

Magnetics Catalog

































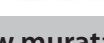
V1.1






Murata Power Solutions

Inductors

Inductance Range

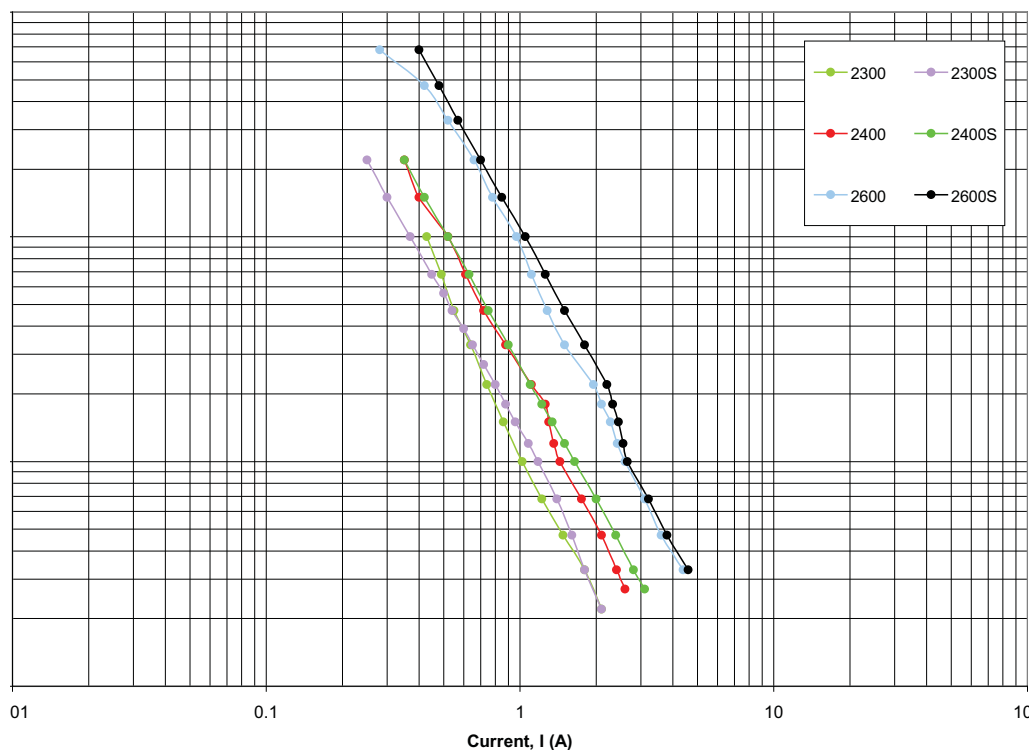
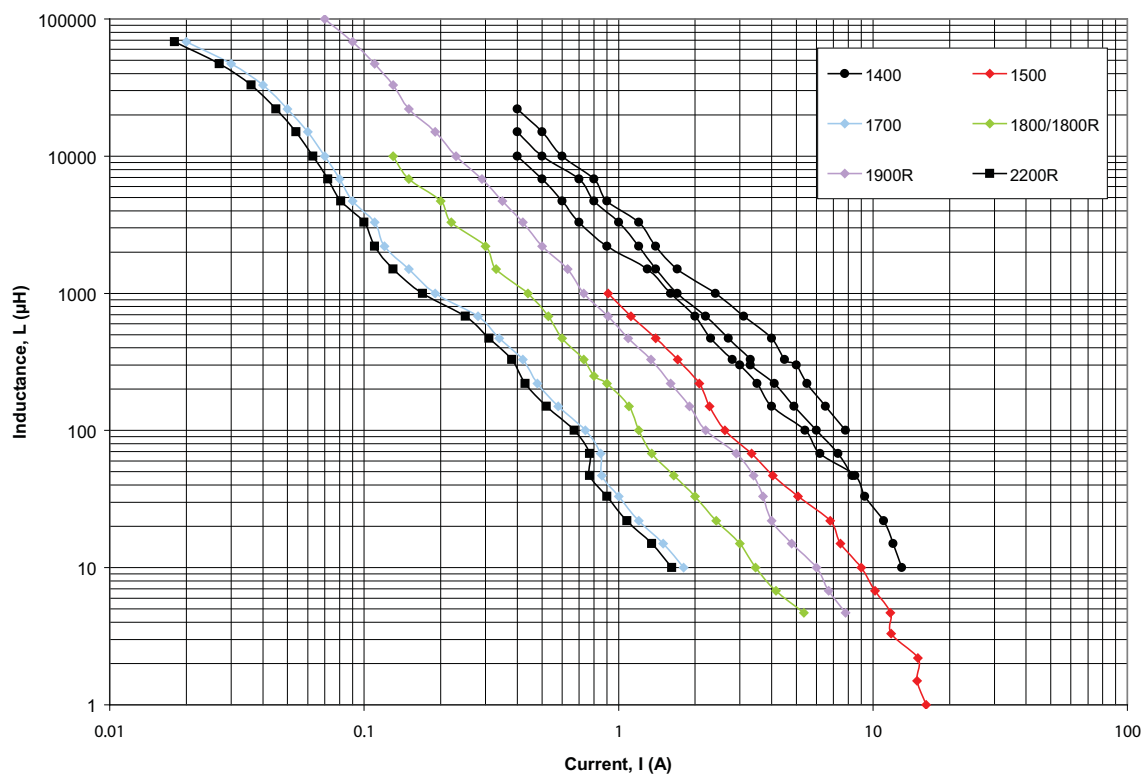
Product Series	Page	0.1μH	1μH	10μH	100μH	1mH	10mH
2200R 	7					2200R	
1700 	9					1700	
1800R 	11				1800R		
1800 	13				1800		
1900R 	15						
1500 	18						
1400 	21				1400		
3200 	23				3200		
3300 	26				3300		
2300 	29			2300			
2400 	33			2400			
2600 	37			2600			
2800 	41			2800			
8200 	44			8200			
8400 	48			8400			
3400L 	51			3400L			
3400 	54			3400			
2900L 	57			2900L			
2900 	60			2900			
4500 	63			4500			
4600 	66			4600			
4700S 	69			4700S			
4700 	72			4700			
4800S 	74			4800S			
4800 	77			4800			
4900S 	79			4900S			
4900 	82			4900			
3500 	84	3500					
3600 	87	3600					
4000 	90			4000			
4100 	92			4100			
4200 	94						
4300 	97						

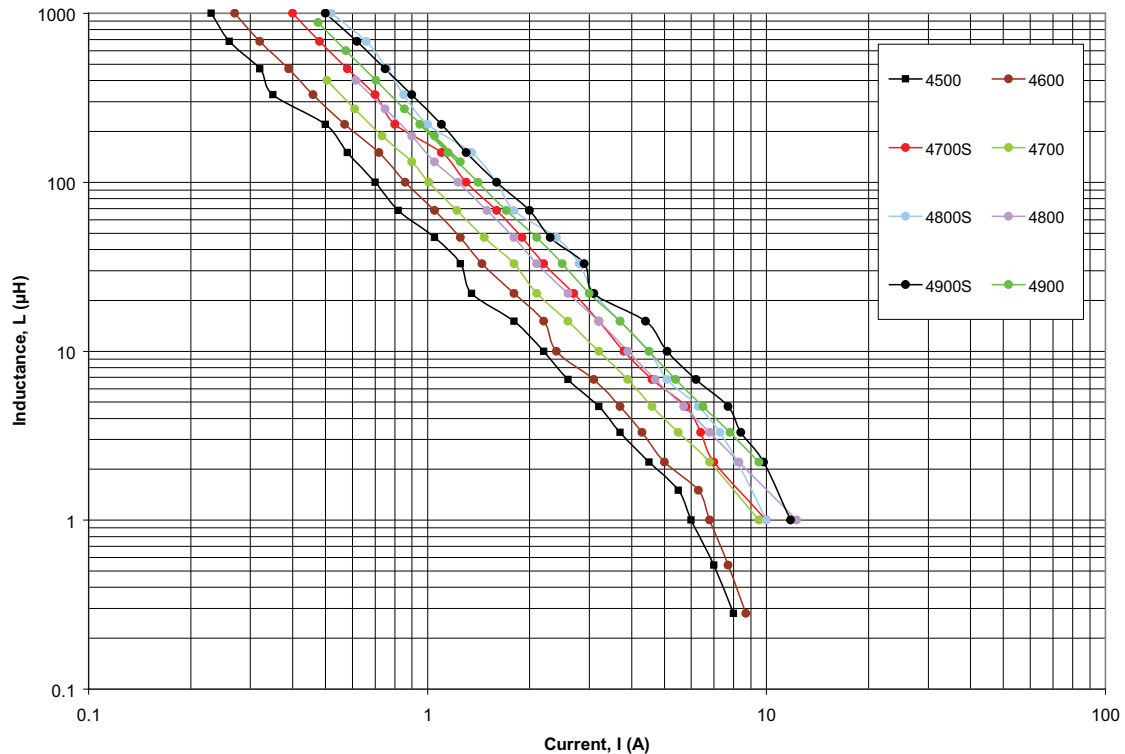
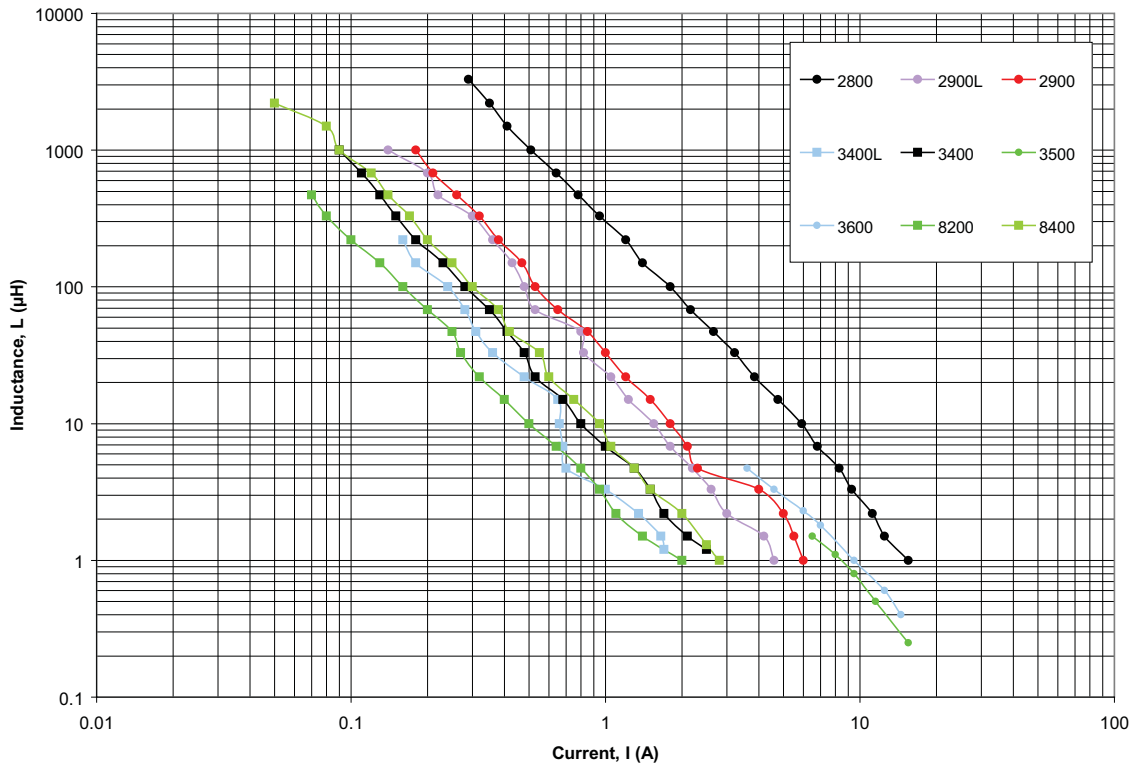
Common-Mode Chokes

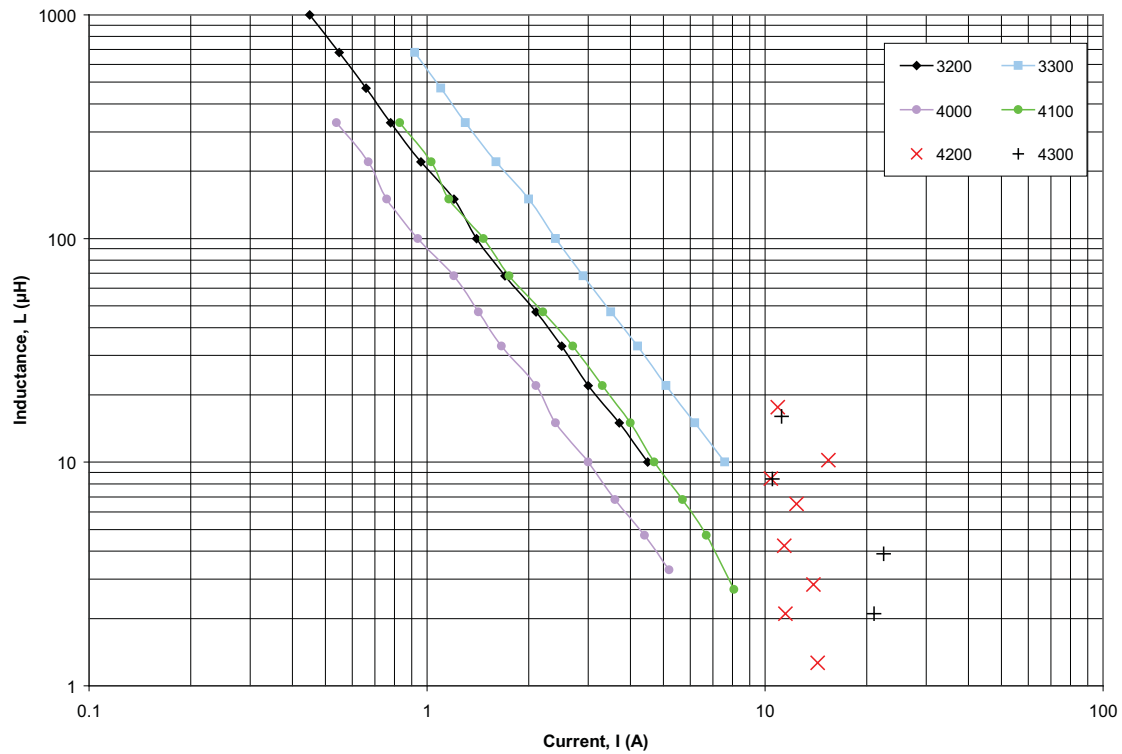
Product Series		Page	Description
5000		100	SM Common Mode Chokes
5100		103	TH Common Mode Chokes
5200		106	TH Common Mode Chokes

Transformers

Product Series		Page	Description
766		109	Pulse Transformers
786		112	General Purpose Pulse Transformers
1000		116	Pulse Transformers
772		118	Pulse Transformers
1600 & 1630C		121	Quad Data-bus Isolators
1605		123	Lan-Pak for CSMA/CD Systems
78250		125	MAX250 Compatible Converter Transformers
78253		128	MAX253 Compatible Converter Transformers
76250ENC, 76253/XXENC		133	BS EN60950 Approved MAX250/253 Compatible Converter Transformers
782485		137	ADM2485 Compatible Converter Transformers
DA100		139	Transformers for Digital Audio Data Transmission
5300		142	10A Current Sensing Transformers
5400		144	15A Current Sensing Transformers
5500		146	15A Current Sensing Transformers
5600		148	10A Current Sensing Transformers









FEATURES

- RoHS compliant
- Radial format
- Up to 1.62A I_{DC}
- 10μH to 68mH
- Low DC resistance
- Miniature size
- PCB mounting
- MIL-I-23053/5 class I sleeving
- Fully tinned leads
- Supplied in bags of 100
- Compatible with RoHS soldering systems
- Backward compatible with Sn/Pb soldering systems
- Custom parts available

DESCRIPTION

The 2200R Series is a general purpose range of inductors suitable for low to medium current applications. Their small footprint makes them ideal for high density applications where a chip inductor will not cope with the power requirement.

SELECTION GUIDE

Order Code	Inductance, (1kHz, 0.1V _{AC})	DC Current ¹	DC Resistance	Q at f kHz		SRF
	±10%	Max.	Max.	Nom.		Nom.
	μH	A	Ω	Q	f	MHz
22R103C	10.0	1.62	0.05	40	1000	21.2
22R153C	15.0	1.35	0.07	30	500	19.4
22R223C	22.0	1.08	0.09	30	500	17.0
22R333C	33.0	0.90	0.14	25	500	11.4
22R473C	47.0	0.77	0.22	25	500	10.9
22R683C	68.0	0.77	0.28	70	100	10.6
22R104C	100.0	0.67	0.39	65	100	8.9
22R154C	150.0	0.52	0.54	80	100	6.2
22R224C	220.0	0.43	0.83	90	100	5.4
22R334C	330.0	0.38	1.21	95	100	4.5
22R474C	470.0	0.31	1.65	100	100	3.2
22R684C	680.0	0.25	2.64	105	100	3.0
22R105C	1.0mH	0.17	3.63	120	100	2.5
22R155C	1.5mH	0.13	6.49	130	100	2.1
22R225C	2.2mH	0.11	8.58	130	50	1.9
22R335C	3.3mH	0.10	10.0	125	150	1.2
22R475C	4.7mH	0.081	13.2	130	150	0.95
22R685C	6.8mH	0.072	22.0	135	150	0.85
22R106C	10.0mH	0.063	37.4	140	150	0.62
22R156C	15.0mH	0.054	49.5	145	150	0.51
22R226C	22.0mH	0.045	82.5	100	50	0.34
22R336C	33.0mH	0.036	110.0	90	50	0.28
22R476C	47.0mH	0.027	154.0	80	50	0.25
22R686C	68.0mH	0.018	242.0	70	50	0.20

TYPICAL CORE/WIRE CHARACTERISTICS

Inductance Temperature Coefficient	Resistance Temperature Coefficient	Curie Temperature (T _C)	Saturation Flux (B _{SAT})
350ppm	3900ppm	190°C	325mT

ABSOLUTE MAXIMUM RATINGS

Operating free air temperature range	-25°C to 70°C
Storage temperature range	-40°C to 125°C

SOLDERING INFORMATION²

Peak wave solder temperature	300°C for 10 seconds
Pin finish	Bright tin

All specifications typical at T_A=25°C

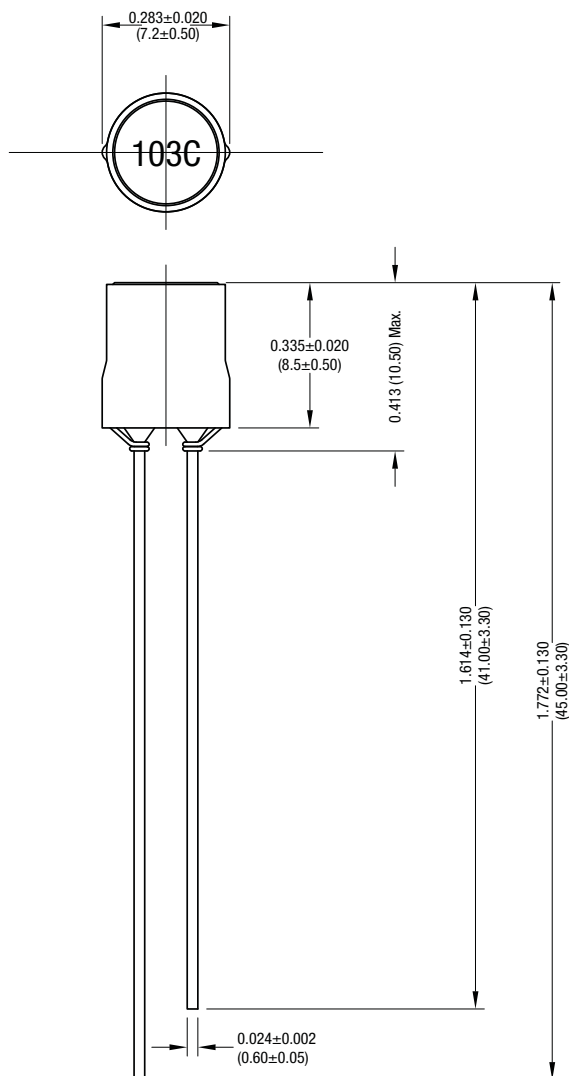
¹ Maximum DC current occurs when either the inductance falls to 90% of its nominal value or when its temperature rise reaches 30°C, whichever is sooner.

² For further information, please visit www.murata-ps.com/rohs



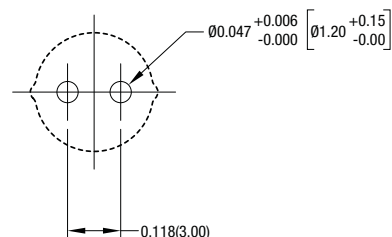
PACKAGE SPECIFICATIONS

MECHANICAL DIMENSIONS



All dimensions in inches (mm). Package weight 1.3g Typ.

RECOMMENDED FOOTPRINT DETAILS



All dimensions in inches (mm)

Murata Power Solutions, Inc.

11 Cabot Boulevard, Mansfield, MA 02048-1151 U.S.A.

Tel: (508) 339-3000 (800) 233-2765 Fax: (508) 339-6356

www.murata-ps.com email: **sales@murata-ps.com** ISO 9001 REGISTERED

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FEATURES

- RoHS compliant
- Radial format
- Up to 1.8A I_{DC}
- 10μH to 68mH
- Low DC resistance
- Miniature size
- PCB mounting
- MIL-I-23053/5 class III sleeving
- Fully tinned leads
- Supplied in packs of 20
- Compatible with RoHS soldering systems
- Backward compatible with Sn/Pb soldering systems
- Custom parts available

DESCRIPTION

The 1700 Series is a general purpose range of inductors suitable for low to medium current applications. Their small footprint makes them ideal for high density applications where a chip inductor will not cope with the power requirement.

SELECTION GUIDE

Order Code	Inductance, (1kHz)	DC Current ¹	DC Resistance	Q at f kHz		SRF
	±10%	Max.	Max.	Nom.		Nom.
	μH	A	Ω	Q	f	MHz
17103C	10.0	1.80	0.05	40	1000	21.2
17153C	15.0	1.50	0.06	30	500	19.4
17223C	22.0	1.20	0.08	30	500	17.0
17333C	33.0	1.00	0.13	25	500	11.4
17473C	47.0	0.86	0.20	25	500	10.9
17683C	68.0	0.85	0.26	70	100	10.6
17104C	100.0	0.74	0.35	65	100	8.9
17154C	150.0	0.58	0.49	80	100	6.2
17224C	220.0	0.48	0.75	90	100	5.4
17334C	330.0	0.42	1.10	95	100	4.5
17474C	470.0	0.34	1.50	100	100	3.2
17684C	680.0	0.28	2.40	105	100	3.0
17105C	1.0mH	0.19	3.30	120	100	2.5
17155C	1.5mH	0.15	5.90	130	100	2.1
17225C	2.2mH	0.12	7.80	130	50	1.9
17335C	3.3mH	0.11	9.1	125	150	1.2
17475C	4.7mH	0.09	12.0	130	150	0.95
17685C	6.8mH	0.08	20.0	135	150	0.85
17106C	10.0mH	0.07	34.0	140	150	0.62
17156C	15.0mH	0.06	45.0	145	150	0.51
17226C	22.0mH	0.05	75.0	100	50	0.34
17336C	33.0mH	0.04	100.0	90	50	0.28
17476C	47.0mH	0.03	140.0	80	50	0.25
17686C	68.0mH	0.02	220.0	70	50	0.20

TYPICAL CORE/WIRE CHARACTERISTICS

Inductance Temperature Coefficient	Resistance Temperature Coefficient	Curie Temperature (T _C)	Saturation Flux (B _{SAT})
350ppm	3900ppm	190°C	325mT

ABSOLUTE MAXIMUM RATINGS

Operating free air temperature range	0°C to 70°C
Storage temperature range	-40°C to 125°C

SOLDERING INFORMATION²

Peak wave solder temperature	300°C for 10 seconds
Pin finish	Bright tin

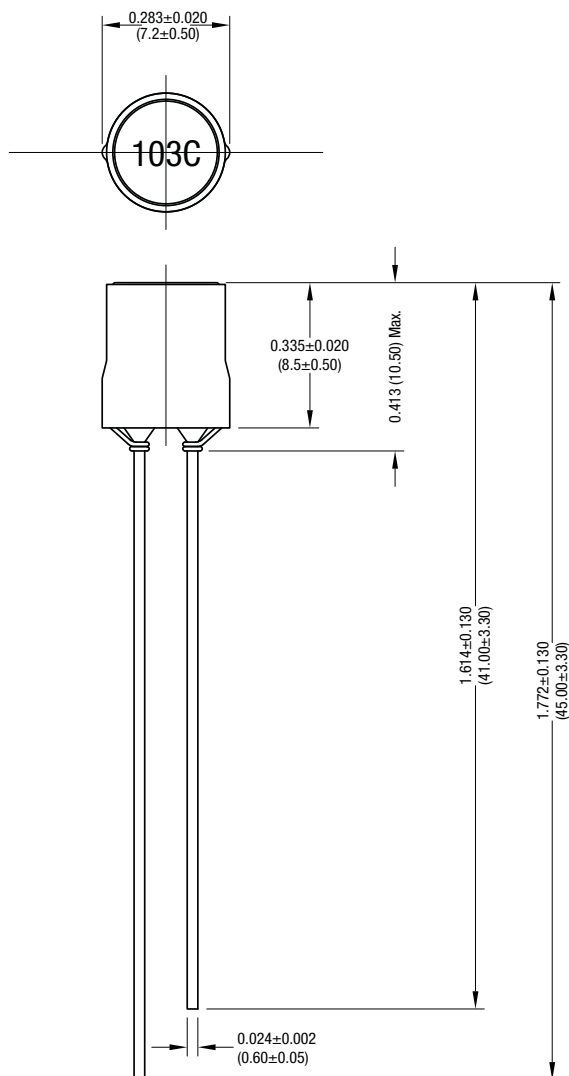
All specifications typical at T_A=25°C

- 1 Maximum DC current occurs when either the inductance falls to 90% of its nominal value or when its temperature rise reaches 30°C, whichever is sooner.
- 2 For further information, please visit www.murata-ps.com/rohs



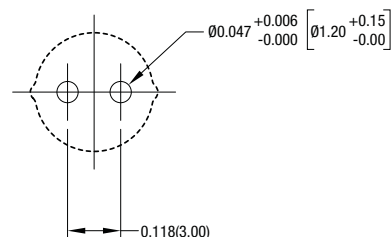
PACKAGE SPECIFICATIONS

MECHANICAL DIMENSIONS



All dimensions in inches (mm). Package weight 1.3g Typ.

RECOMMENDED FOOTPRINT DETAILS



All dimensions in inches (mm)

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Guangzhou, Tel: +86 208 221 8066, email: guangzhou@murata-ps.com



FEATURES

- RoHS compliant
- Radial format
- Up to 5.35A I_{dc}
- 4.7μH to 10mH
- Low DC resistance
- Compact size
- MIL-I-23053/5 class III sleeving
- Fully tinned leads
- Supplied in packs of 10
- Custom & axial parts available
- Backward compatible with Sn/Pb soldering systems

DESCRIPTION

The 1800R Series of inductors are particularly suited to use with a wide variety of switching regulators. Offering high current handling with a small footprint, the devices are ideal where space is at a premium.

SELECTION GUIDE

Order Code	Inductance (1kHz, 0.1V _{ac})	DC Current ¹	DC Resistance	Q @ f kHz		SRF
	±10%	Max.	Max.	Nom.		Nom.
	μH	A	mΩ	Q	f	MHz
18R472C	4.7 ²	5.35	9.0	106	1000	35.1
18R682C	6.8	4.15	12.0	73	500	26.3
18R103C	10.0	3.45	15.0	59	500	23.8
18R153C	15.0	3.00	18.0	55	500	17.0
18R223C	22.0	2.42	25.0	51	500	14.1
18R333C	33.0	2.00	40.0	48	500	11.5
18R473C	47.0	1.65	55.0	46	500	9.85
18R683C	68.0	1.35	70.0	27	100	8.29
18R104C	100.0	1.20	100.0	40	100	7.40
18R154C	150.0	1.10	165.0	40	100	5.58
18R224C	220.0	0.90	230.0	39	100	4.00
18R254C	250.0	0.80	255.0	40	100	3.85
18R334C	330.0	0.73	335.0	49	100	3.57
18R474C	470.0	0.60	465.0	50	100	2.81
18R684C	680.0	0.53	630.0	48	100	2.43
18R105C	1.0mH	0.44	1.0Ω	92	50	1.82
18R155C	1.5mH	0.33	1.5Ω	106	50	1.60
18R225C	2.2mH	0.30	2.2Ω	106	50	1.41
18R335C	3.3mH	0.22	3.5Ω	139	50	1.04
18R475C	4.7mH	0.20	4.6Ω	126	40	0.87
18R685C	6.8mH	0.15	7.0Ω	143	40	0.71
18R106C	10.0mH	0.13	12.0Ω	142	40	0.58

TYPICAL CORE/WIRE CHARACTERISTICS

Inductance Temperature Coefficient	Resistance Temperature Coefficient	Curie Temperature (T _c)	Saturation Flux (B _{SAT})
430ppm	4000ppm	190°C	325mT

ABSOLUTE MAXIMUM RATINGS

Operating free air temperature range	0°C to 70°C
Storage temperature range	-55°C to 125°C

SOLDERING INFORMATION³

Peak wave solder temperature	300°C for 10 seconds
Pin finish	Bright tin

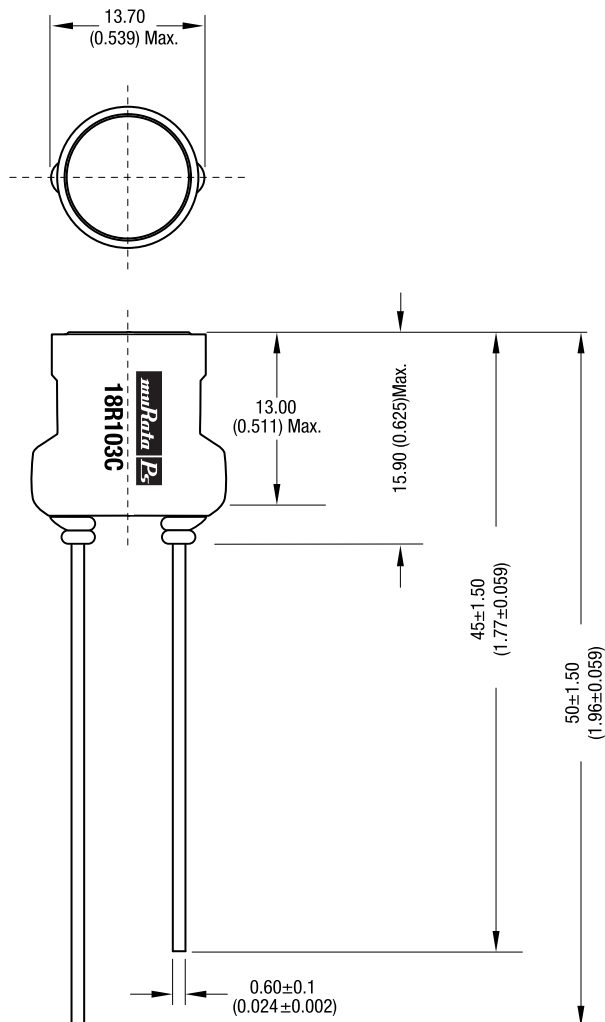
All specifications typical at T_a=25°C

- 1 Maximum DC current occurs when either the inductance falls to 90% of its nominal value or when its temperature rise reaches 30°C, whichever is sooner.
- 2 Tolerance ±15%.
- 3 For further information, please visit www.murata-ps.com/rohs



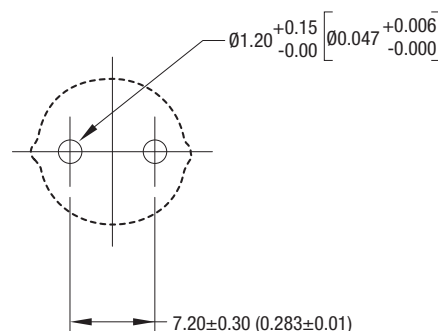
PACKAGE SPECIFICATIONS

MECHANICAL DIMENSIONS



All dimensions in mm (inches). Package weight 4.6g Typ.

RECOMMENDED FOOTPRINT DETAILS



All dimensions in mm (inches)

Murata Power Solutions, Inc.

11 Cabot Boulevard, Mansfield, MA 02048-1151 U.S.A.

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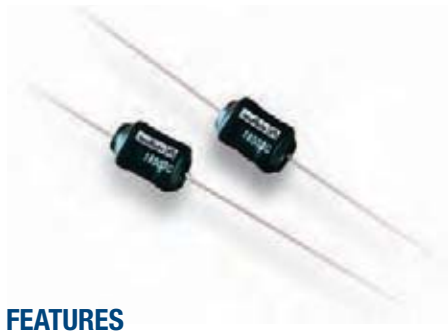
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Guangzhou, Tel: +86 208 221 8066, email: guangzhou@murata-ps.com



FEATURES

- RoHS compliant
- Axial format
- Up to 5.35A Idc
- 4.7μH to 10mH
- Low DC resistance
- Compact size
- MIL-I-23053/5 class III sleeving
- Fully tinned leads
- Supplied in packs of 10
- Custom & radial parts available
- Backward compatible with Sn/Pb soldering systems

DESCRIPTION

The 1800 Series of inductors are particularly suited to use with a wide variety of switching regulators. Offering high current handling with a low mounting height, the devices are ideal where space is at a premium.

SELECTION GUIDE

Order Code	Inductance (1kHz, 0.1VAc)	DC Current ¹	DC Resistance	Q @ f kHz		SRF
	±10%	Max.	Max.	Nom.		Nom.
	μH	A	mΩ	Q	f	MHz
18472C	4.7	5.35	9.0	112	1000	36.4
18682C	6.8	4.15	12.0	78	500	23.6
18103C	10.0	3.45	15.0	64	500	19.0
18153C	15.0	3.00	18.0	55	500	15.9
18223C	22.0	2.42	25.0	59	500	11.8
18333C	33.0	2.00	40.0	48	500	11.5
18473C	47.0	1.65	55.0	55	500	8.5
18683C	68.0	1.35	70.0	31	100	6.6
18104C	100.0	1.20	100.0	40	100	7.4
18154C	150.0	1.10	165.0	47	100	4.4
18224C	220.0	0.90	230.0	46	100	3.5
18254C	250.0	0.80	255.0	50	100	3.7
18334C	330.0	0.73	335.0	58	100	3.0
18474C	470.0	0.60	465.0	56	100	2.2
18684C	680.0	0.53	630.0	55	100	2.0
18105C	1.0mH	0.44	1.0Ω	94	50	1.6
18155C	1.5mH	0.33	1.5Ω	107	50	1.3
18225C	2.2mH	0.30	2.2Ω	108	50	1.1
18335C	3.3mH	0.22	3.5Ω	143	50	0.8
18475C	4.7mH	0.20	4.6Ω	128	40	0.7
18685C	6.8mH	0.15	7.0Ω	144	40	0.6
18106C	10.0mH	0.13	12.0Ω	143	40	0.5

TYPICAL CORE/WIRE CHARACTERISTICS

Inductance Temperature Coefficient	Resistance Temperature Coefficient	Curie Temperature (T _c)	Saturation Flux (B _{SAT})
430ppm	4000ppm	190°C	325mT

ABSOLUTE MAXIMUM RATINGS

Operating free air temperature range	0°C to 70°C
Storage temperature range	-55°C to 125°C

SOLDERING INFORMATION²

Peak wave solder temperature	300°C for 10 seconds
Pin finish	Bright tin

All specifications typical at T_A=25°C

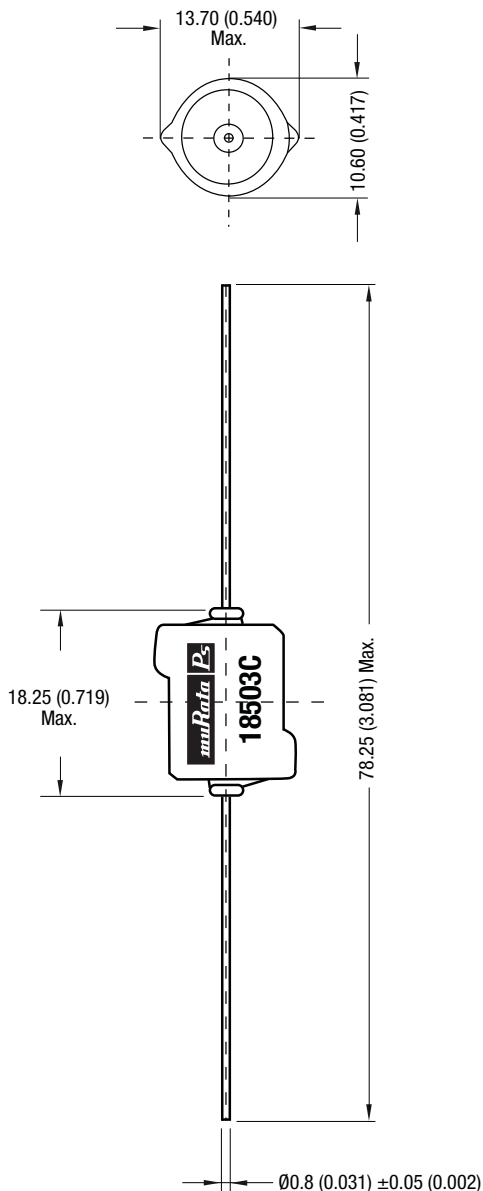
1 Maximum DC current occurs when either the inductance falls to 90% of its nominal value or when its temperature rise reaches 30°C, whichever is sooner.

2 For further information, please visit www.murata-ps.com/rohs



PACKAGE SPECIFICATIONS

MECHANICAL DIMENSIONS



Unless otherwise stated, all dimensions in mm (inches) ± 0.25 (0.01).

Package weight: 4.6g Typ.

Package quantity: 10

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FEATURES

- RoHS compliant
- Radial format
- Up to 7.8A lrc
- 4.7μH to 100mH
- Low DC resistance
- PCB mounting
- Fully tinned leads
- Compatible with RoHS soldering systems
- Backward compatible with Sn/Pb soldering systems
- Custom parts available

DESCRIPTION

The 1900R Series is a general purpose range of inductors suitable for low to medium current applications such as power supply and other general purpose filtering designs.

SELECTION GUIDE

Order Code	Inductance, (1kHz, 0.1V _{AC})	DC Current ¹	DC Resistance
	±10%	Max.	Max.
	μH	A	Ω
19R472C	4.7 ±20%	7.8	0.008
19R682C	6.8 ±20%	6.7	0.011
19R103C	10	6.0	0.017
19R153C	15	4.8	0.022
19R223C	22	4.0	0.026
19R333C	33	3.7	0.032
19R473C	47	3.4	0.038
19R683C	68	2.9	0.055
19R104C	100	2.2	0.090
19R154C	150	1.9	0.129
19R224C	220	1.6	0.162
19R334C	330	1.34	0.240
19R474C	470	1.09	0.380
19R684C	680	0.91	0.548
19R105C	1.0mH	0.73	0.844
19R155C	1.5mH	0.63	1.2
19R225C	2.2mH	0.50	2.0
19R335C	3.3mH	0.42	2.5
19R475C	4.7mH	0.35	3.5
19R685C	6.8mH	0.29	5.7
19R106C	10mH	0.23	7.3
19R156C	15mH	0.19	12
19R226C	22mH	0.15	22
19R336C	33mH	0.13	26
19R476C	47mH	0.11	36
19R686C	68mH	0.09	57
19R107C	100mH	0.07	90

ABSOLUTE MAXIMUM RATINGS

Operating free air temperature range	-40°C to +95°C
Storage temperature range	-40°C to +125°C

SOLDERING INFORMATION²

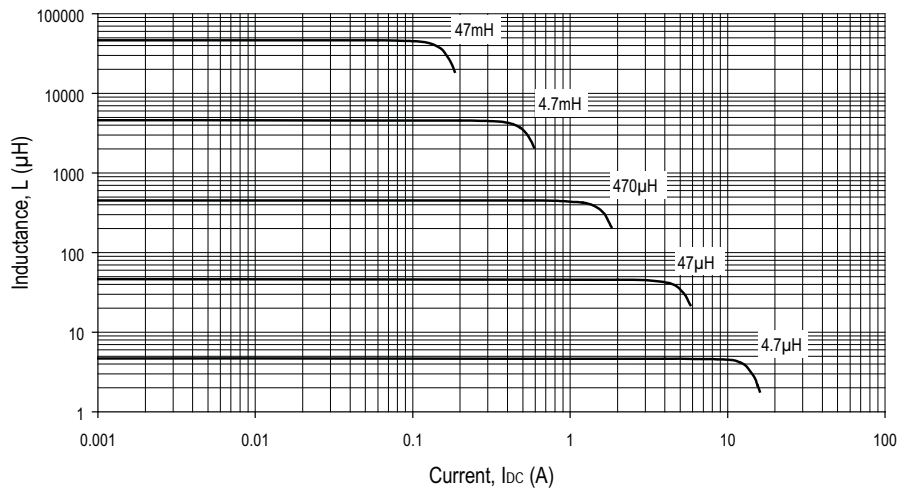
Peak wave solder temperature	260°C for 10 seconds
Pin finish	Bright tin

All specifications typical at T_A=25°C

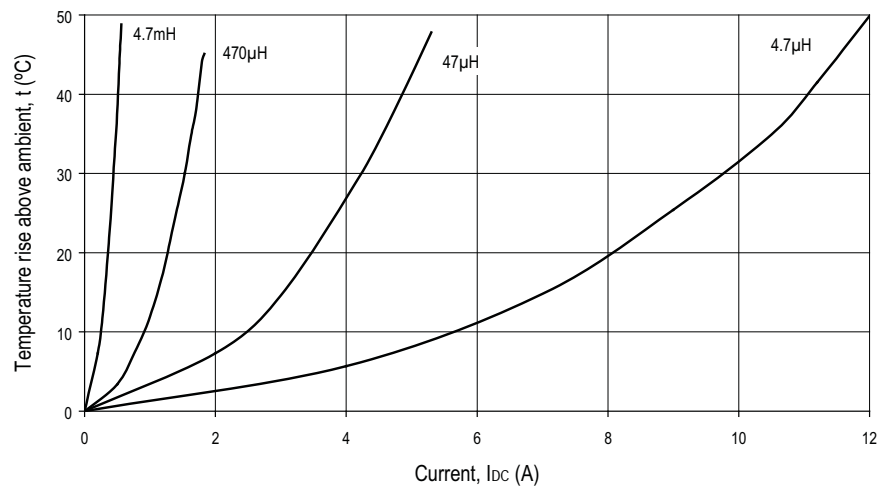
- 1 Maximum DC current occurs when either the inductance falls to 90% of its nominal value or when its temperature rise reaches 30°C, whichever is sooner.
- 2 For further information, please visit www.murata-ps.com/rohs



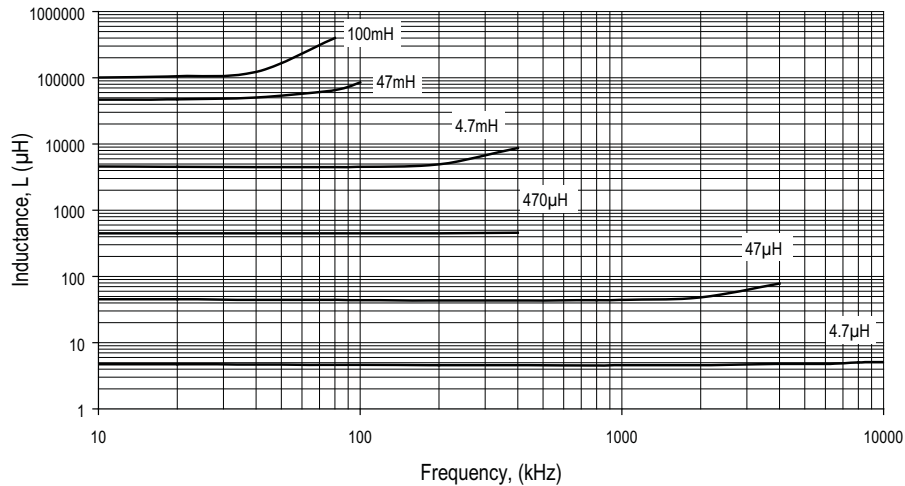
INDUCTANCE Vs CURRENT



TEMPERATURE Vs CURRENT

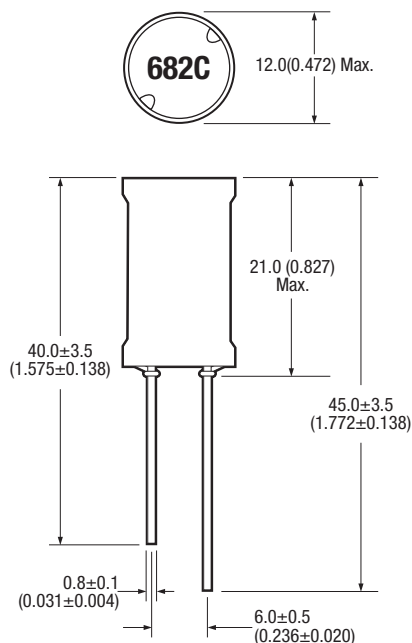


INDUCTANCE Vs FREQUENCY



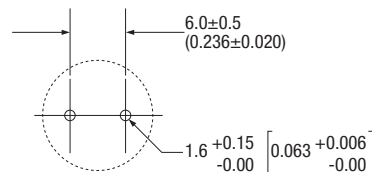
PACKAGE SPECIFICATIONS

MECHANICAL DIMENSIONS



All dimensions in mm (inches). Package weight 7.2g Typ.

RECOMMENDED FOOTPRINT DETAILS



All dimensions in mm (inches)

PACKAGING DETAILS

Supplied in cartons (40 pieces per carton)

Murata Power Solutions, Inc.

11 Cabot Boulevard, Mansfield, MA 02048-1151 U.S.A.

Tel: (508) 339-3000 (800) 233-2765 Fax: (508) 339-6356

www.murata-ps.com email: **sales@murata-ps.com** ISO 9001 REGISTERED

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Guangzhou, Tel: +86 208 221 8066, email: guangzhou@murata-ps.com



FEATURES

- RoHS compliant
- Radial format
- Up to 16.2A ldc
- 1.0μH to 1.0mH
- Low DC resistance
- PCB mounting
- Fully tinned leads
- Compatible with RoHS soldering systems
- Backward compatible with Sn/Pb soldering systems
- Custom parts available

DESCRIPTION

The 1500 Series is a general purpose range of inductors suitable for low to medium current applications such as power supply and other general purpose filtering designs. The central hole allows mechanical fixing with a non-magnetic screw.

SELECTION GUIDE

Order Code	Inductance, (10kHz, 0.1Vac)	DC Current ¹	DC Resistance	Q @ f kHz		SRF	Lead Dimensions (See Package Specifications)	
	± 10%	Max.	Max.	Nom.		Nom.	Dim. A	Dim. B
	μH	A	Ω	Q	f	MHz	mm	mm
15102C	1.0 ± 20%	16.2	2.76	151	1000	142	1.18	13.6
15152C	1.5 ± 20%	14.9	3.48	155	1000	108	1.18	13.6
15222C	2.2 ± 20%	15.0	4.20	127	1000	82	1.18	13.6
15332C	3.3 ± 20%	11.8	5.76	128	1000	68	1.18	13.6
15472C	4.7 ± 20%	11.7	6.48	131	1000	60	1.18	13.6
15682C	6.8 ± 20%	10.2	8.04	133	1000	46	1.18	14.0
15103C	10	9.01	10.6	112	1000	30	1.18	14.5
15153C	15	7.44	15.5	109	1000	19	1.06	14.2
15223C	22	6.80	18.8	102	1000	11	1.06	13.6
15333C	33	5.08	31.2	107	1000	8	0.90	13.8
15473C	47	4.04	45.6	104	1000	5	0.80	14.2
15683C	68	3.33	70.3	100	1000	4	0.71	13.6
15104C	100	2.62	110	89	1000	3	0.63	13.8
15154C	150	2.28	149	126	800	2	0.60	13.6
15224C	220	2.08	185	69	20	2	0.60	14.0
15334C	330	1.71	263	68	20	1.6	0.56	13.8
15474C	470	1.40	389	76	20	1.3	0.50	14.2
15684C	680	1.12	574	86	25	1.0	0.45	14.0
15105C	1000	0.91	887	96	30	0.8	0.40	13.6

ABSOLUTE MAXIMUM RATINGS

Operating free air temperature range	-40°C to +85°C
Storage temperature range	-40°C to +125°C

SOLDERING INFORMATION²

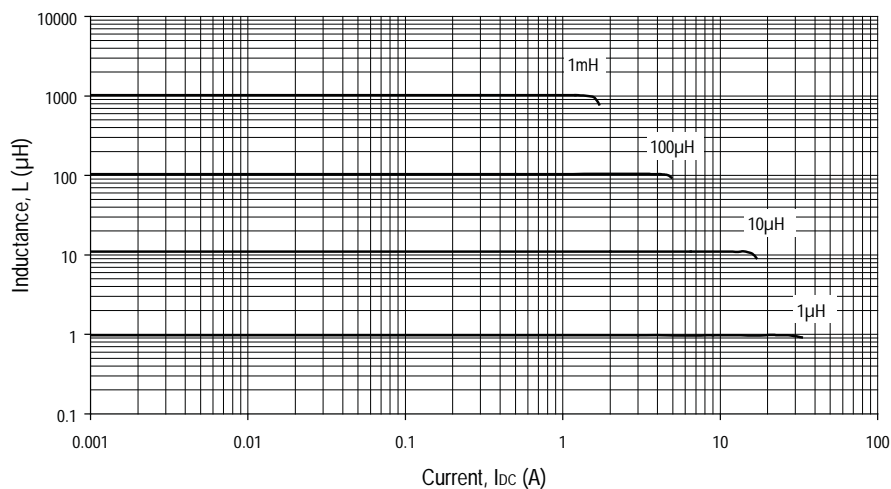
Peak wave solder temperature	260°C for 10 seconds
Pin finish	Pure tin dip

All specifications typical at T_A=25°C

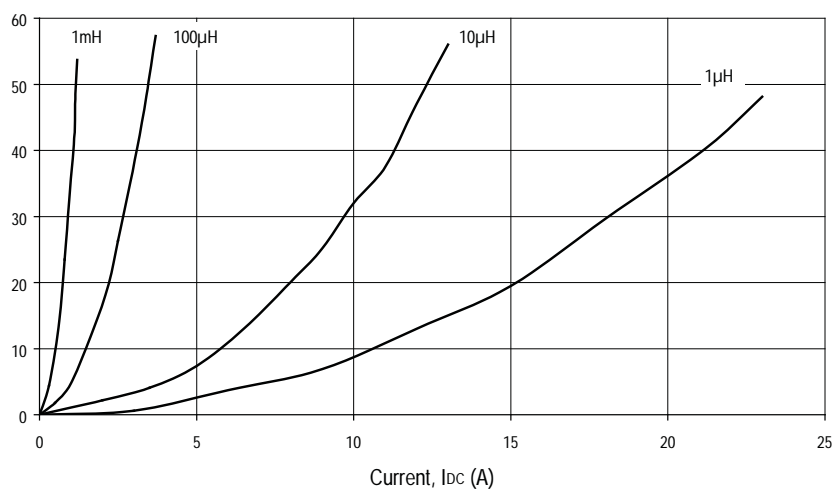
- 1 Maximum DC current occurs when either the inductance falls to 75% of its nominal value or when its temperature rise reaches 40°C, whichever is sooner.
- 2 For further information, please visit www.murata-ps.com/rohs



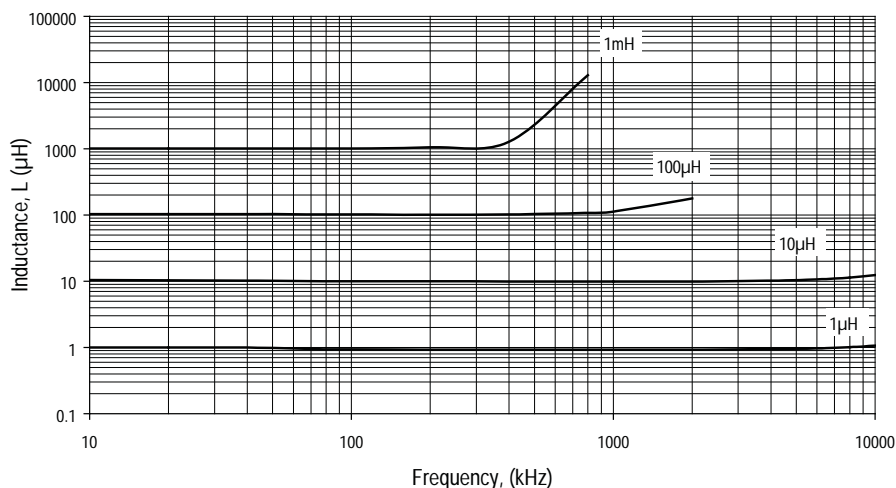
INDUCTANCE Vs CURRENT



TEMPERATURE Vs CURRENT

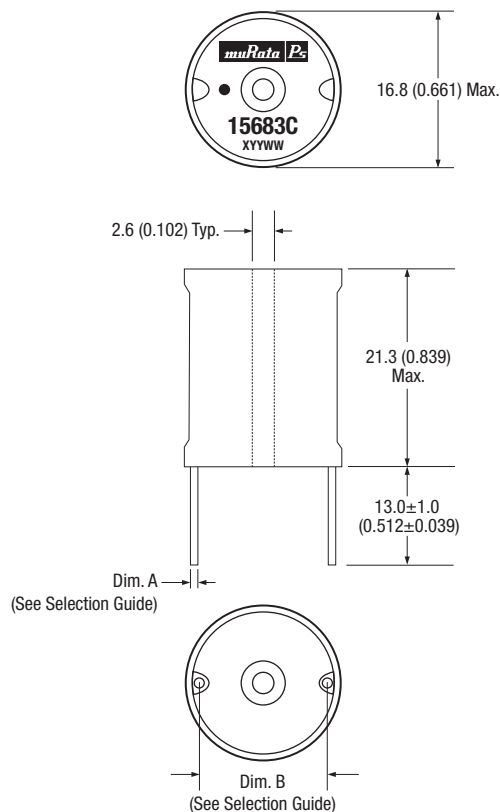


INDUCTANCE Vs FREQUENCY



PACKAGE SPECIFICATIONS

MECHANICAL DIMENSIONS



All dimensions in mm (inches). Package weight 13-18g Typ.
Dot signifies the innermost turn of the winding.

PACKAGING DETAILS

Supplied in cartons (40 pieces per carton)

Murata Power Solutions, Inc.

11 Cabot Boulevard, Mansfield, MA 02048-1151 U.S.A.

Tel: (508) 339-3000 (800) 233-2765 Fax: (508) 339-6356

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Guangzhou, Tel: +86 208 221 8066, email: guangzhou@murata-ps.com



FEATURES

- RoHS compliant
- Radial format
- -40°C to 85°C operating temperature
- Up to 13A ldc
- 10µH to 22mH
- Low DC resistance
- Fully tinned leads
- PCB mounting hole
- Low temperature dependence
- Backward compatible with Sn/Pb soldering systems
- Custom parts available

DESCRIPTION

The 1400 Series is suitable for many power supply and other general purpose filtering applications. The use of a non-magnetic screw will ensure mechanical stability.



For full details go to
www.murata-ps.com/rohs

SELECTION GUIDE

Order Code	Inductance, (1kHz, 0.1V _{AC})	DC Current ¹	DC Resistance	Q at f kHz		SRF	Mechanical Dimensions					Footprint	
	±10%	Max.	Max.	Nom.		Nom.	a	b	c	d	Øe	f	Øg
	µH	A	Ω	Q	f	MHz	mm					mm	
1410313C	10	13	0.007	54	50	20.7	27.0	24.4	14.0	1.30	4.5	23.9	2.6
1415312C	15	12	0.009	42	50	12.7	27.0	24.4	14.0	1.30	4.5	23.9	2.6
1422311C	22	11	0.011	64	100	9.3	27.0	24.4	14.0	1.30	4.5	23.9	2.6
1433393C	33	9.3	0.015	27	50	9.1	27.0	24.4	14.0	1.30	4.5	23.9	2.6
1447383C	47	8.3	0.019	40	100	6.0	27.0	24.4	18.5	1.30	4.5	23.9	2.6
1447385C	47	8.5	0.021	33	100	6.7	26.8	24.4	14.0	1.20	4.5	23.8	2.4
1468362C	68	6.2	0.032	32	100	5.3	26.5	24.4	14.0	1.08	4.5	23.7	2.1
1468373C	68	7.3	0.022	45	100	5.3	27.0	24.4	18.5	1.30	4.5	23.9	2.6
1410454C	100	5.4	0.042	24	100	4.6	26.4	24.4	14.0	1.02	4.5	23.6	2.0
1410460C	100	6.0	0.033	37	100	3.9	26.8	24.4	18.5	1.20	4.5	23.8	2.4
1410478C	100	7.8	0.040	34	50	3.3	32.4	29.8	21.8	1.30	5.1	29.3	2.6
1415440C	150	4.0	0.069	24	50	3.4	26.2	24.4	14.0	0.90	4.5	23.5	1.8
1415449C	150	4.9	0.051	34	50	2.9	26.4	24.4	18.5	1.02	4.5	23.6	2.0
1415465C	150	6.5	0.042	46	100	2.4	32.2	29.8	21.8	1.20	5.1	29.2	2.4
1422435C	220	3.5	0.096	22	50	2.8	26.1	24.4	14.0	0.85	4.5	23.5	1.7
1422441C	220	4.1	0.073	33	100	2.3	26.3	24.4	18.5	0.97	4.5	23.6	1.9
1422455C	220	5.5	0.062	30	50	2.2	32.1	29.8	21.8	1.14	5.1	29.1	2.2
1430430C	300	3.0	0.140	26	50	2.6	25.9	24.4	14.0	0.75	4.5	23.4	1.5
1430433C	300	3.3	0.100	37	50	2.2	26.2	24.4	18.5	0.90	4.5	23.5	1.8
1430450C	300	5.0	0.080	28	50	1.7	31.8	29.8	21.8	1.02	5.1	29.0	2.0
1433428C	330	2.8	0.150	22	50	2.5	25.9	24.4	14.0	0.76	4.5	23.4	1.5
1433433C	330	3.3	0.107	29	50	2.0	26.2	24.4	18.5	0.90	4.5	23.5	1.8
1433445C	330	4.5	0.091	25	50	1.6	31.8	29.8	21.8	1.02	5.1	29.0	2.0
1447423C	470	2.3	0.222	34	50	2.0	25.7	24.4	14.0	0.67	4.5	23.3	1.3
1447427C	470	2.7	0.149	25	50	1.6	26.1	24.4	18.5	0.85	4.5	23.5	1.7
1447440C	470	4.0	0.125	24	50	1.4	31.7	29.8	21.8	0.97	5.1	29.0	1.9
1468420C	680	2.0	0.276	23	50	1.6	25.7	24.4	14.0	0.67	4.5	23.3	1.3
1468422C	680	2.2	0.226	28	50	1.3	25.9	24.4	18.5	0.75	4.5	23.4	1.5
1468431C	680	3.1	0.173	60	10	1.0	31.6	29.8	21.8	0.90	5.1	28.9	1.8
1410516C	1.0mH	1.6	0.419	30	50	1.4	25.6	24.4	14.0	0.60	4.5	23.2	1.2
1410517C	1.0mH	1.7	0.336	35	50	1.2	25.7	24.4	18.5	0.67	4.5	23.3	1.3
1410524C	1.0mH	2.4	0.277	33	50	1.0	31.4	29.8	21.8	0.79	5.1	28.8	1.5
1415513C	1.5mH	1.3	0.630	34	50	1.0	25.5	24.4	14.0	0.54	4.5	23.1	1.0
1415514C	1.5mH	1.4	0.518	47	50	0.8	25.6	24.4	18.5	0.60	4.5	23.2	1.2
1415517C	1.5mH	1.7	0.374	28	50	0.7	31.3	29.8	21.8	0.75	5.1	28.8	1.5
1422509C	2.2mH	0.9	0.916	43	50	0.9	25.3	24.4	14.0	0.48	4.5	23.1	0.9
1422512C	2.2mH	1.2	0.649	33	50	0.7	25.6	24.4	18.5	0.60	4.5	23.2	1.2
1422514C	2.2mH	1.4	0.622	33	50	0.6	31.1	29.8	21.8	0.67	5.1	28.7	1.3
1433507C	3.3mH	0.7	1.428	45	50	0.8	25.2	24.4	14.0	0.43	4.5	23.0	0.8
1433510C	3.3mH	1.0	1.992	20	50	0.7	25.5	24.4	18.5	0.54	4.5	23.1	1.0
1433512C	3.3mH	1.2	0.861	20	50	0.5	31.0	29.8	21.8	0.60	5.1	28.6	1.2
1447506C	4.7mH	0.6	2.200	60	50	0.6	25.2	24.4	14.0	0.39	4.5	23.0	0.7
1447508C	4.7mH	0.8	1.436	65	50	0.5	25.3	24.4	18.5	0.48	4.5	23.1	0.9
1447509C	4.7mH	0.9	1.250	57	10	0.5	30.9	29.8	21.8	0.54	5.1	28.5	1.0
1468505C	6.8mH	0.5	2.810	50	50	0.5	25.2	24.4	14.0	0.39	4.5	23.0	0.7
1468507C	6.8mH	0.7	2.214	47	50	0.4	25.2	24.4	18.5	0.43	4.5	23.0	0.8
1468508C	6.8mH	0.8	1.884	30	50	0.4	30.7	29.8	21.8	0.48	5.1	28.5	0.9
1410604C	10mH	0.4	4.340	51	50	0.4	25.1	24.4	14.0	0.34	4.5	22.9	0.6
1410605C	10mH	0.5	3.394	48	50	0.3	25.2	24.4	18.5	0.39	4.5	23.0	0.7
1410606C	10mH	0.6	2.294	48	50	0.2	30.9	29.8	21.8	0.54	5.1	28.5	1.0
1415604C	15mH	0.4	4.912	61	10	0.2	25.1	24.4	18.5	0.34	4.5	22.9	0.6
1415605C	15mH	0.5	3.740	55	10	0.2	30.6	29.8	21.8	0.43	5.1	28.4	0.8
1422604C	22mH	0.4	6.962	30	50	0.2	30.5	29.8	21.8	0.34	5.1	28.3	0.6

¹ Maximum DC current occurs when either the inductance falls to 60% of its nominal value or when its temperature rise reaches 50°C, whichever is sooner.

SOLDERING INFORMATION²

Peak wave solder temperature	300°C for 10 seconds
Pin finish	Pure tin dip

TYPICAL CORE/WIRE CHARACTERISTICS

Inductance Temperature Coefficient	Resistance Temperature Coefficient	Curie Temperature (T _C)	Saturation Flux (B _{SAT})
215ppm	3900ppm	130°C	240mT

ABSOLUTE MAXIMUM RATINGS

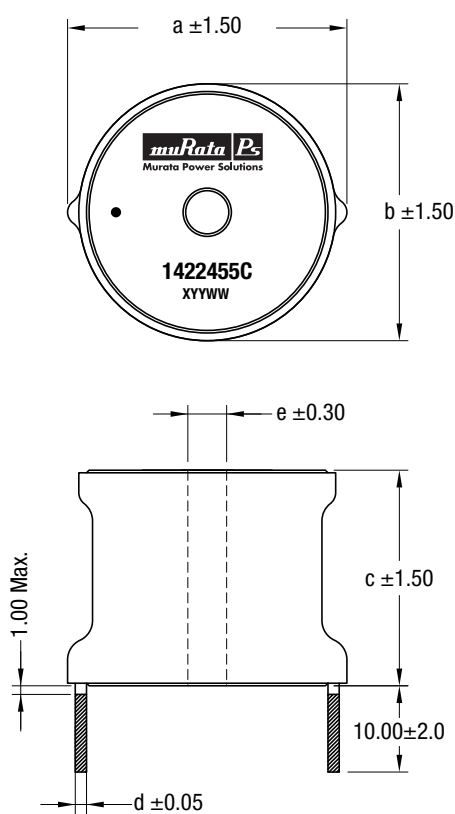
Operating free air temperature range	-40°C to 85°C
Storage temperature range	-55°C to 125°C

All specifications typical at T_A=25°C

2 For further information, please visit www.murata-ps.com/rohs

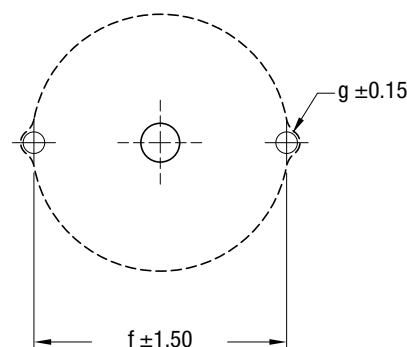
PACKAGE SPECIFICATIONS

MECHANICAL DIMENSIONS



All dimensions in mm.
Package weight: 30-65g Typ.
Marking indicates start of winding.

RECOMMENDED FOOTPRINT DETAILS



All dimensions in mm

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Guangzhou, Tel: +86 208 221 8066, email: guangzhou@murata-ps.com



FEATURES

- RoHS compliant
- Toroidal construction
- Up to 4.5A loc
- Inductance range from 10μH to 1.0mH
- Low EMI
- UL 94V-0 packaging materials
- Low DC resistance

PRODUCT OVERVIEW

The 3200 series is a range of through-hole power inductors. Due to the toroidal construction, they exhibit a very low EMI as stray flux is kept to a minimum. Typical applications include switching regulators, and power line filtering.

SELECTION GUIDE

Order Code	Inductance, L	DC Current ²	DC Resistance	Q @ f MHz		SRF	Package Weight
	±15%	Max.	Max.	Nom.		Typ.	Typ.
	μH	A	mΩ	Q	f	MHz	g
32100C	10	4.50	20	3.1	1.0	69	7.8
32150C	15	3.70	24	3.1	1.0	53	8.1
32220C	22	3.00	29	3.2	1.0	41	8.4
32330C	33	2.50	36	3.2	1.0	28	8.8
32470C	47	2.10	42	3.1	1.0	21	9.2
32680C	68	1.70	62	3.1	1.0	11	9.0
32101C	100	1.40	77	3.5	0.8	5.3	9.6
32151C	150	1.20	117	3.3	0.8	3.3	9.4
32221C	220	0.96	141	3.3	0.8	2.8	9.8
32331C	330	0.78	215	3.2	0.8	2.3	9.9
32471C	470	0.66	312	2.8	0.8	1.6	9.6
32681C	680	0.55	377	2.0	0.8	1.2	10.4
32102C	1000	0.45	568	1.2	0.8	1.0	10.1

ABSOLUTE MAXIMUM RATINGS

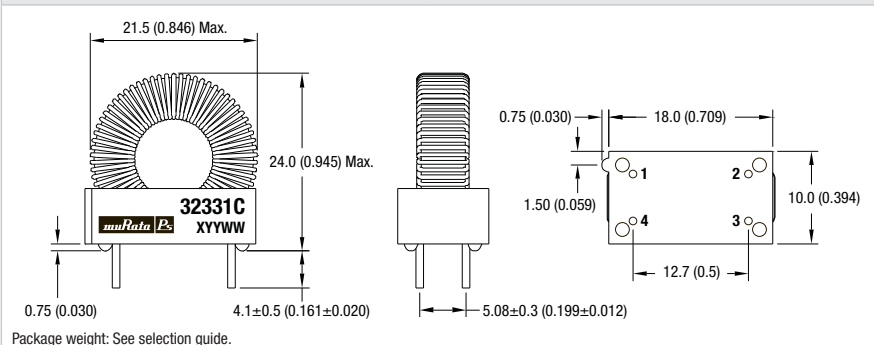
Operating free air temperature range	-40°C to 125°C
Storage temperature range	-40°C to 125°C

SOLDERING INFORMATION¹

Peak wave solder temperature	260°C
Pin finish	Tin

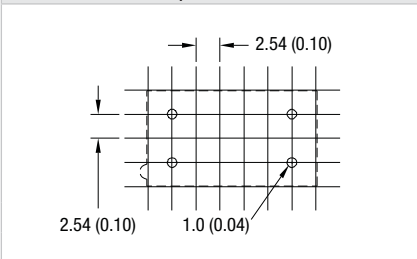
PACKAGE SPECIFICATIONS

Mechanical Dimensions



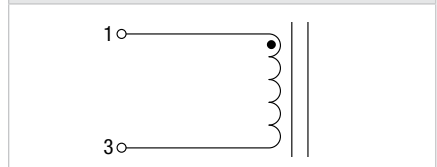
Package weight: See selection guide.

Recommended Footprint Details



Unless otherwise stated, all dimensions in mm (inches) ± 0.25 (0.010).

Pin Connections



Packaging

Supplied in trays (30 pieces per tray)

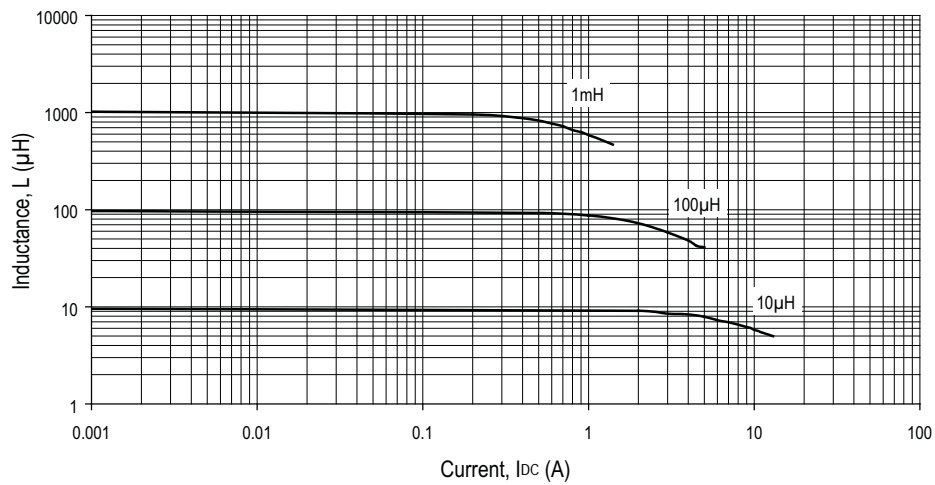
Specifications typical at $T_a = 25^\circ\text{C}$

1 For further information, please visit www.murata-ps.com/rohs

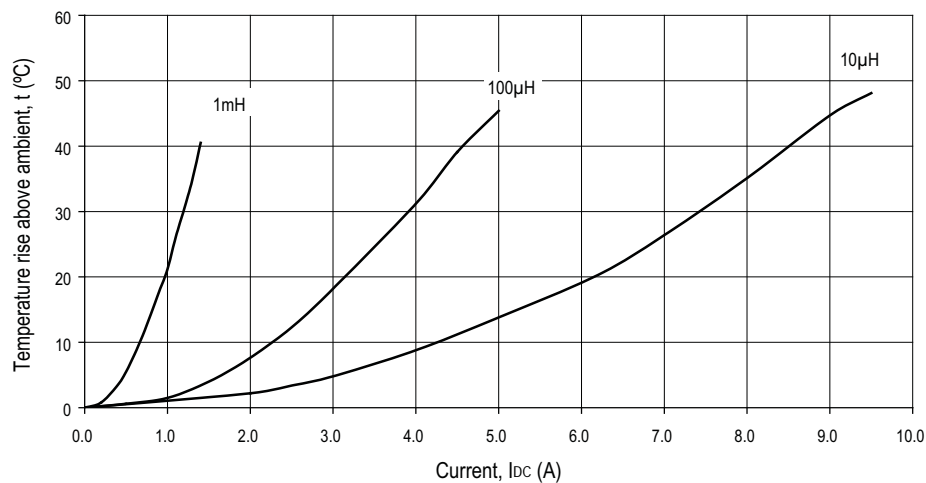
2 The maximum DC current is the value at which the inductance falls to 75% of its nominal value or when its temperature rise reaches 40°C, whichever is sooner.



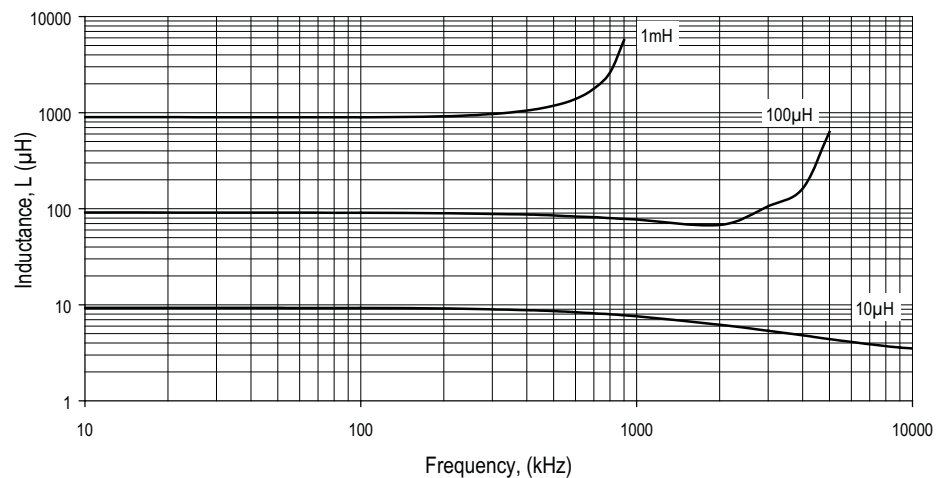
INDUCTANCE Vs CURRENT



TEMPERATURE Vs CURRENT



INDUCTANCE Vs FREQUENCY



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FEATURES

- RoHS compliant
- Toroidal construction
- Up to 7.6A loc
- Inductance range from 10μH to 1.0mH
- Low EMI
- UL 94V-0 packaging materials
- Low DC resistance

PRODUCT OVERVIEW

The 3300 series is a range of through-hole power inductors. Due to the toroidal construction, they exhibit a very low EMI as stray flux is kept to a minimum. Typical applications include switching regulators, and power line filtering.

SELECTION GUIDE

Order Code	Inductance, L	DC Current ²	DC Resistance	Q @ f MHz		SRF	Package Weight
	±15%	Max.	Max.	Nom.		Typ.	Typ.
	μH	A	mΩ	Q	f	MHz	g
33100C	10	7.60	20	3.4	1.0	68	20.8
33150C	15	6.20	27	3.3	1.0	49	21.3
33220C	22	5.10	33	3.4	1.0	37	21.5
33330C	33	4.20	40	3.5	1.0	24	22.0
33470C	47	3.50	48	3.4	1.0	17	22.5
33680C	68	2.90	57	3.5	1.0	16	22.9
33101C	100	2.40	70	3.9	0.8	9.7	23.7
33151C	150	2.00	84	3.8	0.8	7.2	24.9
33221C	220	1.60	102	3.2	0.8	2.0	26.1
33331C	330	1.30	126	3.4	0.8	1.9	27.8
33471C	470	1.10	152	2.6	0.8	1.4	29.5
33681C	680	0.92	183	0.64	0.8	0.9	31.5
33102C	1000	0.76	221	0.85	0.8	0.7	34.0

ABSOLUTE MAXIMUM RATINGS

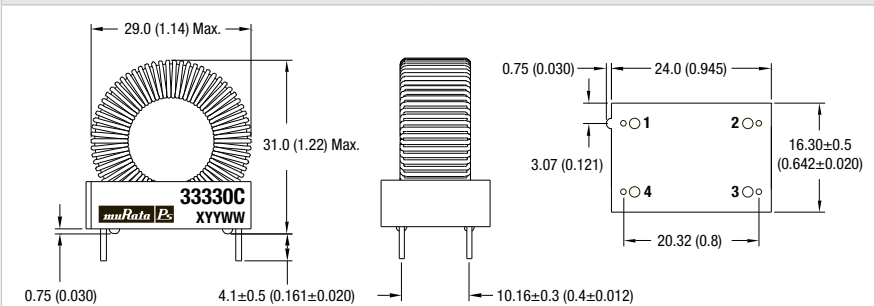
Operating free air temperature range	-40°C to 125°C
Storage temperature range	-40°C to 125°C

SOLDERING INFORMATION¹

Peak wave solder temperature	260°C
Pin finish	Tin

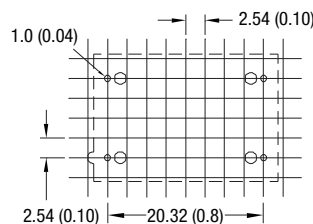
PACKAGE SPECIFICATIONS

Mechanical Dimensions



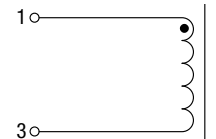
Package weight: See selection guide.

Recommended Footprint Details



Unless otherwise stated, all dimensions in mm (inches) ± 0.25 (0.010).

Pin Connections



Packaging

Supplied in trays (16 pieces per tray)

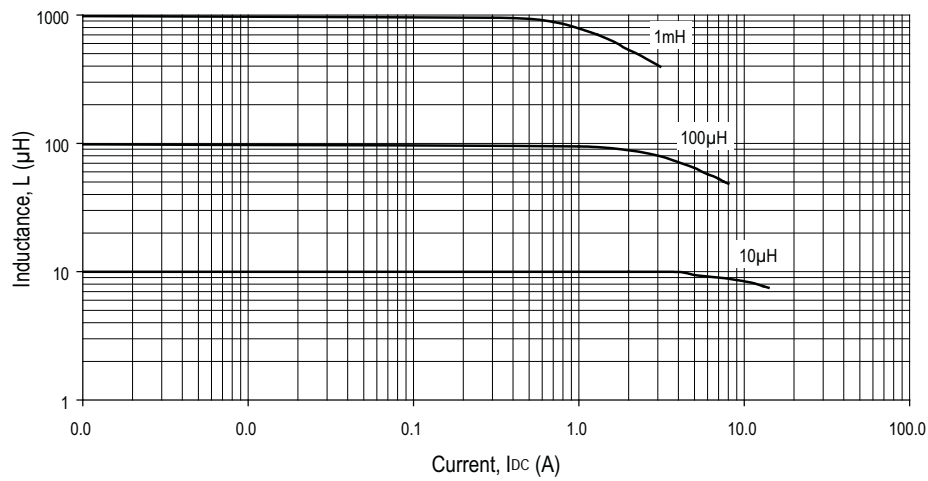
Specifications typical at $T_a = 25^\circ\text{C}$

1 For further information, please visit www.murata-ps.com/rohs

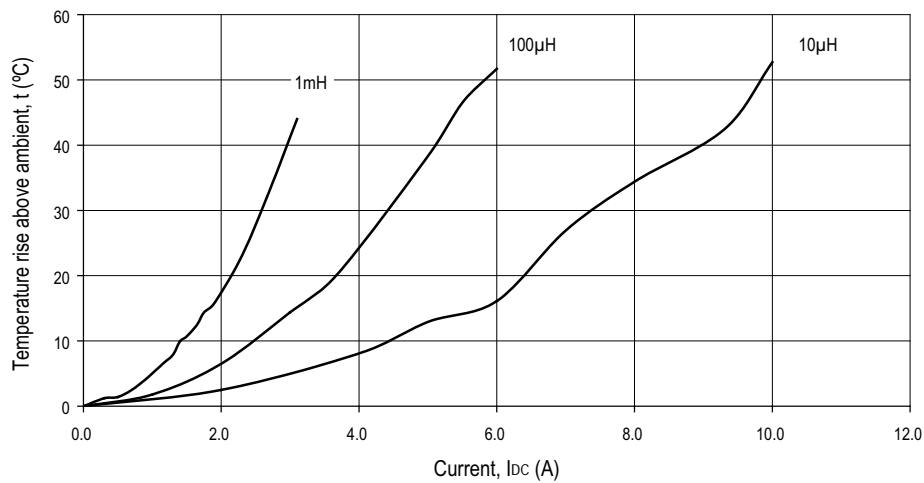
2 The maximum DC current is the value at which the inductance falls to 75% of its nominal value or when its temperature rise reaches 40°C, whichever is sooner.



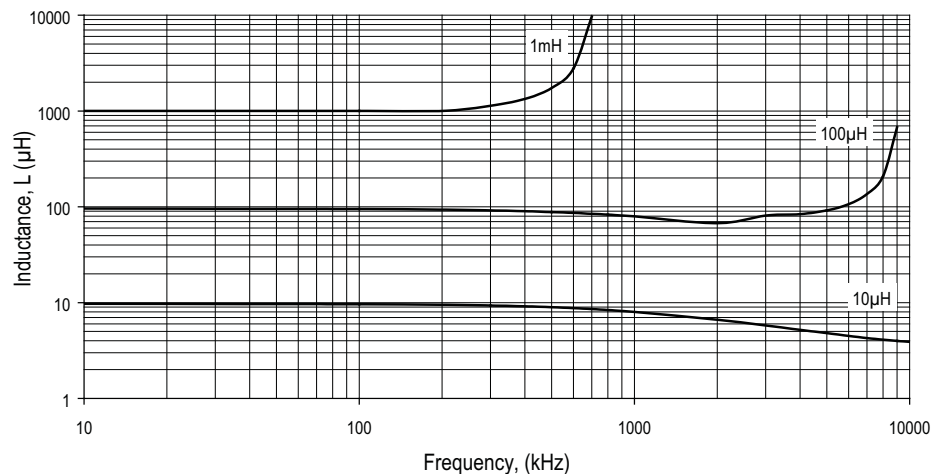
INDUCTANCE Vs CURRENT



TEMPERATURE Vs CURRENT



INDUCTANCE Vs FREQUENCY



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FEATURES

- RoHS compliant
- Up to 2.1A I_{DC}
- 2.2μH to 220μH
- Optional integral EMI shield
- Low R_{DC}
- Surface mount
- Compact size
- Tape and reel packaging
- J-STD-020C reflow
- Backward compatible with Sn/Pb soldering systems

DESCRIPTION

The 2300 series is a range of bobbin-wound, surface-mount inductors designed for use in switching power supply, and power line filter circuits. The parts are suitable for any application requiring a high saturation current in a miniature surface-mount footprint. Where EMI is a critical factor, the devices are available with an integral ferrite EMI shield.

SELECTION GUIDE (UNSHIELDED TYPES)

Order Code	Inductance (1 kHz, 100mV _{AC})	Inductance Range (1 kHz, 100mV _{AC})	DC Current ¹	DC Resistance
	Nom.	Min. - Max.	Max.	Max.
	μH	μH	A	Ω
232R2C	2.2	1.7 - 2.8	2.10	0.040
233R3C	3.3	2.3 - 3.9	1.80	0.058
234R7C	4.7	3.6 - 6.0	1.48	0.068
236R8C	6.8	5.1 - 8.6	1.22	0.102
23100C	10	7.6 - 12.7	1.02	0.138
23150C	15	11.3 - 18.9	0.86	0.210
23220C	22	16.8 - 28.1	0.74	0.361
23330C	33	24.6 - 41.0	0.64	0.497
23470C	47	34.6 - 57.6	0.55	0.683
23680C	68	51.0 - 85.0	0.49	1.051
23101C	100	74.2 - 124	0.43	1.281

SELECTION GUIDE (SHIELDED TYPES)

Order Code	Inductance (1 kHz, 100mV _{AC})	Inductance Range (1 kHz, 100mV _{AC})	DC Current ¹	DC Resistance
	Nom.	Min. - Max.	Max.	Max.
	μH	μH	A	Ω
23S2R2C	2.2	1.8 - 3.0	2.10	0.025
23S3R3C	3.3	2.7 - 4.5	1.80	0.031
23S4R7C	4.7	3.8 - 6.4	1.60	0.044
23S6R8C	6.8	5.2 - 8.6	1.40	0.064
23S100C	10	7.5 - 12.6	1.18	0.087
23S120C	12	9.4 - 15.6	1.08	0.107
23S150C	15	11.4 - 19.0	0.96	0.131
23S180C	18	13.6 - 22.6	0.88	0.143
23S220C	22	16.0 - 26.7	0.80	0.175
23S270C	27	20.0 - 33.3	0.72	0.218
23S330C	33	24.4 - 40.7	0.65	0.241
23S390C	39	29.3 - 48.8	0.60	0.370
23S470C	47	34.6 - 57.7	0.54	0.460
23S560C	56	42.4 - 70.6	0.50	0.509
23S680C	68	50.9 - 84.9	0.45	0.641
23S101C	100	75.8 - 126	0.37	0.782
23S151C	150	112 - 187	0.30	1.190
23S221C	220	167 - 279	0.25	2.280

ABSOLUTE MAXIMUM RATINGS

Operating free air temperature range	-40°C to 85°C
Storage temperature range	-40°C to 125°C

SOLDERING INFORMATION²

Peak reflow temperature	250°C
Pin finish	Hot dipped tin

Specifications typical at T_a = 25°C

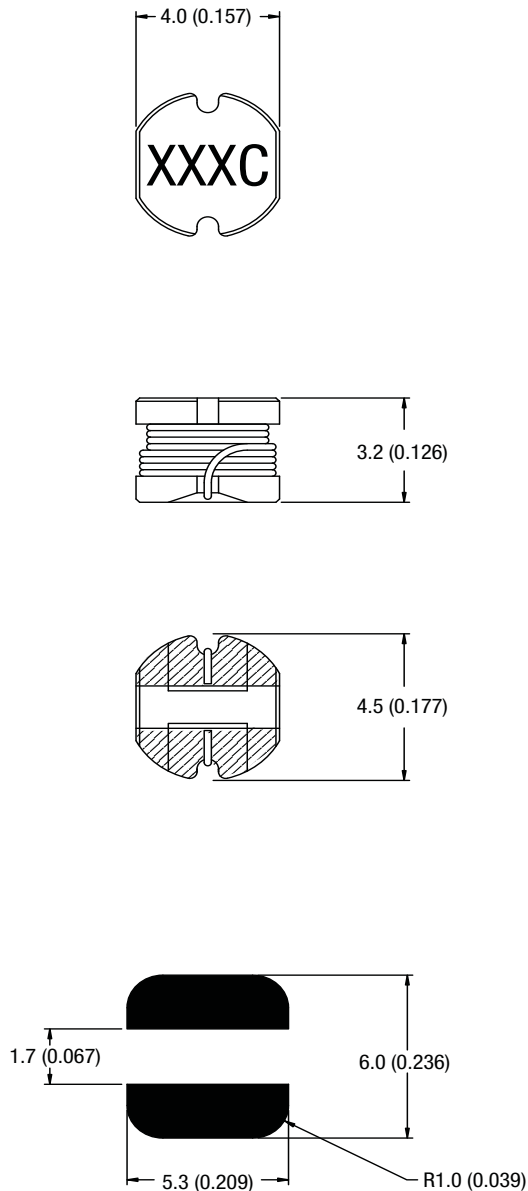
1 The maximum DC current is the value at which the inductance falls to 75% of its nominal value or when its temperature rise reaches 40°C, whichever is sooner.

2 For further information, please visit www.murata-ps.com/rohs



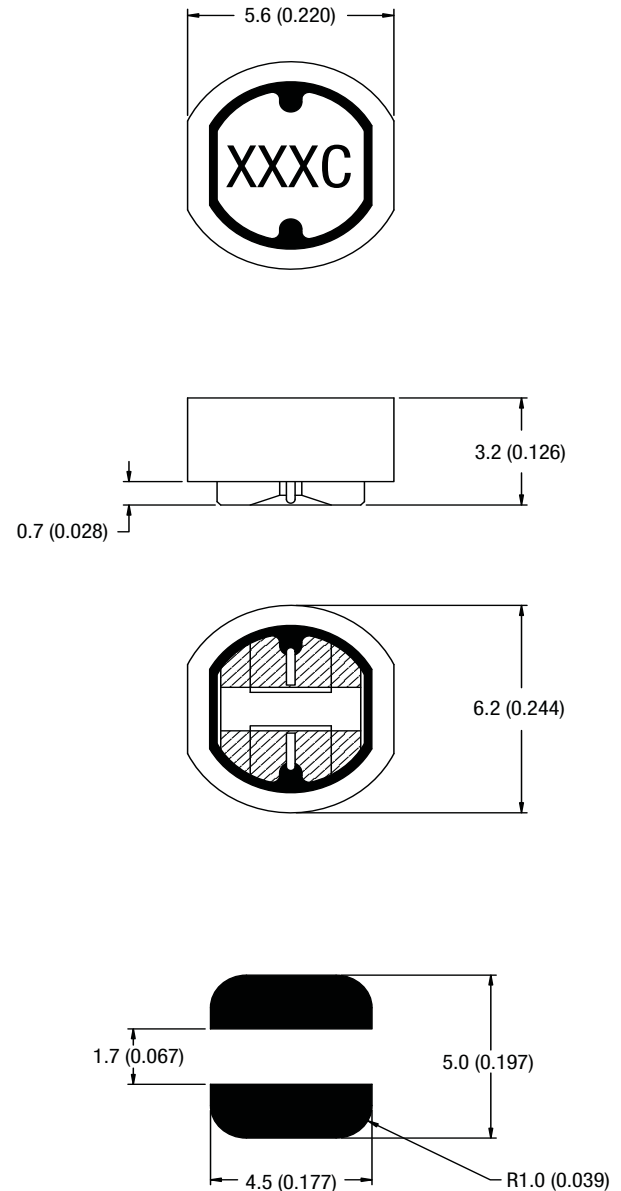
MECHANICAL DIMENSIONS

UNSHIELDED TYPES



Unless otherwise stated all dimensions in mm (inches) ± 0.25 (0.01).
 Package Weight 0.20g Typ.
 Hatching represents solder pads.

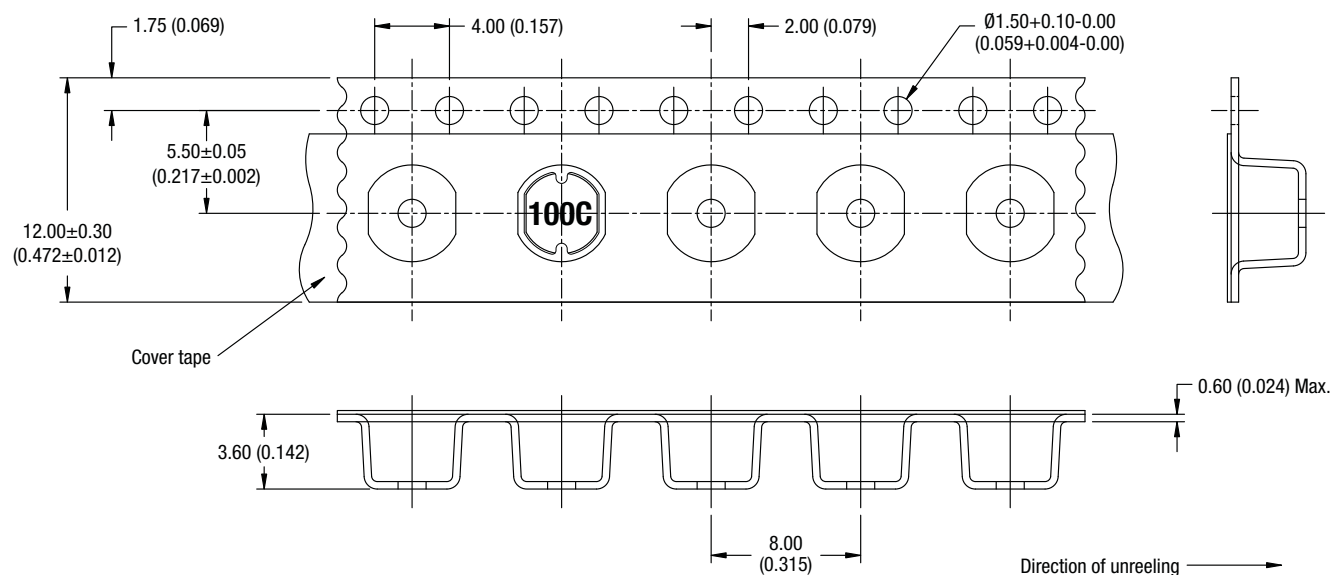
SHIELDED TYPES



Unless otherwise stated all dimensions in mm (inches) ± 0.25 (0.01).
 Package Weight 0.34g Typ.
 Hatching represents solder pads.

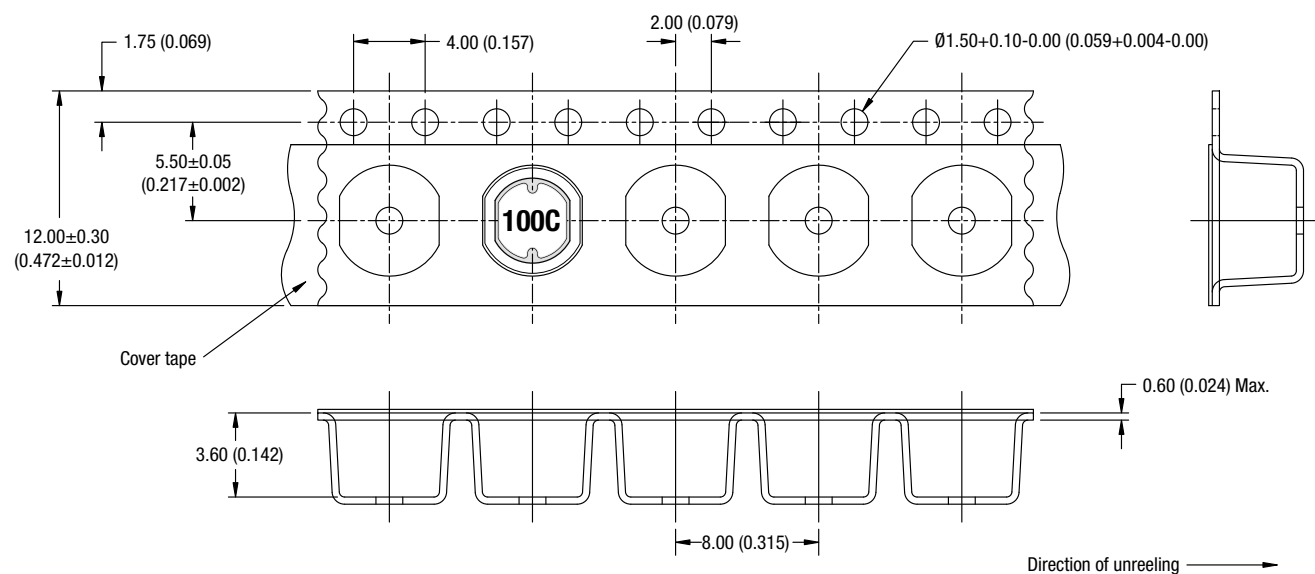
TAPE & REEL SPECIFICATIONS

TAPE OUTLINE DIMENSIONS - UNSHIELDED PARTS



All dimensions in mm (inches)

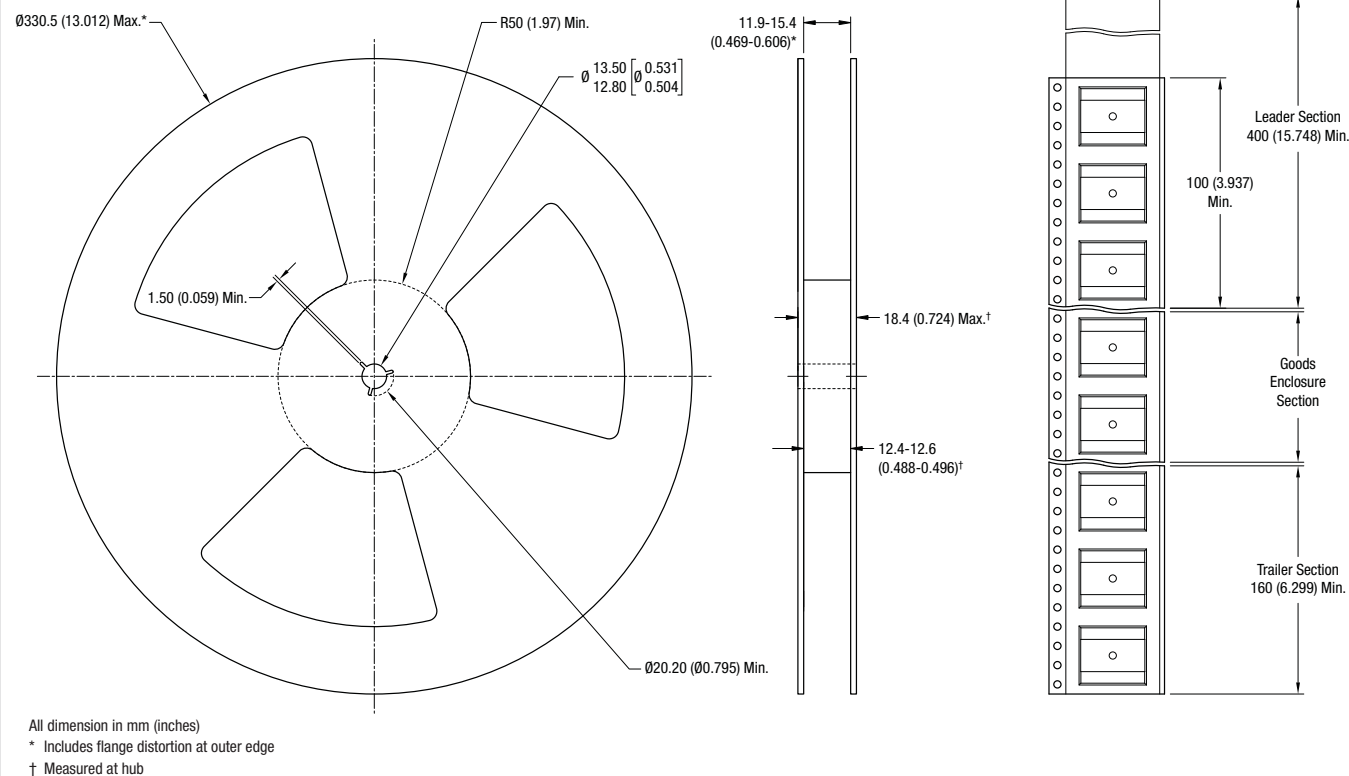
TAPE OUTLINE DIMENSIONS - SHIELDED PARTS



All dimensions in mm (inches)

TAPE & REEL SPECIFICATIONS

REEL OUTLINE DIMENSIONS



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FEATURES

- RoHS compliant
- Up to 3.1A I_{DC}
- 2.7μH to 220μH
- Optional integral EMI shield
- Low R_{DC}
- Surface mount
- Compact size
- Tape and reel packaging
- J-STD-020C reflow
- Backward compatible with Sn/Pb soldering systems

DESCRIPTION

The 2400 series is a range of bobbin-wound, surface-mount inductors designed for use in switching power supply, and power line filter circuits. The parts are suitable for any application requiring a high saturation current in a miniature surface-mount footprint. Where EMI is a critical factor, the devices are available with an integral ferrite EMI shield.

2400 Series

Bobbin Wound Surface Mount Inductors

SELECTION GUIDE (UNSHIELDED TYPES)

Order Code	Inductance (1kHz, 100mV _{AC})	Inductance Range (1kHz, 100mV _{AC})	DC Current ¹	DC Resistance	SRF (100mV _{rms})
	Nom.	Min. - Max.	Max.	Max.	Nom.
	μH	μH	A	mΩ	MHz
242R7C	2.7	2.04 - 3.78	2.60	39	57.0
243R3C	3.3	2.44 - 4.54	2.40	42	53.0
244R7C	4.7	3.37 - 6.25	2.10	50	45.0
246R8C	6.8	5.03 - 9.34	1.75	61	37.0
24100C	10	8.00 - 12.0	1.44	100	27.8
24120C	12	8.54 - 15.9	1.36	100	26.0
24150C	15	12.0 - 18.0	1.30	120	22.0
24180C	18	13.0 - 24.1	1.26	150	20.0
24220C	22	17.6 - 26.4	1.11	180	16.5
24330C	33	28.1 - 34.7	0.88	230	13.1
24470C	47	40.8 - 54.1	0.72	370	10.9
24680C	68	61.2 - 74.8	0.61	460	9.38
24101C	100	90.0 - 110	0.52	700	7.03
24151C	150	135 - 165	0.40	1100	5.13
24221C	220	198 - 242	0.35	1570	4.24

SELECTION GUIDE (SHIELDED TYPES)

Order Code	Inductance (1kHz, 100mV _{AC})	Inductance Range (1kHz, 100mV _{AC})	DC Current ¹	DC Resistance	SRF (100mV _{rms})
	Nom.	Min. - Max.	Max.	Max.	Nom.
	μH	μH	A	mΩ	MHz
24S2R7C	2.7	1.78 - 3.52	3.10	28	79.0
24S3R3C	3.3	2.07 - 4.68	2.80	32	63.0
24S4R7C	4.7	2.82 - 6.01	2.39	37	52.0
24S6R8C	6.8	4.40 - 9.17	2.00	45	39.0
24S100C	10	8.50 - 12.5	1.64	70	25.6
24S120C	12	7.65 - 15.2	1.50	74	29.0
24S150C	15	12.8 - 18.8	1.34	90	19.7
24S180C	18	11.1 - 22.7	1.22	91	23.0
24S220C	22	18.7 - 27.5	1.10	120	15.7
24S330C	33	28.1 - 41.3	0.90	190	11.2
24S470C	47	40.0 - 58.8	0.75	240	10.2
24S680C	68	57.8 - 85.0	0.63	370	8.09
24S101C	100	85.0 - 120	0.52	540	6.2
24S151C	150	128 - 180	0.42	860	4.88
24S221C	220	187 - 264	0.35	1310	3.58

ABSOLUTE MAXIMUM RATINGS

Operating free air temperature range	-40°C to 85°C
Storage temperature range	-40°C to 125°C

SOLDERING INFORMATION²

Peak reflow temperature	250°C
Pin finish	Hot dipped tin

Specifications typical at T_A = 25°C

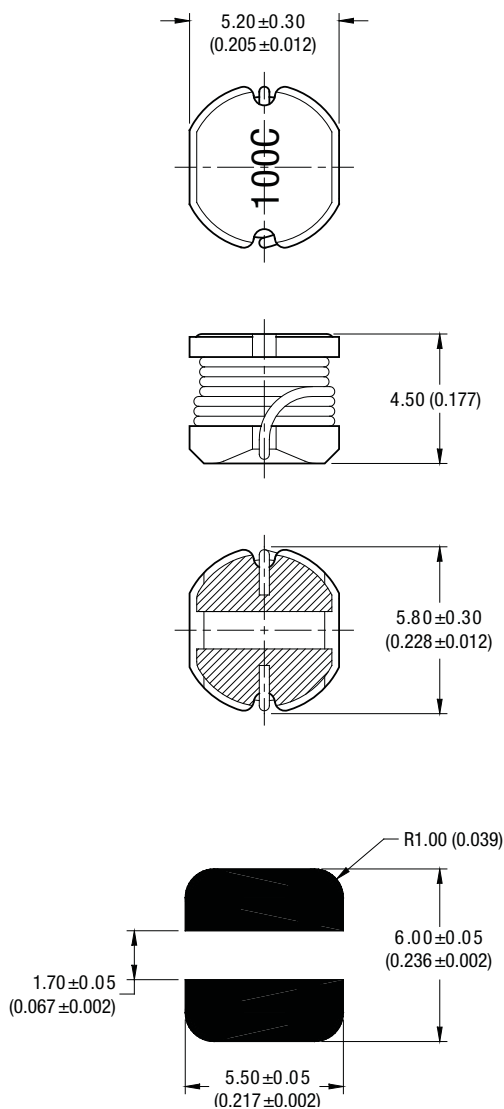
1 The maximum DC current is the value at which the inductance falls to 80% of its nominal value or when its temperature rise reaches 40°C, whichever is sooner.

2 For further information, please visit www.murata-ps.com/rohs



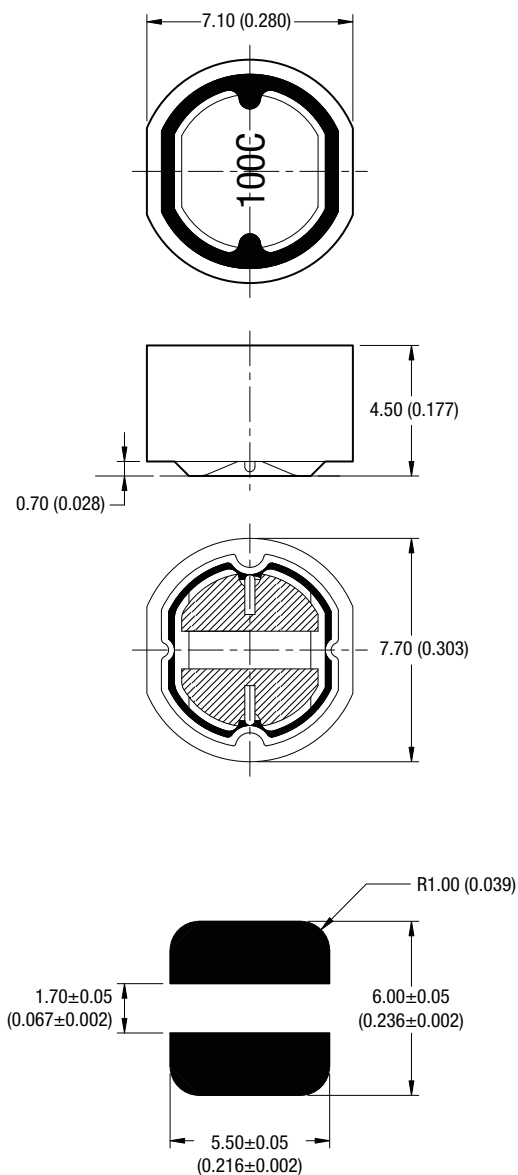
MECHANICAL DIMENSIONS

UNSHIELDED TYPES



Unless otherwise stated all dimensions in mm (inches)
 ± 0.25 (0.01). Package Weight 0.43g Typ.

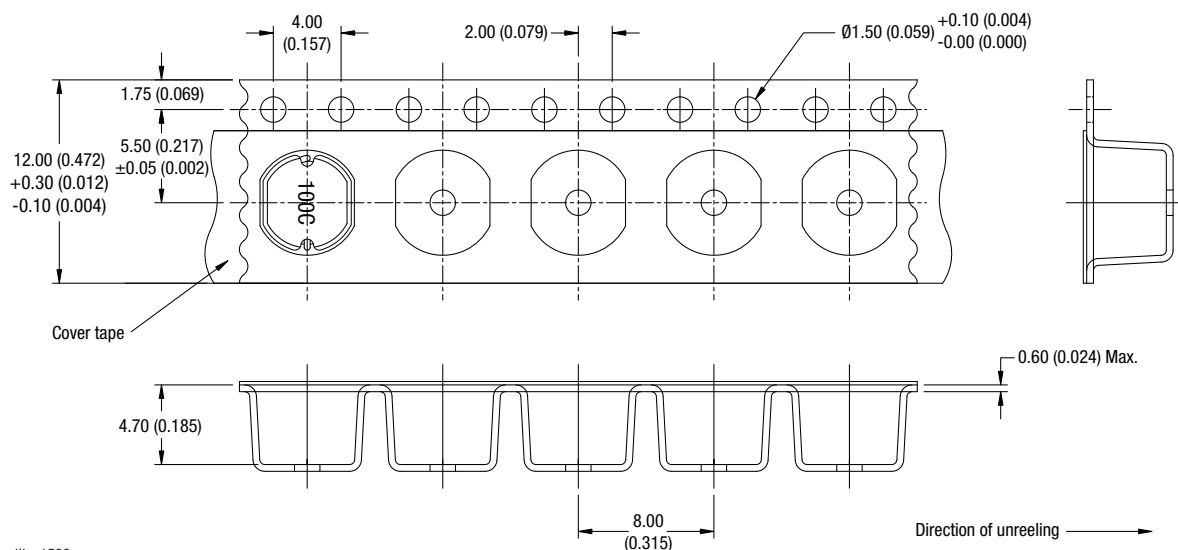
SHIELDED TYPES



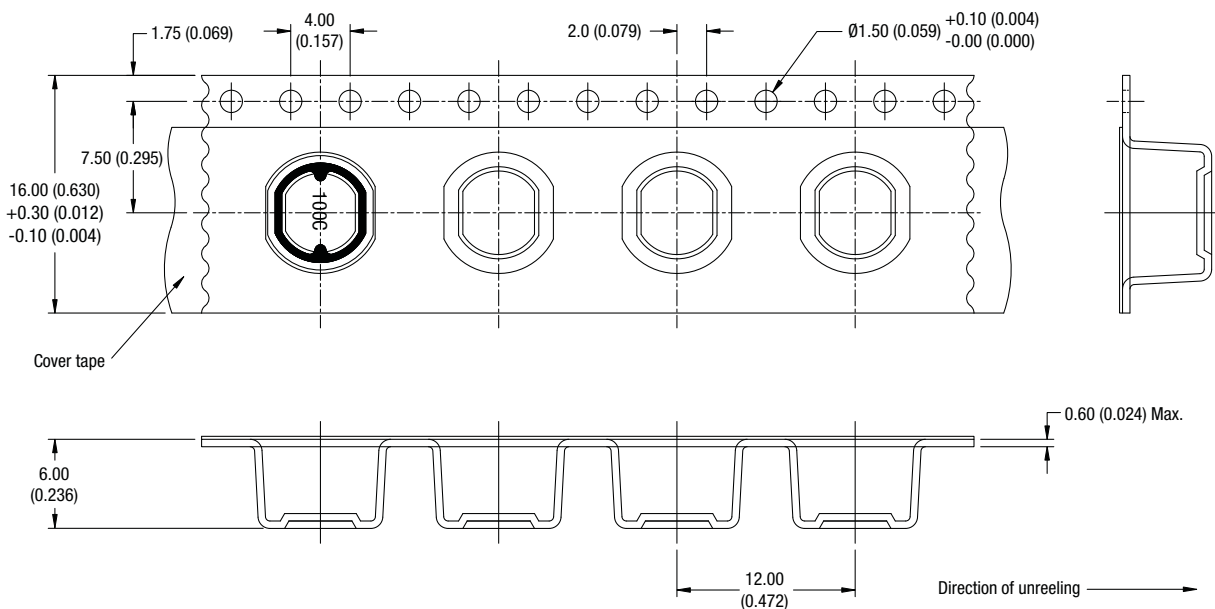
Unless otherwise stated all dimensions in mm (inches)
 ± 0.25 (0.01). Package Weight 0.72g Typ.

TAPE & REEL SPECIFICATIONS

TAPE OUTLINE DIMENSIONS - UNSHIELDED PARTS

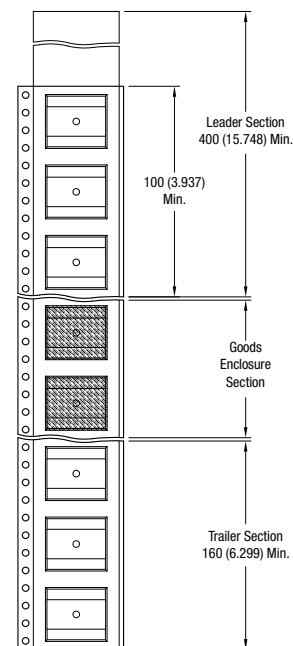
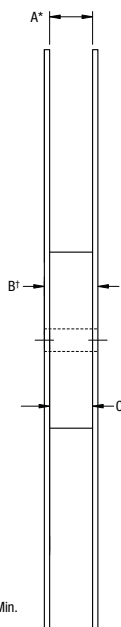
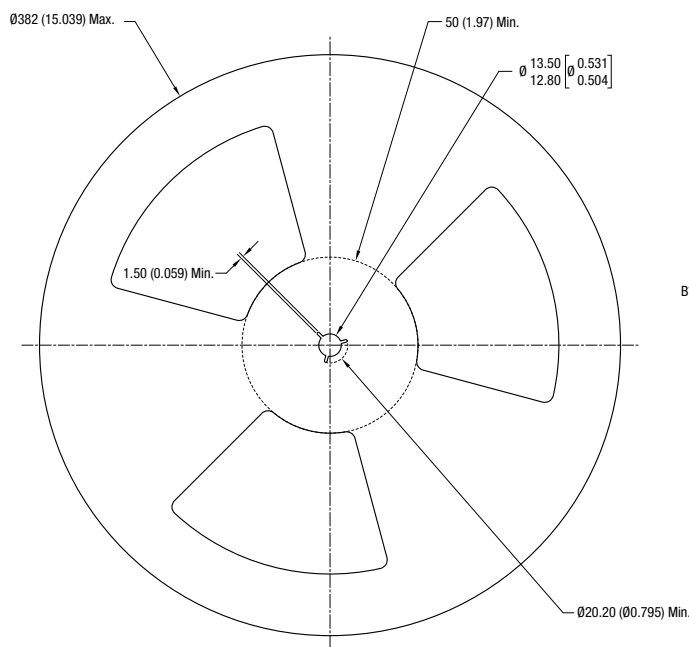


TAPE OUTLINE DIMENSIONS - SHIELDED PARTS



TAPE & REEL SPECIFICATIONS

REEL OUTLINE DIMENSIONS



All dimension in mm [inches]
 * Includes flange distortion at outer edge
 † Measured at hub

	A	B (Max.)	C
Unshielded Types	11.9-15.4 (0.469-0.606)	18.4 (0.724)	12.4-12.6 (0.488-0.496)
Shielded Types	15.9-19.4 (0.626-0.764)	22.4 (0.882)	16.4-16.6 (0.646-0.654)



FEATURES

- RoHS compliant
- Up to 4.6A I_{DC}
- 3.3μH to 680μH
- Optional integral EMI shield
- Low R_{DC}
- Surface mount
- Compact size
- Tape and reel packaging
- J-STD-020C reflow
- Backward compatible with Sn/Pb soldering systems

DESCRIPTION

The 2600 series is a range of bobbin-wound, surface-mount inductors designed for use in switching power supply, and power line filter circuits. The parts are suitable for any application requiring a high saturation current in a miniature surface-mount footprint. Where EMI is a critical factor, the devices are available with an integral ferrite EMI shield.

2600 Series

Bobbin Wound Surface Mount Inductors

SELECTION GUIDE (UNSHIELDED TYPES)

Order Code	Inductance (1kHz, 100mVAC)	Inductance Range (1kHz, 100mVAC)	DC Current ¹	DC Resistance	SRF (100mVrms)
	Nom.	Min. - Max.	Max.	Max.	Nom.
	μH	μH	A	mΩ	MHz
263R3C	3.3	2.13-3.95	4.40	35	53.0
264R7C	4.7	3.41-6.34	3.60	45	37.0
266R8C	6.8	5.00-9.28	3.10	54	31.0
26100C	10	8.00-12.0	2.60	60	24.8
26120C	12	7.95-14.8	2.42	68	24.0
26150C	15	12.0-18.0	2.27	90	20.2
26180C	18	12.9-24.0	2.10	87	19.0
26220C	22	17.6-26.4	1.95	100	16.9
26330C	33	26.4-39.6	1.50	120	12.8
26470C	47	42.3-51.7	1.28	170	10.2
26680C	68	61.2-74.8	1.11	220	8.37
26101C	100	90.0-110	0.97	350	6.56
26151C	150	135-165	0.78	470	5.20
26221C	220	198-242	0.66	730	4.00
26331C	330	297-363	0.52	1150	3.14
26471C	470	423-517	0.42	1480	2.54
26681C	680	612-748	0.28	2250	1.97

SELECTION GUIDE (SHIELDED TYPES)

Order Code	Inductance (1kHz, 100mVAC)	Inductance Range (1kHz, 100mVAC)	DC Current ¹	DC Resistance	SRF (100mVrms)
	Nom.	Min. - Max.	Max.	Max.	Nom.
	μH	μH	A	mΩ	MHz
26S3R3C	3.3	2.69-5.46	4.60	33	46.0
26S4R7C	4.7	3.58-7.15	3.80	38	38.0
26S6R8C	6.8	4.60-8.97	3.21	43	30.0
26S100C	10	8.00-12.0	2.65	50	22.9
26S120C	12	8.42-15.9	2.55	58	21.0
26S150C	15	12.0-18.0	2.45	60	19.7
26S180C	18	13.4-25.6	2.32	74	16.0
26S220C	22	18.7-26.4	2.20	70	15.5
26S330C	33	28.1-39.6	1.80	100	11.5
26S470C	47	40.0-56.4	1.50	120	9.44
26S680C	68	57.8-81.6	1.26	170	7.47
26S101C	100	85.0-120	1.05	250	6.04
26S151C	150	128-180	0.85	400	4.67
26S221C	220	187-264	0.70	520	3.75
26S331C	330	281-396	0.57	800	2.87
26S471C	470	400-564	0.48	1200	2.33
26S681C	680	578-816	0.40	1780	1.83

ABSOLUTE MAXIMUM RATINGS

Operating free air temperature range	-40°C to 85°C
Storage temperature range	-40°C to 125°C

SOLDERING INFORMATION²

Peak reflow temperature	245°C
Pin finish	Hot dipped tin

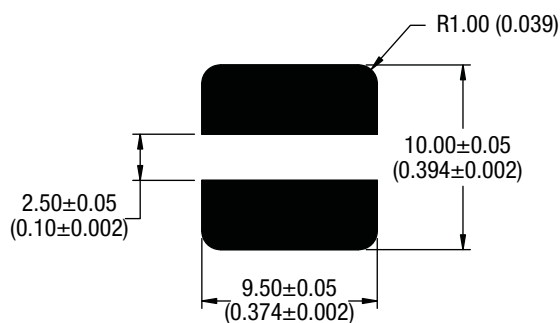
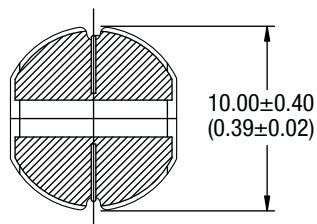
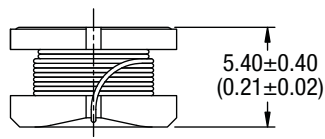
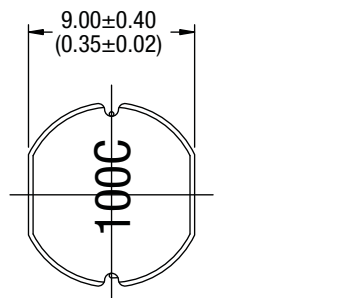
Specifications typical at T_a = 25°C

- The maximum DC current is the value at which the inductance falls to 80% of its nominal value or when its temperature rise reaches 40°C, whichever is sooner.
- For further information, please visit www.murata-ps.com/rohs



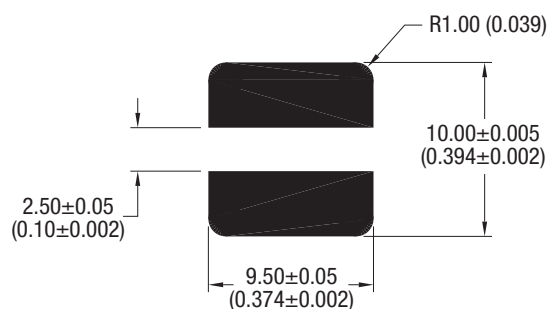
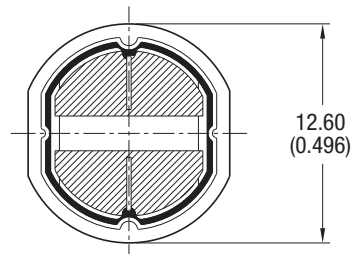
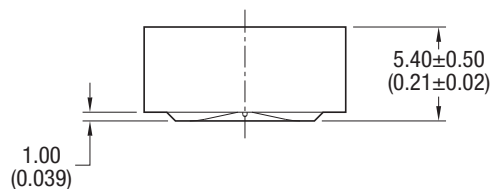
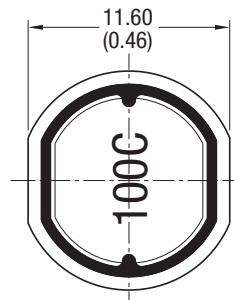
MECHANICAL DIMENSIONS

UNSHIELDED TYPES



Unless otherwise stated all dimensions in mm (inches)
±0.25 (0.01). Package Weight 1.54g Typ.

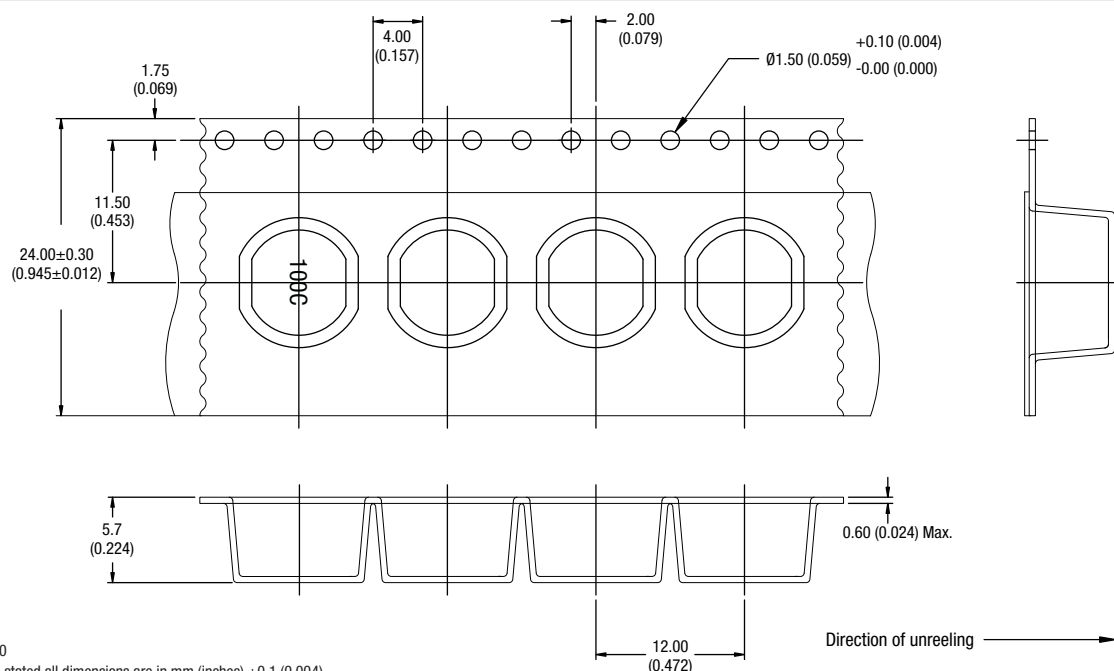
SHIELDED TYPES



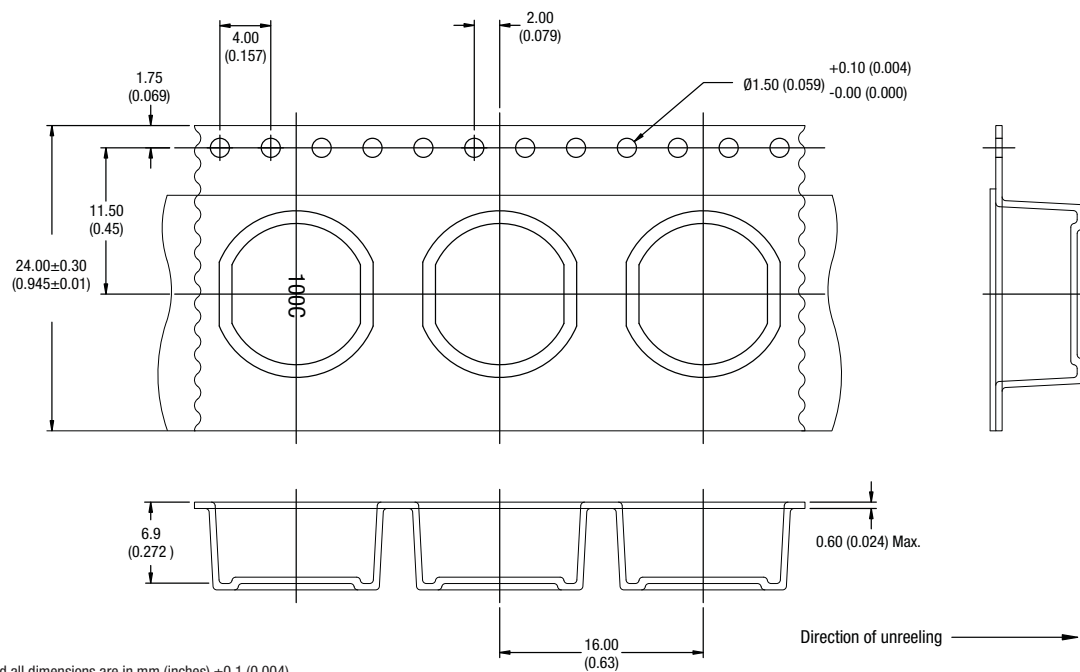
Unless otherwise stated all dimensions in mm (inches)
±0.25 (0.01). Package Weight 2.34g Typ.

TAPE & REEL SPECIFICATIONS

TAPE OUTLINE DIMENSIONS - UNSHIELDED PARTS

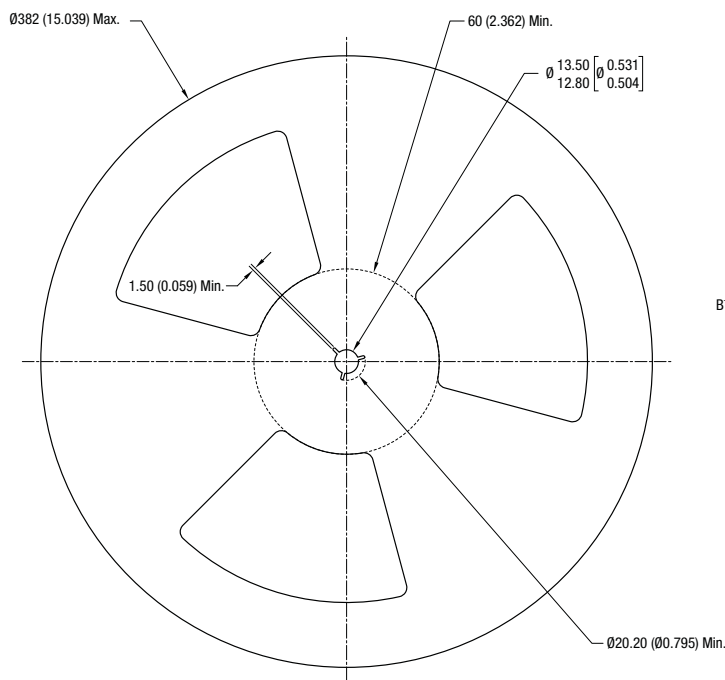


TAPE OUTLINE DIMENSIONS - SHIELDED PARTS

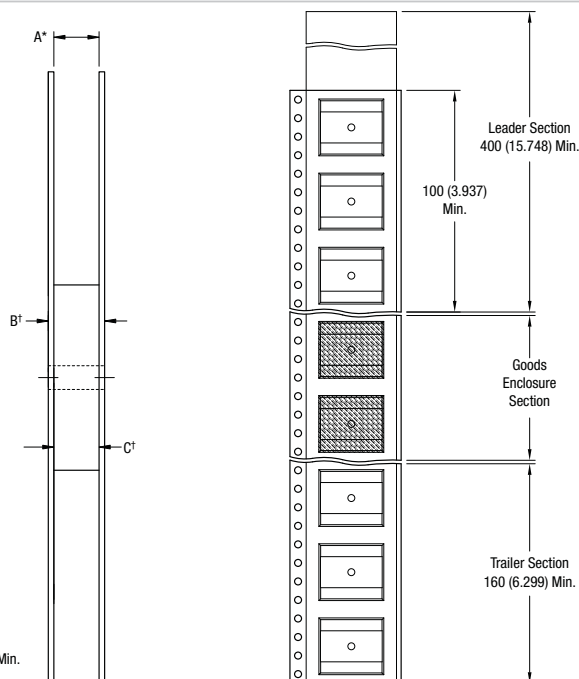


TAPE & REEL SPECIFICATIONS

REEL OUTLINE DIMENSIONS



All dimension in mm [inches]
 * Includes flange distortion at outer edge
 † Measured at hub



	A	B (Max.)	C
Unshielded Types	23.9-27.4 (0.94-1.08)	30.4 (1.197)	24.4-26.4 (0.96-1.04)
Shielded Types	23.9-27.4 (0.94-1.08)	30.4 (1.197)	24.4-26.4 (0.96-1.04)



FEATURES

- RoHS compliant
- Compact size, low profile
- Surface mount design
- Inductance range from 1.0μH to 3.3mH
- Tape & reel packaging
- UL 94V-0
- Custom solutions available

PRODUCT OVERVIEW

The 2800 series is a range of bobbin-wound, surface-mount inductors designed for use in switching power supply, and power line filter circuits. The parts are suitable for any application requiring a high saturation current in a miniature surface-mount footprint.

SELECTION GUIDE

Order Code	Inductance (1kHz, 100mV _{AC})	Inductance Range (1kHz, 100mV _{AC})	DC Current ²	DC Resistance	Q@f MHz		SRF
	Nom.	Min.-Max.	Max.	Max.	Nom.		Typical
	μH	μH	A	mΩ	Q	F	MHz
28102C	1.0	0.68 - 1.02	15.5	2.6	45.6	1.0	104
28152C	1.5	1.12 - 1.68	12.5	3.6	43.9	1.0	72
28222C	2.2	1.56 - 2.34	11.2	4.4	36.9	1.0	58
28332C	3.3	2.84 - 4.26	9.3	7.5	34.6	1.0	42
28472C	4.7	3.68 - 5.52	8.3	10	33.3	1.0	37
28682C	6.8	5.52 - 8.28	6.8	14	31.2	1.0	29
28103C	10	7.84 - 11.76	5.9	18	31.1	1.0	22.5
28153C	15	12.0 - 18.0	4.77	28	31.0	1.0	17.8
28223C	22	17.7 - 26.5	3.85	42	43.5	1.0	14.4
28333C	33	26.2 - 39.4	3.22	63	42.8	1.0	11.8
28473C	47	39.0 - 58.4	2.66	86	31.5	1.0	10.4
28683C	68	55.4 - 83.0	2.16	122	33.9	1.0	8.6
28104C	100	80.8 - 121.2	1.80	174	21.4	0.8	7.7
28154C	150	121 - 181	1.40	276	20.9	0.8	6.7
28224C	220	178 - 266	1.20	381	18.0	0.8	5.8
28334C	330	266 - 398	0.95	575	30.8	0.8	5.0
28474C	470	383 - 575	0.78	816	31.7	0.8	4.3
28684C	680	548 - 822	0.64	1170	20.4	0.8	4.2
28105C	1000	940 - 1150	0.51	1820	21.0	0.8	3.8
28155C	1500	1390 - 1700	0.41	2620	19.8	0.8	3.4
28225C	2200	1960 - 2400	0.35	3720	15.8	0.8	3.3
28335C	3300	3030 - 3700	0.29	5760	12.8	0.8	3.2

ABSOLUTE MAXIMUM RATINGS

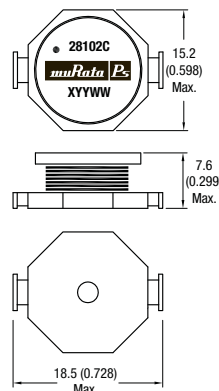
Operating free air temperature range	-40°C to 125°C
Storage temperature range	-40°C to 150°C

SOLDERING INFORMATION¹

Peak reflow solder temperature	245°C
Pin finish	Tin

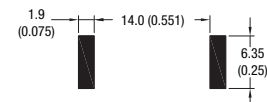
PACKAGE SPECIFICATIONS

Mechanical Dimensions



Package weight: 3.9g Typ.
All dimensions in mm (inches)
Dot signifies the innermost turn of the winding

Recommended Footprint Details

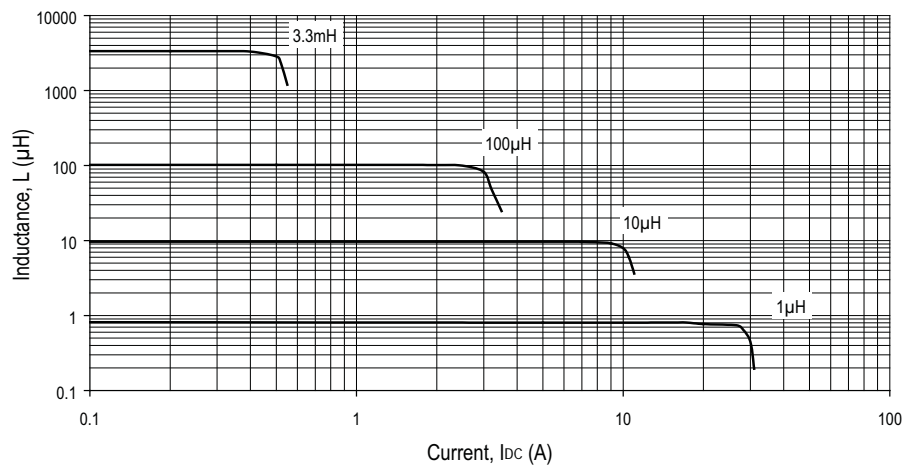


Specifications typical at T_A = 25°C

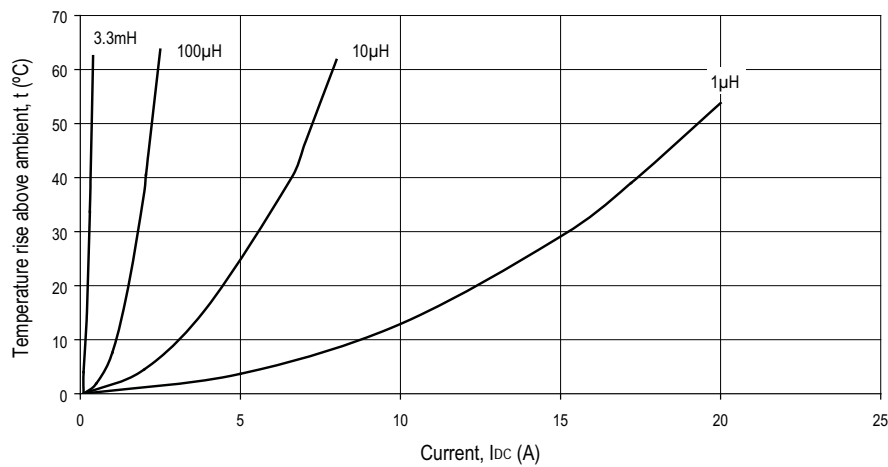
- For further information, please visit www.murata-ps.com/rohs
- The maximum DC current is the value at which the inductance falls to 75% of its nominal value or when its temperature rise reaches 40°C, whichever is sooner.



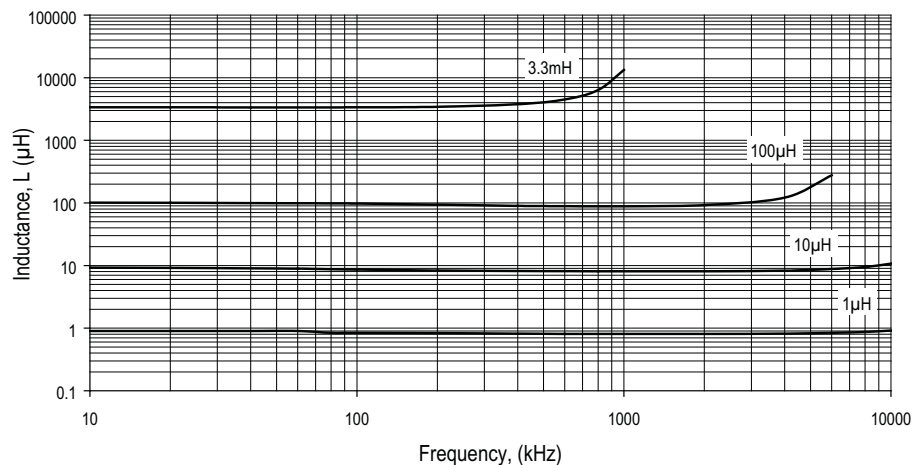
INDUCTANCE Vs CURRENT



TEMPERATURE Vs CURRENT

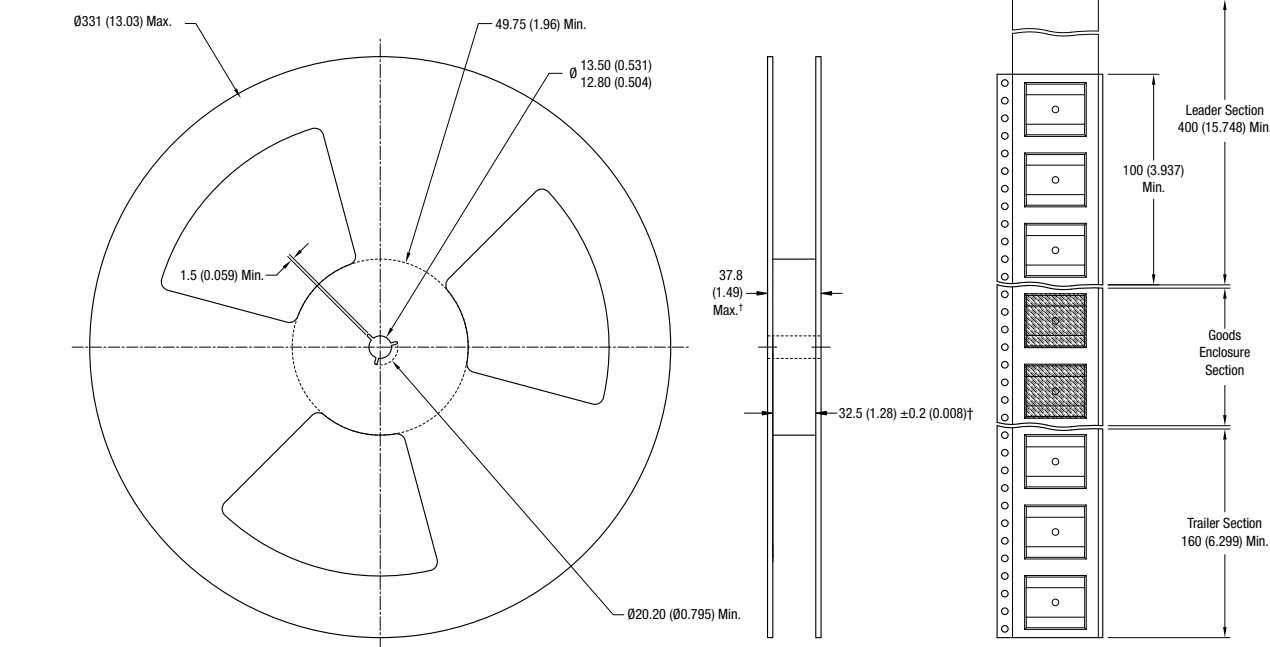


INDUCTANCE Vs FREQUENCY



PACKAGE SPECIFICATIONS

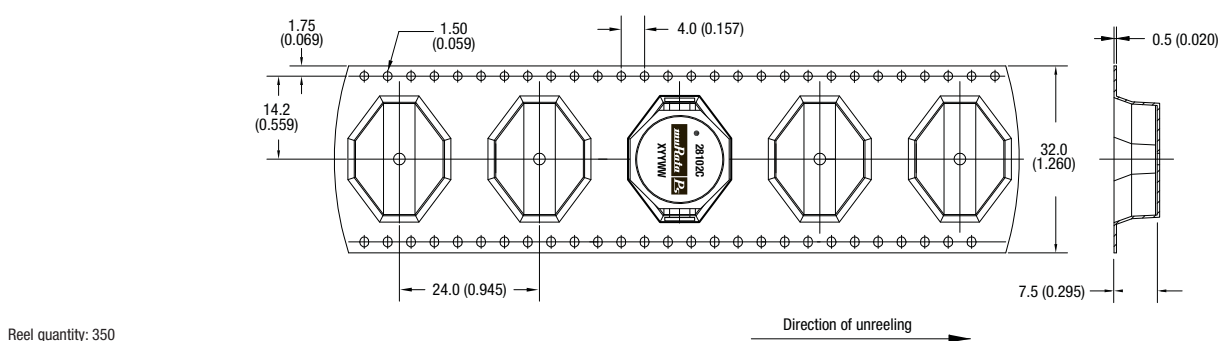
Mechanical Dimensions



All dimension in mm (inches)

† Measured at hub

Tape Outline Dimensions



Reel quantity: 350

All dimensions in mm (inches)

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Website: www.murata-ps.jp

China: Shanghai, Tel: +86 215 027 3678, email: shanghai@murata-ps.com

Guangzhou, Tel: +86 208 221 8066, email: guangzhou@murata-ps.com



FEATURES

- RoHS compliant
- Up to 2.0A I_{DC}
- 1.0μH to 470μH
- Ultra low profile
- Low R_{DC}
- Tape and reel packaging
- J-STD-020C reflow
- Backward compatible with Sn/Pb soldering systems

DESCRIPTION

The 8200 series is a range of miniature, surface-mount, I-core power inductors. They are designed for use in power applications with restricted PCB space and height, such as ExpressCard™ technology, handheld devices, DC-DC converters and notebook computers. The products are supplied in tape and reel for high-volume, automated surface-mount assembly.

8200 Series

Miniature Surface Mount Power Inductors

SELECTION GUIDE

Order Code	Inductance, L		Idc (Max.) ¹	Q Factor		SRF (Typ.)	Rdc (Max.)
	0.1V @ 10KHz	Tolerance		Q (Min.)	at frequency		
	μH	%	A			MHz	Ω
82102C	1.0	±20%	2.0	18	1MHz	133	0.058
82152C	1.5	±20%	1.4	18	1MHz	103	0.068
82222C	2.2	±20%	1.1	18	1MHz	85	0.104
82332C	3.3	±20%	0.95	18	1MHz	67	0.138
82472C	4.7	±20%	0.80	20	1MHz	58	0.190
82682C	6.8	±20%	0.64	20	1MHz	46	0.270
82103C	10	±10%	0.50	35	1MHz	38	0.400
82153C	15	±10%	0.40	35	1MHz	31	0.560
82223C	22	±10%	0.32	35	1MHz	25	0.920
82333C	33	±10%	0.27	40	1MHz	20	1.30
82473C	47	±10%	0.25	40	1MHz	17	1.69
82683C	68	±10%	0.20	40	1MHz	15	2.55
82104C	100	±10%	0.16	40	800k	13	3.5
82154C	150	±10%	0.13	40	800k	11	5.9
82224C	220	±10%	0.10	40	800k	10	8.0
82334C	330	±10%	0.08	40	800k	9	13.5
82474C	470	±10%	0.07	50	800k	9	16.8

ABSOLUTE MAXIMUM RATINGS

Operating free air temperature range	-40°C to 85°C
Storage temperature range	-40°C to 125°C

SOLDERING INFORMATION²

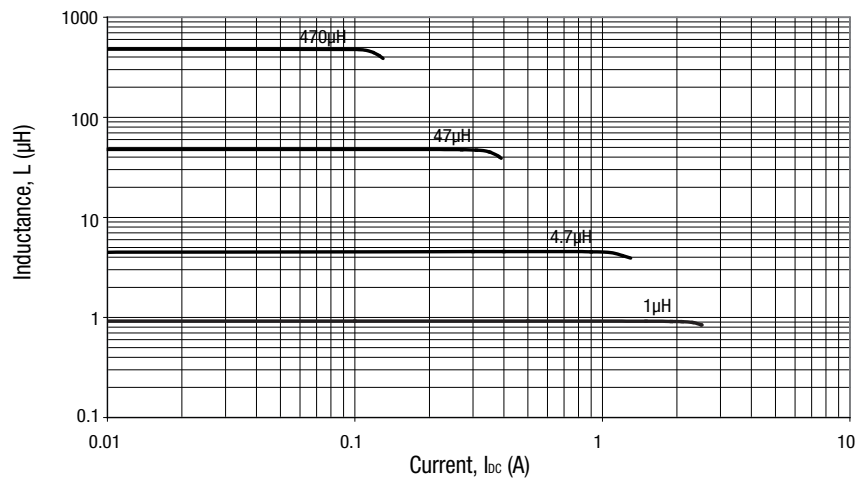
Peak reflow temperature	260°C
Pin finish	Reflowed SAC305

Specifications typical at T_a = 25°C

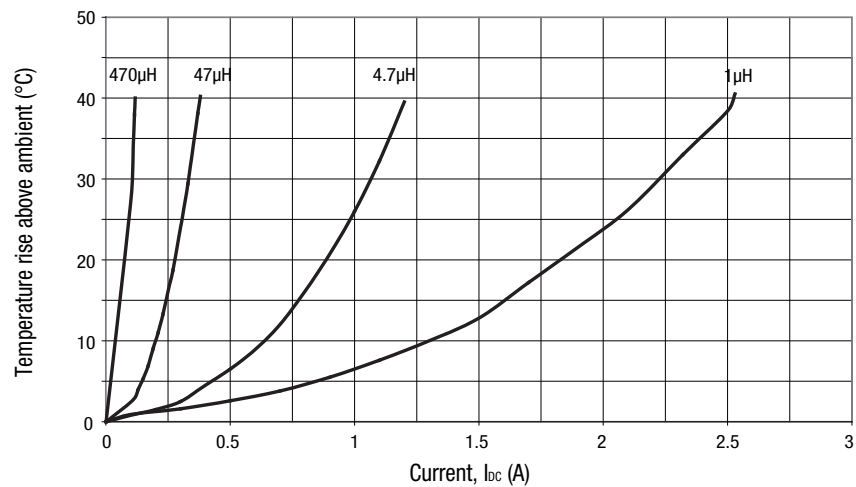
- 1 The maximum DC current occurs when either the inductance falls to 75% of its nominal value or when its temperature rise reaches 40°C, whichever is sooner.
- 2 For further information, please visit www.murata-ps.com/rohs



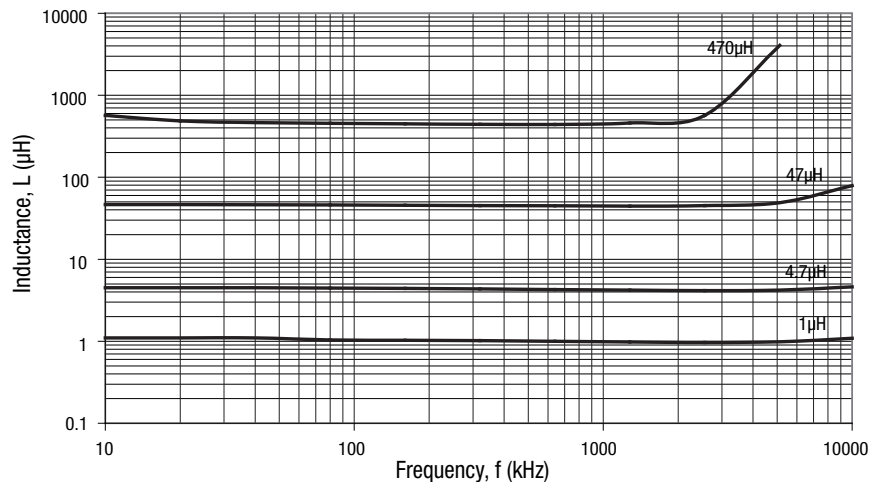
INDUCTANCE Vs CURRENT



TEMPERATURE Vs CURRENT

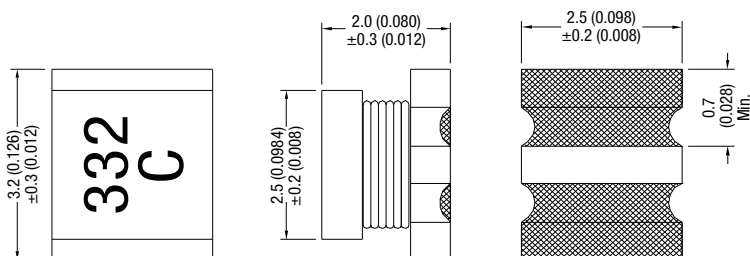


INDUCTANCE Vs FREQUENCY



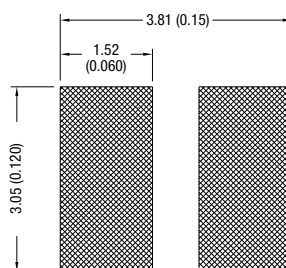
PACKAGE SPECIFICATIONS

MECHANICAL DIMENSIONS



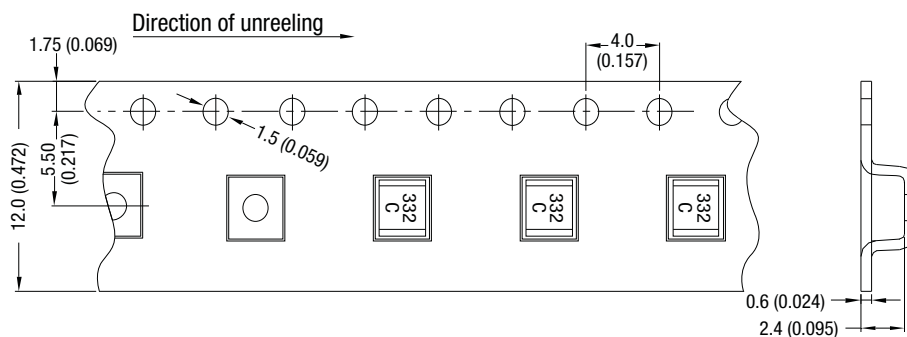
Unless otherwise stated all dimensions in mm (inches) ± 0.25 (0.01).
Package Weight 0.06g Typ.

RECOMMENDED FOOTPRINT



Unless otherwise stated all dimensions in mm (inches) ± 0.25 (0.01).

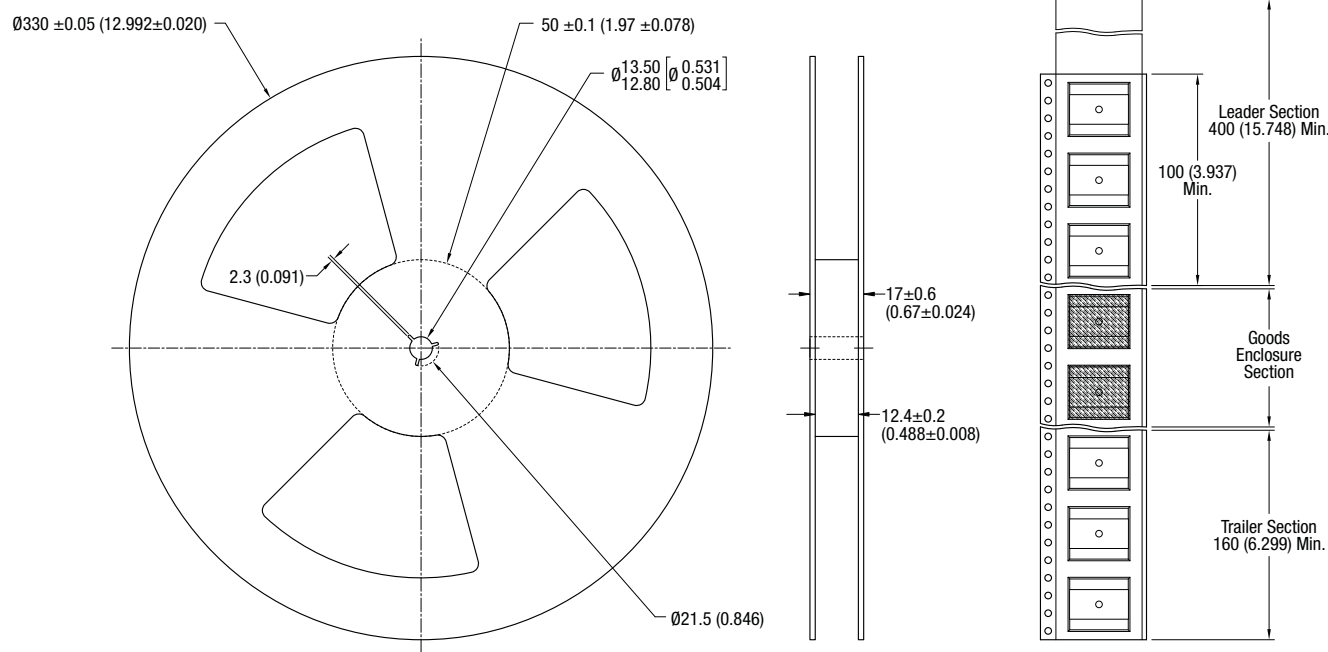
TAPE OUTLINE DIMENSIONS



Reel Quantity: 2500
Unless otherwise stated all dimensions in mm (inches)

PACKAGE SPECIFICATIONS (continued)

REEL OUTLINE DIMENSIONS



All dimension in mm [inches]
Tape and reel specifications conform with international standards EIA-481-C

Murata Power Solutions, Inc.

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China: Shanghai, Tel: +86 215 027 3678, email: shanghai@murata-ps.com
Guangzhou, Tel: +86 208 221 8066, email: guangzhou@murata-ps.com



FEATURES

- RoHS compliant
- Up to 2.8A I_{DC}
- 1.0μH to 2.2mH
- Low R_{DC}
- Small footprint
- Ultra-low profile
- UL 94V-0 packaging materials
- J-STD-020C reflow
- Custom inductance values available

PRODUCT OVERVIEW

The 8400 series is a range of miniature, surface-mount, I-core power inductors. They are designed for use in power applications with restricted PCB space and height, such as ExpressCard™ technology, handheld devices, DC-DC converters and notebook computers. The products are supplied in tape and reel for high-volume, automated surface-mount assembly.

SELECTION GUIDE

Order Code	Inductance, L	DC Current ²	DC Resistance
	±10% μH	Max. A	Max. Ω
84102C	1.0±20%	2.80	0.08
84132C	1.3±20%	2.50	0.08
84222C	2.2±20%	2.00	0.09
84332C	3.3±20%	1.50	0.12
84472C	4.7±20%	1.30	0.15
84682C	6.8±20%	1.05	0.20
84103C	10	0.95	0.24
84153C	15	0.75	0.45
84223C	22	0.60	0.60
84333C	33	0.55	0.86
84473C	47	0.42	1.1
84683C	68	0.38	1.6
84104C	100	0.30	2.0
84154C	150	0.25	3.2
84224C	220	0.20	4.6
84334C	330	0.17	6.5
84474C	470	0.14	8.5
84684C	680	0.12	11.5
84105C	1000	0.09	18.0
84155C	1500	0.08	27.0
84225C	2200	0.05	45

ABSOLUTE MAXIMUM RATINGS

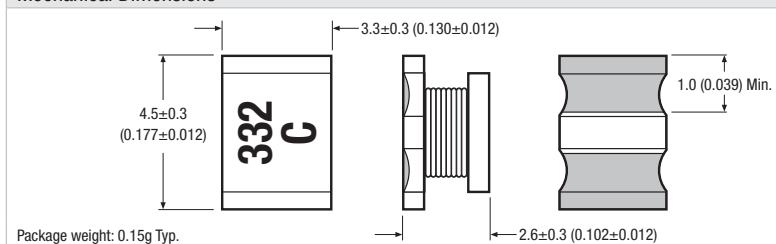
Operating free air temperature range	-40°C to 125°C
Storage temperature range	-40°C to 150°C

SOLDERING INFORMATION¹

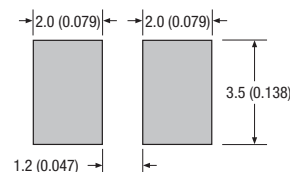
Peak reflow solder temperature	250°C
Pin finish	SAC 305
Moisture sensitivity level	1

PACKAGE SPECIFICATIONS

Mechanical Dimensions



Recommended Footprint Details



All dimensions in mm (inches)

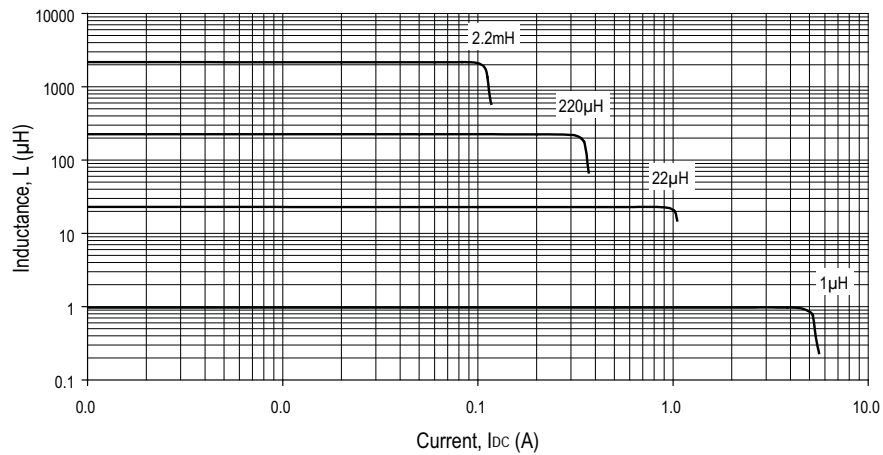
Specifications typical at T_A = 25°C

1 For further information, please visit www.murata-ps.com/rohs

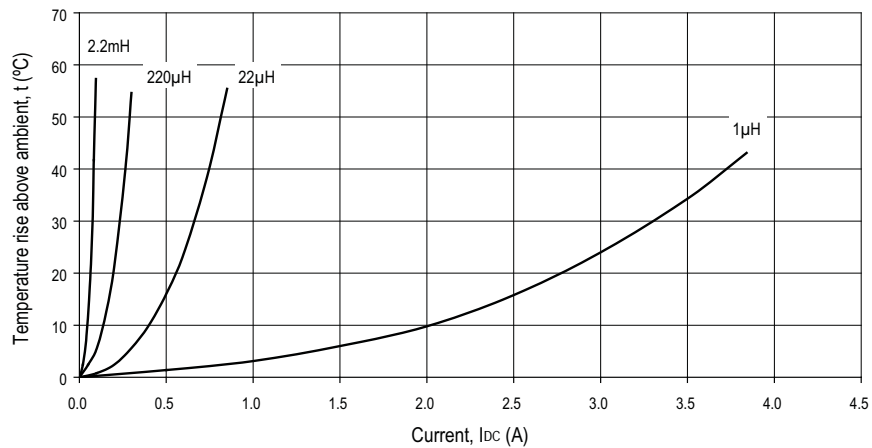
2 The maximum DC current is the value at which the inductance falls to 75% of its nominal value or when its temperature rise reaches 40°C, whichever is sooner.



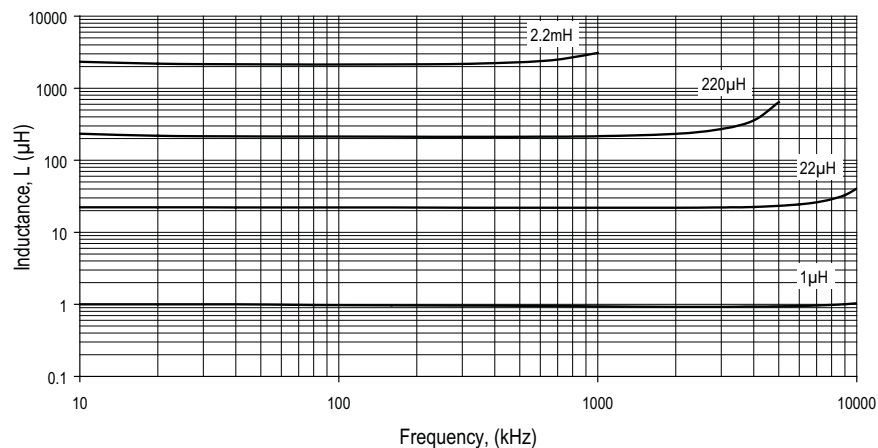
INDUCTANCE Vs CURRENT



TEMPERATURE Vs CURRENT

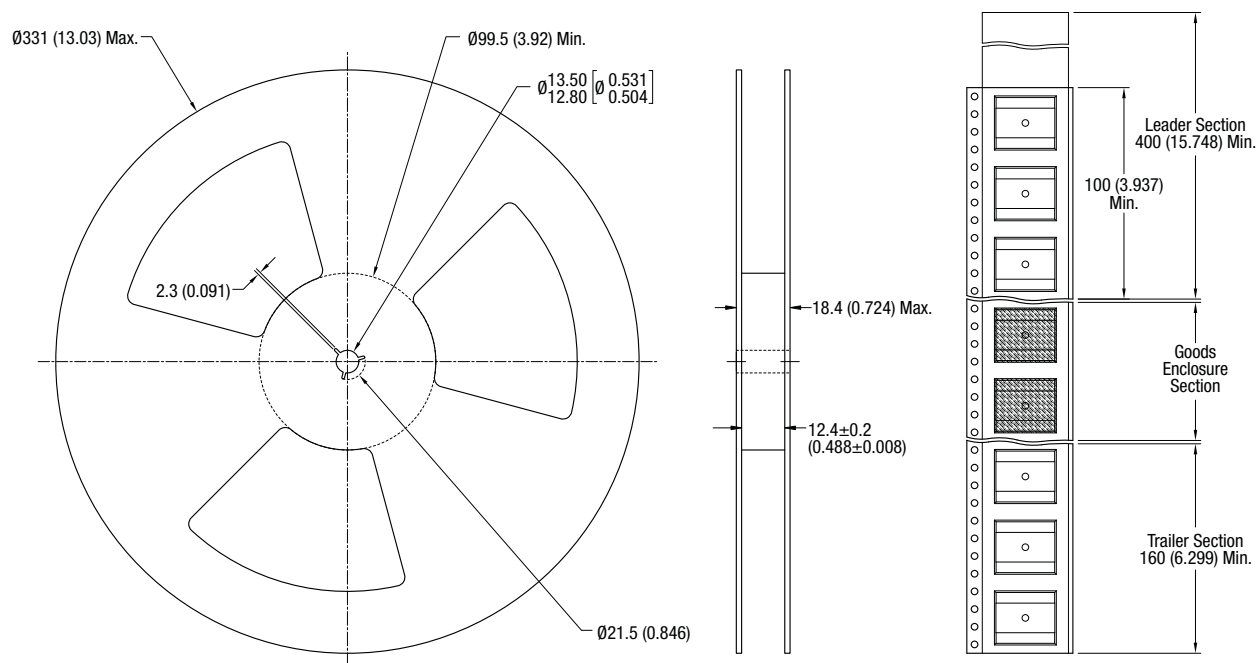


INDUCTANCE Vs FREQUENCY



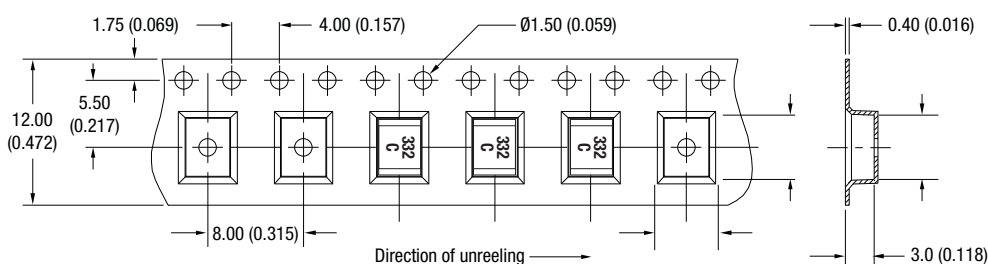
PACKAGE SPECIFICATIONS

Mechanical Dimensions



All dimension in mm [inches]

Tape Outline Dimensions



Reel quantity: 2000

Unless otherwise stated, all dimensions in mm (inches).

Murata Power Solutions, Inc.

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FEATURES

- RoHS compliant
- Inductance range from 1.2μH to 220μH
- Small footprint
- Ultra-low profile
- UL 94V-0 packaging materials
- Tape & reel
- J-STD-020C reflow
- Custom inductance values available

PRODUCT OVERVIEW

The 3400L series is a lower profile version of our 3400 series range of bobbin-wound, shielded inductors. They are suitable for power-line filtering found in consumer electronics such as desktop computers, handheld devices and GPS systems, as well as in a vast range of industrial and telecom applications including network hubs, bridges/routers, and high frequency wireless communication devices.

These surface mount inductors are extremely compact and have an integral shield, making them useful in EMI sensitive applications.



SELECTION GUIDE

Order Code	Inductance, L	DC Current ²	DC Resistance
	±20%	Max.	Max.
	μH	A	Ω
34L122C	1.2 ± 30%	1.70	0.075
34L152C	1.5 ± 30%	1.65	0.085
34L222C	2.2 ± 30%	1.35	0.100
34L332C	3.3 ± 30%	1.00	0.150
34L472C	4.7 ± 30%	0.70	0.180
34L682C	6.8 ± 30%	0.68	0.265
34L103C	10	0.66	0.325
34L153C	15	0.65	0.520
34L223C	22	0.48	0.780
34L333C	33	0.36	1.180
34L473C	47	0.31	1.820
34L683C	68	0.28	2.130
34L104C	100	0.24	3.330
34L154C	150	0.18	6.100
34L224C	220	0.16	8.000

ABSOLUTE MAXIMUM RATINGS

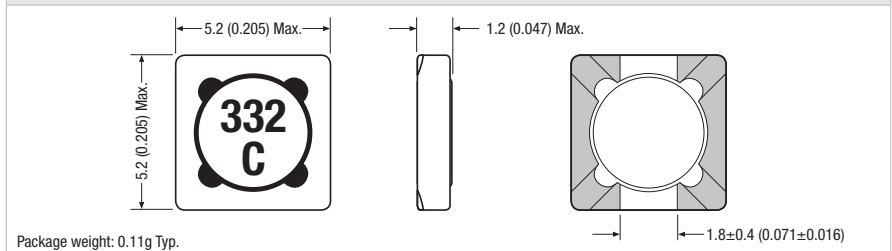
Operating free air temperature range	-40°C to 125°C
Storage temperature range	-40°C to 150°C

SOLDERING INFORMATION¹

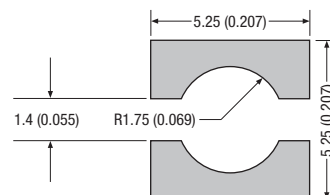
Peak reflow solder temperature	260°C
Pin finish	SAC 305
Moisture sensitivity level ³	1

PACKAGE SPECIFICATIONS

Mechanical Dimensions



Recommended Footprint Details



All dimensions in mm (inches)

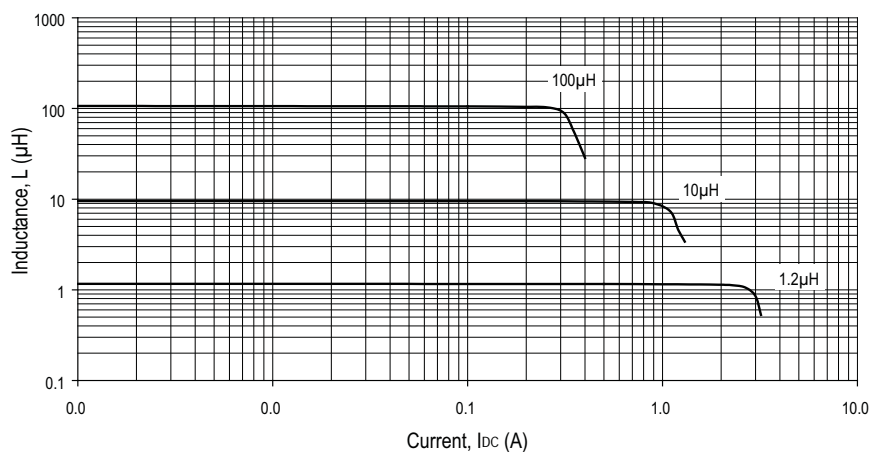
Specifications typical at $T_a = 25^\circ\text{C}$

1 For further information, please visit www.murata-ps.com/rohs

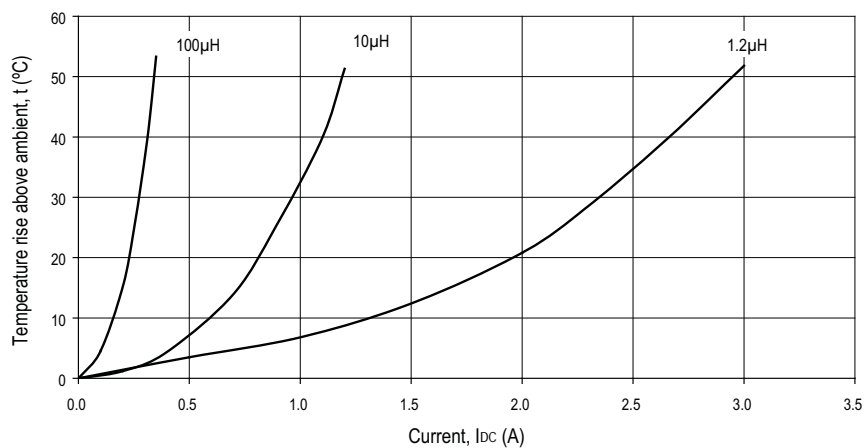
2 The maximum DC current is the value at which the inductance falls to 75% of its nominal value or when its temperature rise reaches 40°C, whichever is sooner.

3 When tested to moisture sensitivity level 1, as described per IPC/JEDEC J-STD-020D, products passed electrical testing, package coplanarity and visual inspection.

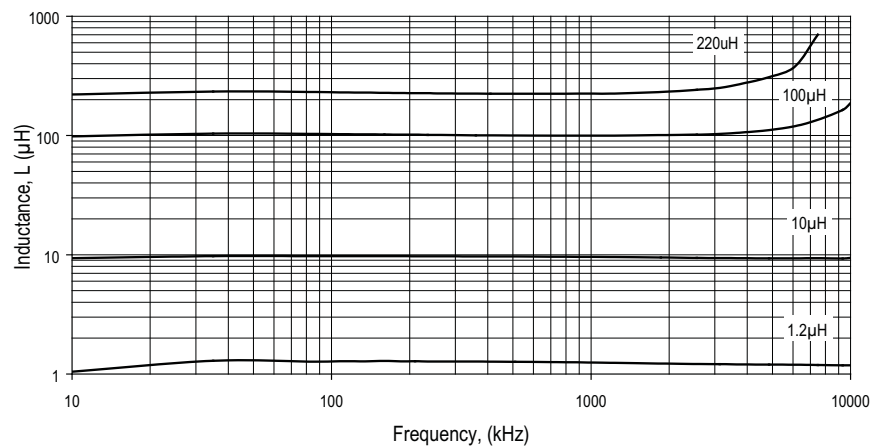
INDUCTANCE Vs CURRENT



TEMPERATURE Vs CURRENT

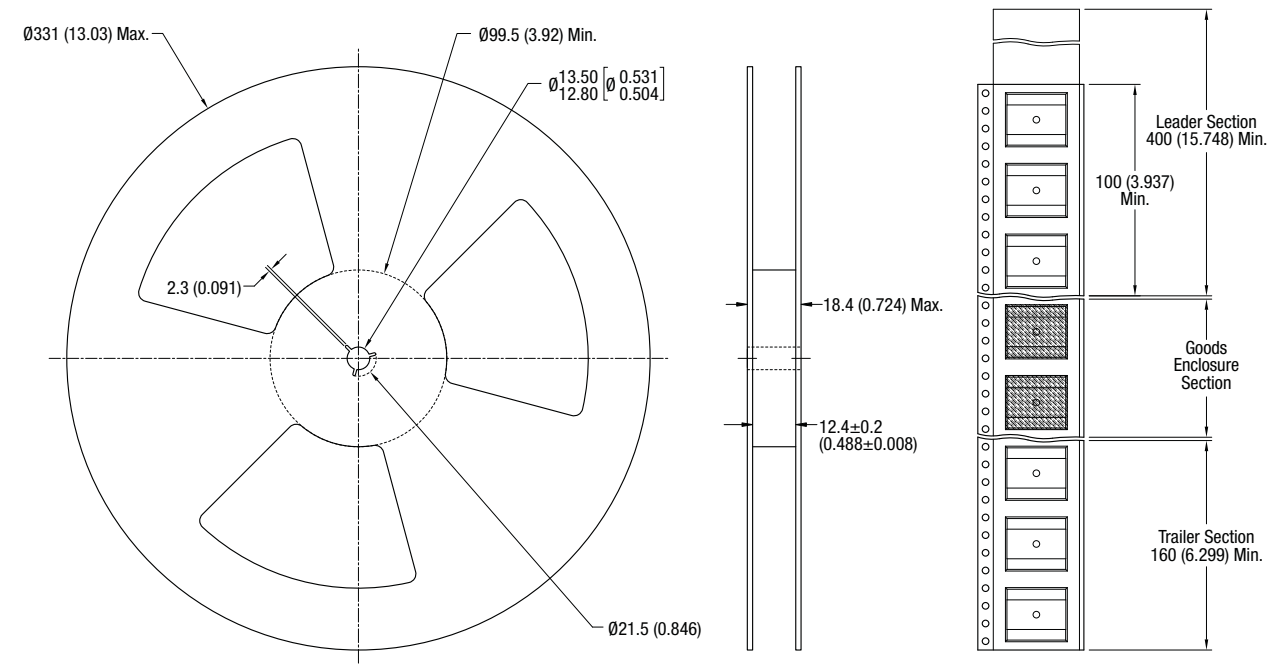


INDUCTANCE Vs FREQUENCY



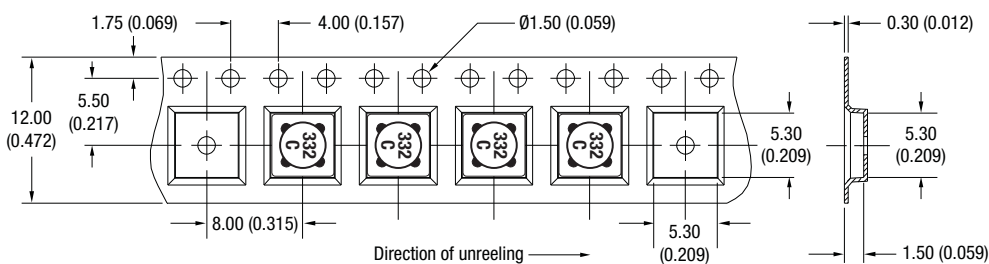
PACKAGE SPECIFICATIONS

Mechanical Dimensions



All dimension in mm (inches)

Tape Outline Dimensions



Reel quantity: 4000

Unless otherwise stated, all dimensions in mm (inches).

Murata Power Solutions, Inc.

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FEATURES

- RoHS compliant
- Inductance range from 1.2μH to 1mH
- Small footprint
- Ultra-low profile
- UL 94V-0 packaging materials
- Tape & reel
- J-STD-020C reflow
- Custom inductance values available

PRODUCT OVERVIEW

The 3400 series is a range of bobbin-wound, shielded inductors. They are suitable for power-line filtering found in consumer electronics such as desktop computers, handheld devices and GPS systems, as well as in a vast range of industrial and telecom applications including network hubs, bridges/routers, and high frequency wireless communication devices.

These surface mount inductors are extremely compact and have an integral shield, making them useful in EMI sensitive applications.

For lower current ratings see also our even lower profile 3400L series.

SELECTION GUIDE

Order Code	Inductance, L	DC Current ²	DC Resistance
	±20%	Max.	Max.
	μH	A	Ω
34122C	1.2 ± 30%	2.50	0.030
34152C	1.5 ± 30%	2.10	0.040
34222C	2.2 ± 30%	1.70	0.050
34332C	3.3 ± 30%	1.50	0.080
34472C	4.7 ± 30%	1.30	0.100
34682C	6.8 ± 30%	1.00	0.150
34103C	10	0.80	0.200
34153C	15	0.68	0.280
34223C	22	0.53	0.360
34333C	33	0.48	0.560
34473C	47	0.41	0.850
34683C	68	0.35	1.050
34104C	100	0.28	1.700
34154C	150	0.23	2.400
34224C	220	0.18	3.050
34334C	330	0.15	4.550
34474C	470	0.13	7.650
34684C	680	0.11	11.150
34105C	1000	0.09	15.000

ABSOLUTE MAXIMUM RATINGS

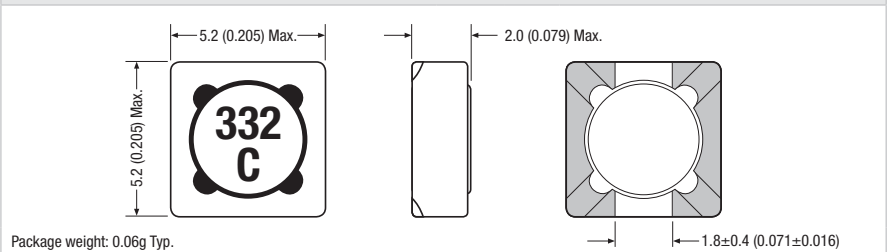
Operating free air temperature range	-40°C to 125°C
Storage temperature range	-40°C to 150°C

SOLDERING INFORMATION¹

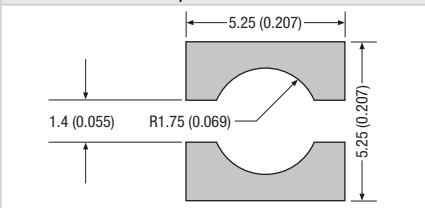
Peak reflow solder temperature	260°C
Pin finish	SAC 305
Moisture sensitivity level ³	1

PACKAGE SPECIFICATIONS

Mechanical Dimensions



Recommended Footprint Details



All dimensions in mm (inches)

Specifications typical at T_A = 25°C

1 For further information, please visit www.murata-ps.com/rohs

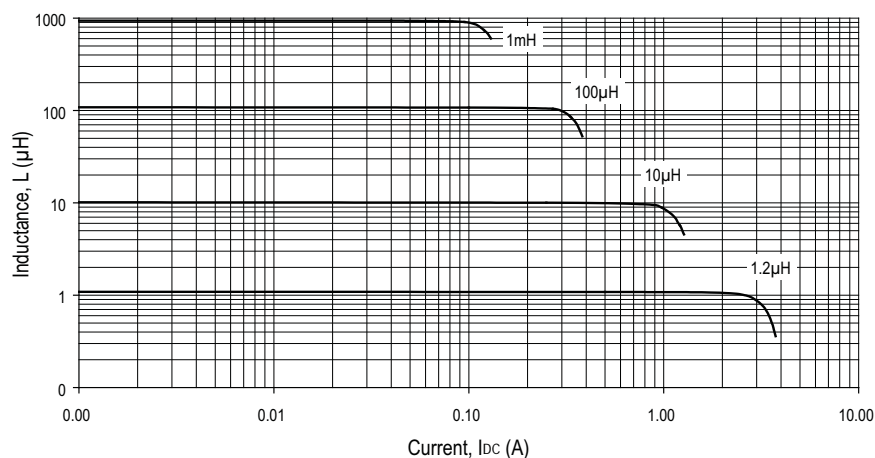
2 The maximum DC current is the value at which the inductance falls to 75% of its nominal value or when its temperature rise reaches 40°C, whichever is sooner.

3 When tested to moisture sensitivity level 1, as described per IPC/JEDEC J-STD-020D, products passed electrical testing, package coplanarity and visual inspection.

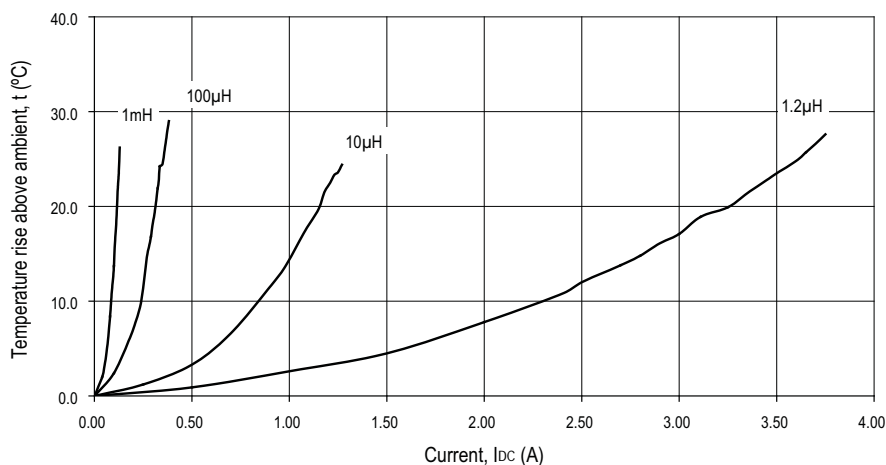


For full details go to
www.murata-ps.com/rohs

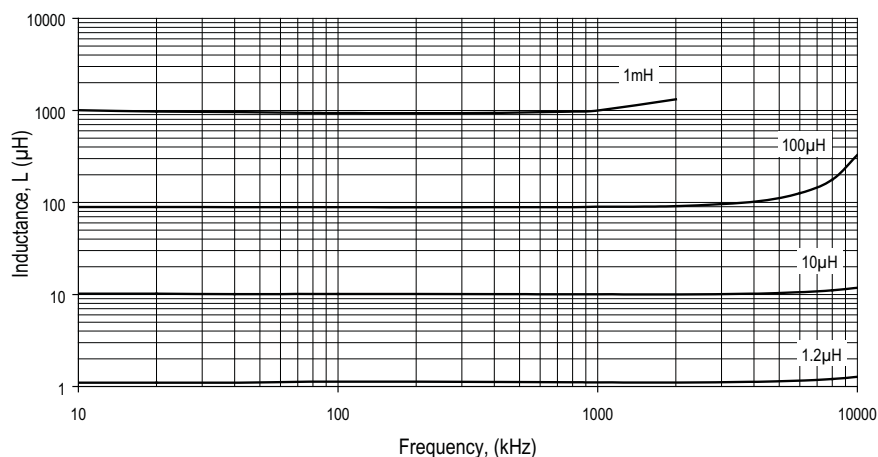
INDUCTANCE Vs CURRENT



TEMPERATURE Vs CURRENT

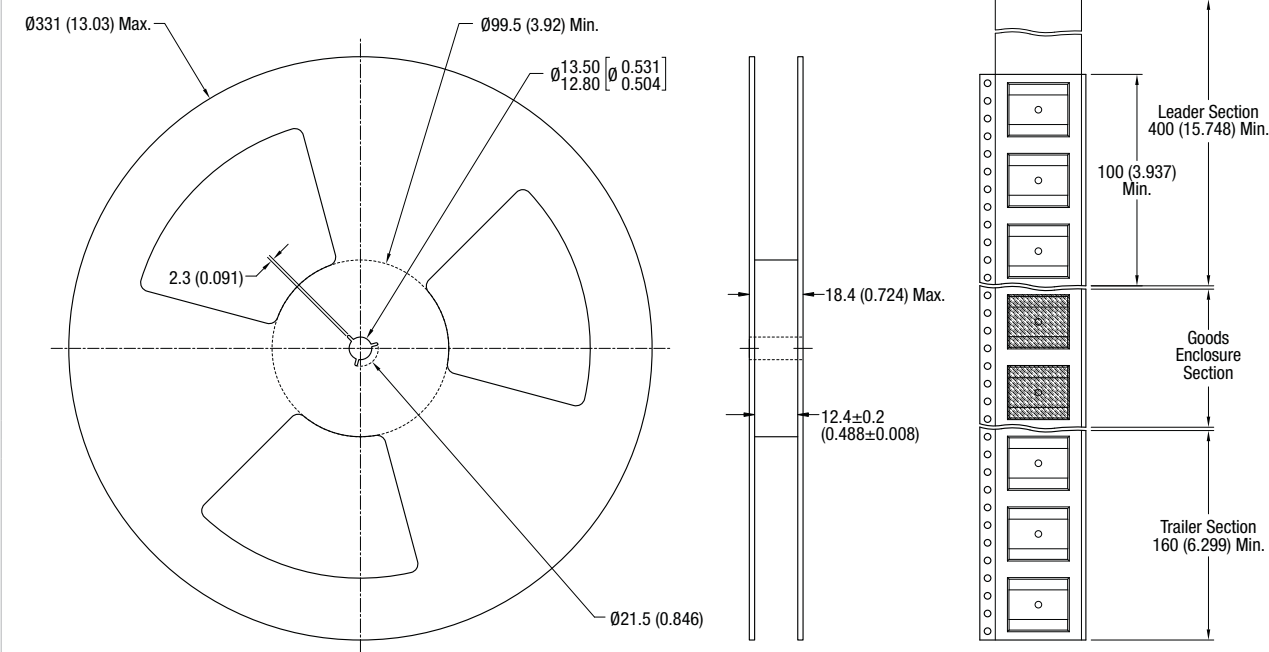


INDUCTANCE Vs FREQUENCY



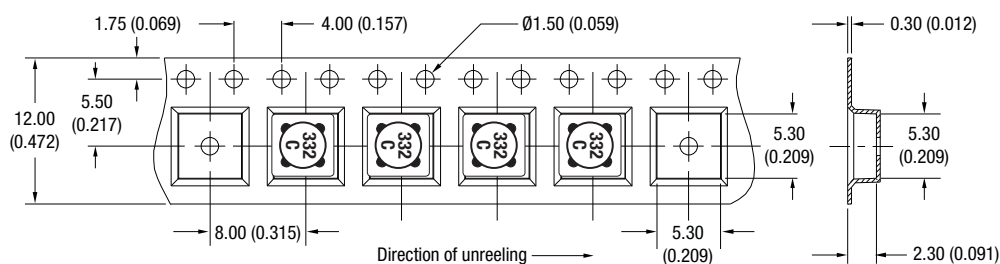
PACKAGE SPECIFICATIONS

Mechanical Dimensions



All dimension in mm (inches)

Tape Outline Dimensions



Reel quantity: 3000

Unless otherwise stated, all dimensions in mm (inches).

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FEATURES

- RoHS compliant
- Low profile
- Surface mount
- Inductance range from 1.0μH to 1.0mH
- Tape & reel
- UL 94V-0 materials
- J-STD-020-C reflow

PRODUCT OVERVIEW

The 2900L series is a lower profile version of our 2900 series range of bobbin-wound, shielded inductors. They are suitable for power-line filtering found in consumer electronics such as desktop computers, handheld devices and GPS systems, as well as in a vast range of industrial and telecom applications including network hubs, bridges & routers, and high frequency wireless communication devices.

These surface mount inductors are extremely compact and have an integral shield, making them useful in EMI sensitive applications.

SELECTION GUIDE

Order Code	Inductance (10kHz, 0.1V _{AC})		Idc	Rdc
	Nom.	Min. – Max.	Max.	Max.
	μH	μH	A	mΩ
29L102C	1.0	0.70 – 1.30	4.6	13
29L152C	1.5	1.02 – 1.88	4.2	15
29L222C	2.2	1.76 – 3.26	3.0	20
29L332C	3.3	2.26 – 4.20	2.6	25
29L472C	4.7	3.31 – 6.15	2.2	31
29L682C	6.8	4.75 – 8.83	1.8	48
29L103C	10	8.4 – 12.6	1.55	64
29L153C	15	11.8 – 17.7	1.23	84
29L223C	22	17.1 – 25.7	1.05	114
29L333C	33	25.7 – 38.6	820mA	174
29L473C	47	36.7 – 55.0	800mA	223
29L683C	68	54.7 – 82.1	530mA	307
29L104C	100	79.0 – 119	480mA	456
29L154C	150	121 – 181	430mA	738
29L224C	220	178 – 266	360mA	1060
29L334C	330	267 – 403	300mA	1670
29L474C	470	380 – 570	220mA	2410
29L684C	680	560 – 840	200mA	3610
29L105C	1000	816 – 1224	140mA	6480

ABSOLUTE MAXIMUM RATINGS

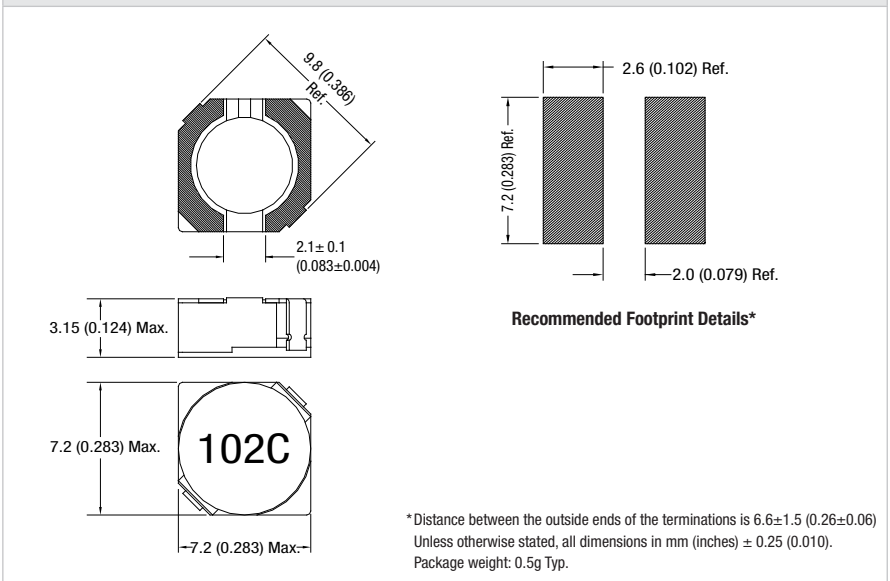
Operating free air temperature range	-40°C to 85°C
Storage temperature range	-40°C to 125°C

SOLDERING INFORMATION¹

Peak reflow solder temperature	250°C
Pin finish	Bright tin

PACKAGE SPECIFICATIONS

Mechanical Dimensions

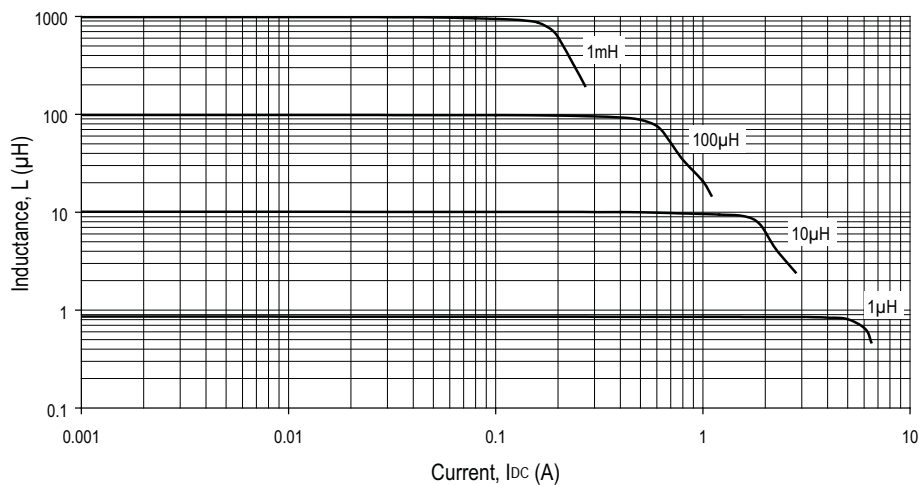


¹ For further information, please visit www.murata-ps.com/rohs
All specifications typical at T_A=25°C

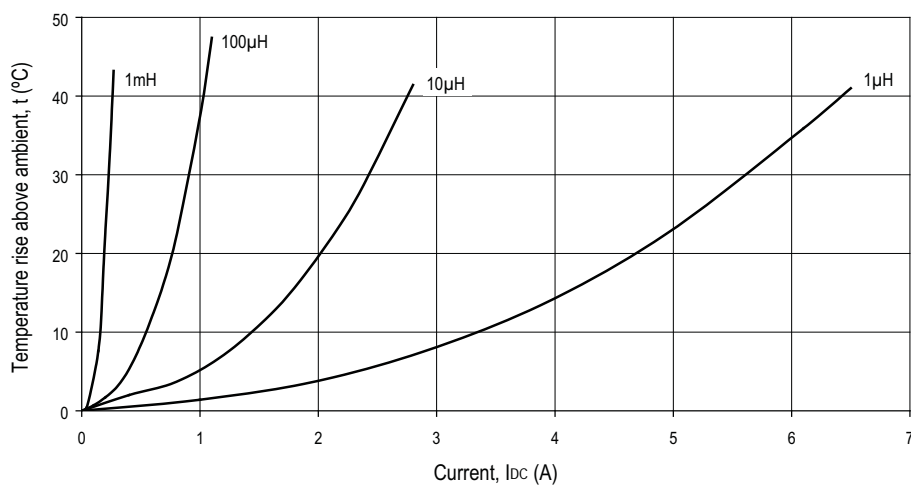


For full details go to
www.murata-ps.com/rohs

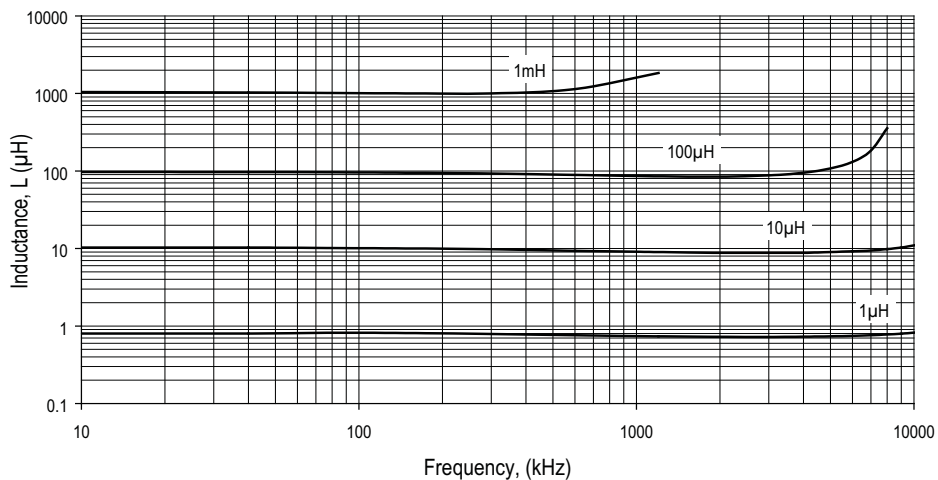
INDUCTANCE Vs CURRENT



TEMPERATURE Vs CURRENT

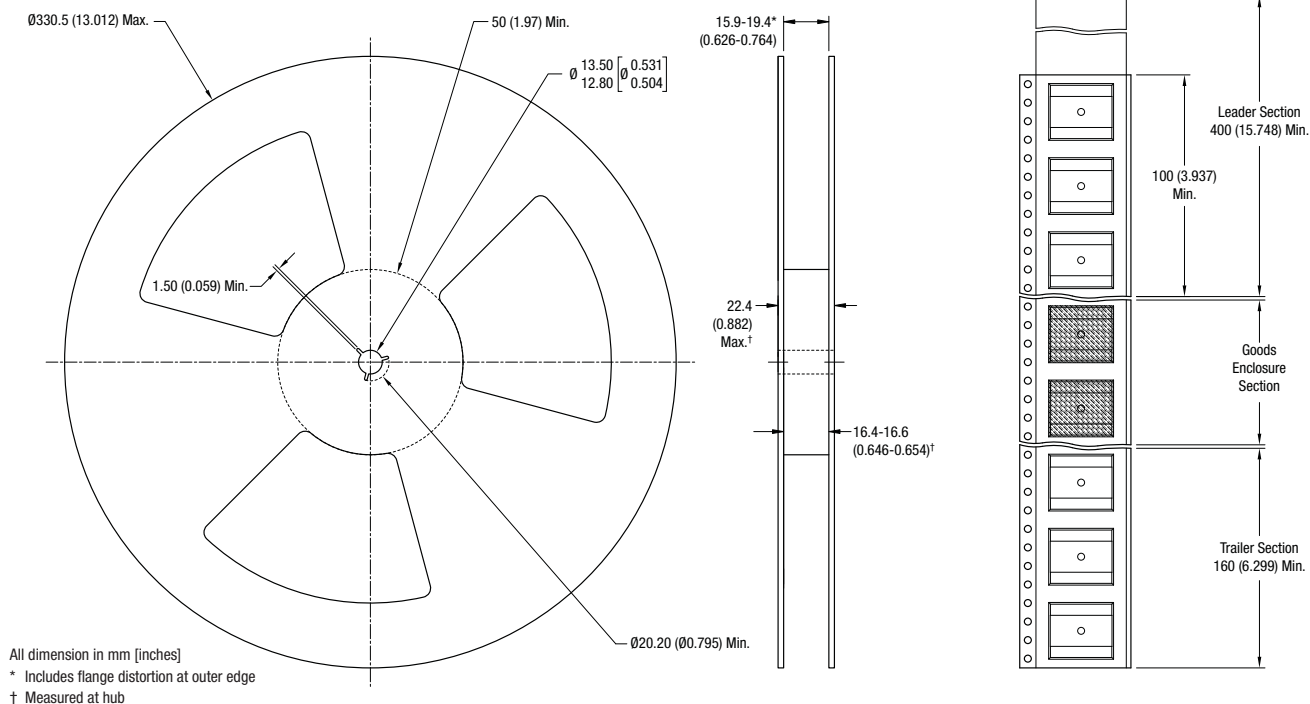


INDUCTANCE Vs FREQUENCY

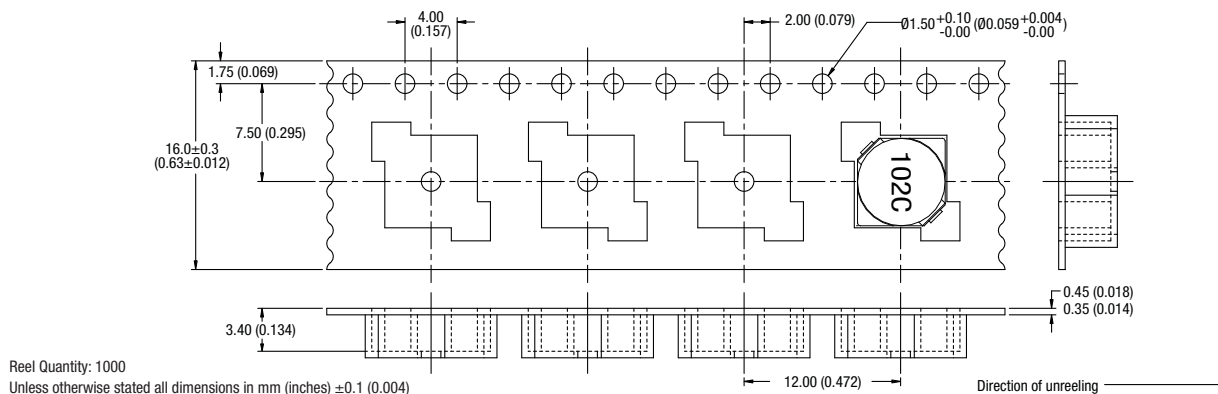


PACKAGE SPECIFICATIONS

Reel Dimensions



Tape Outline Dimensions



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FEATURES

- RoHS compliant
- Low profile
- Surface mount
- Inductance range from 1.0μH to 1.0mH
- Tape & reel
- UL 94V-0 materials
- J-STD-020-C reflow

PRODUCT OVERVIEW

The 2900 series is a range of bobbin-wound, shielded inductors. They are suitable for power-line filtering found in consumer electronics such as desktop computers, handheld devices and GPS systems, as well as in a vast range of industrial and telecom applications including network hubs, bridges & routers, and high frequency wireless communication devices.

These surface mount inductors are extremely compact and have an integral shield, making them useful in EMI sensitive applications.

For lower current ratings see also our lower profile 2900L series.

SELECTION GUIDE

Order Code	Inductance (10kHz, 0.1V _{AC})		Idc	Rdc
	Nom.	Min. – Max.	Max.	Max.
	μH	μH	A	mΩ
29102C	1.0	0.70 – 1.30	6.0	16
29152C	1.5	1.05 – 1.95	5.5	18
29222C	2.2	1.54 – 2.86	5.0	20
29332C	3.3	2.31 – 4.29	4.0	28
29472C	4.7	3.29 – 6.11	2.3	30
29682C	6.8	4.76 – 8.84	2.1	40
29103C	10	8.0 – 12.0	1.8	45
29153C	15	12.0 – 18.0	1.5	65
29223C	22	17.6 – 26.4	1.2	85
29333C	33	26.4 – 39.6	1.0	120
29473C	47	37.6 – 56.4	850mA	170
29683C	68	54.4 – 81.6	650mA	250
29104C	100	80.0 – 120	530mA	360
29154C	150	120 – 180	470mA	500
29224C	220	176 – 264	380mA	760
29334C	330	264 – 396	320mA	1000
29474C	470	376 – 564	260mA	1600
29684C	680	544 – 816	210mA	2400
29105C	1000	800 – 1200	180mA	4100

ABSOLUTE MAXIMUM RATINGS

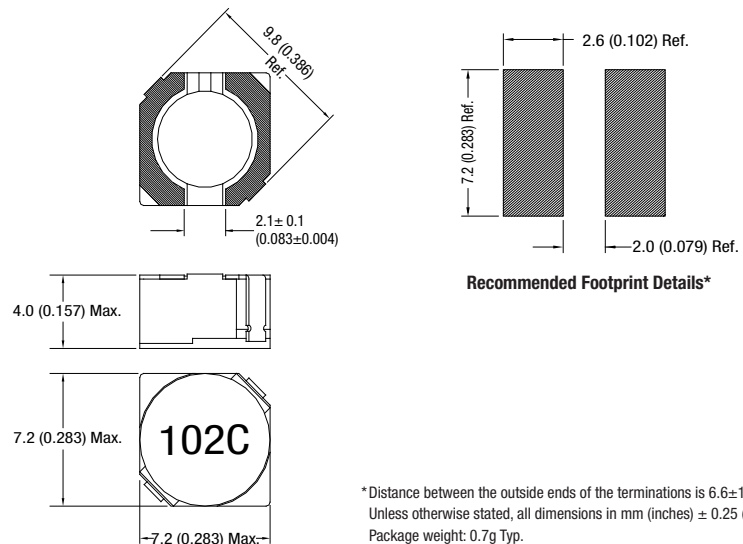
Operating free air temperature range	-40°C to 85°C
Storage temperature range	-40°C to 125°C

SOLDERING INFORMATION¹

Peak reflow solder temperature	250°C
Pin finish	Bright tin

PACKAGE SPECIFICATIONS

Mechanical Dimensions



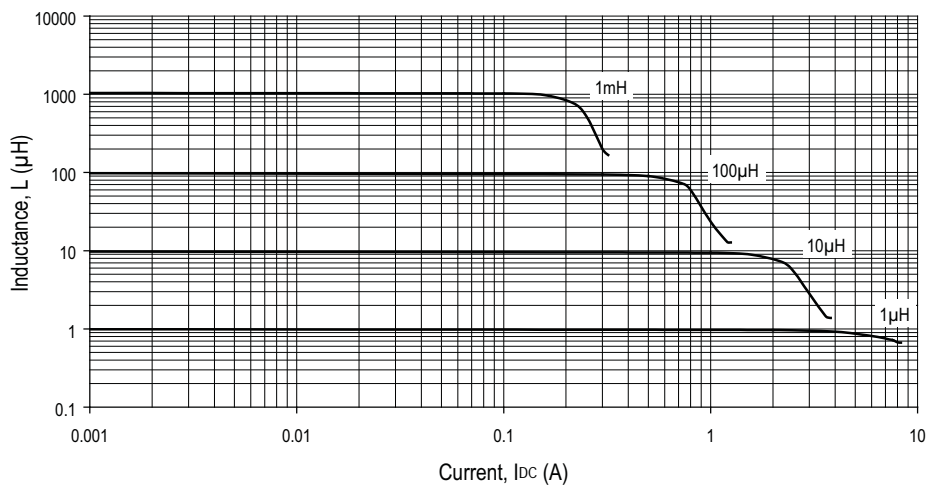
*Distance between the outside ends of the terminations is 6.6±1.5 (0.26±0.06)
Unless otherwise stated, all dimensions in mm (inches) ± 0.25 (0.010).
Package weight: 0.7g Typ.

¹ For further information, please visit www.murata-ps.com/rohs
All specifications typical at T_A=25°C

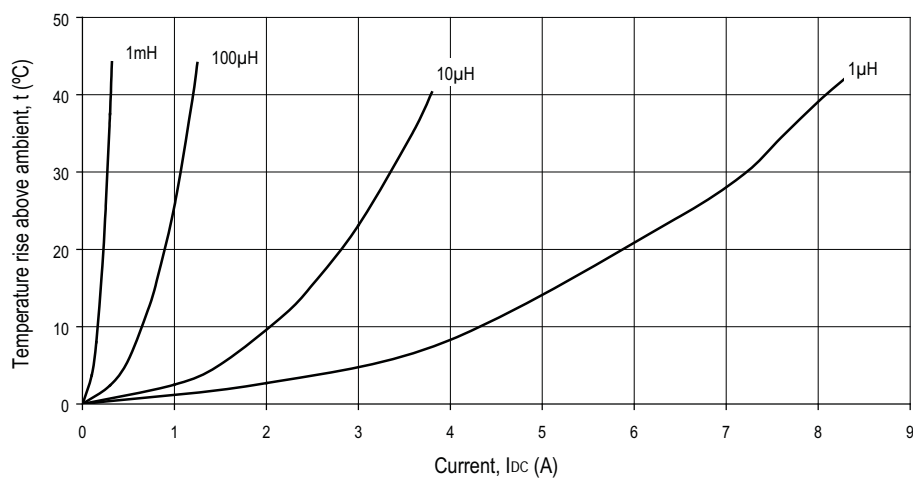


For full details go to
www.murata-ps.com/rohs

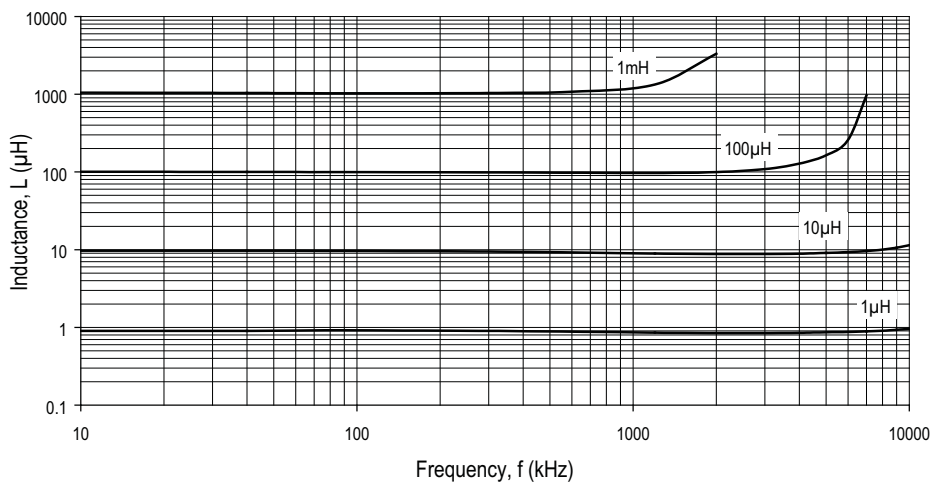
INDUCTANCE Vs CURRENT



TEMPERATURE Vs CURRENT

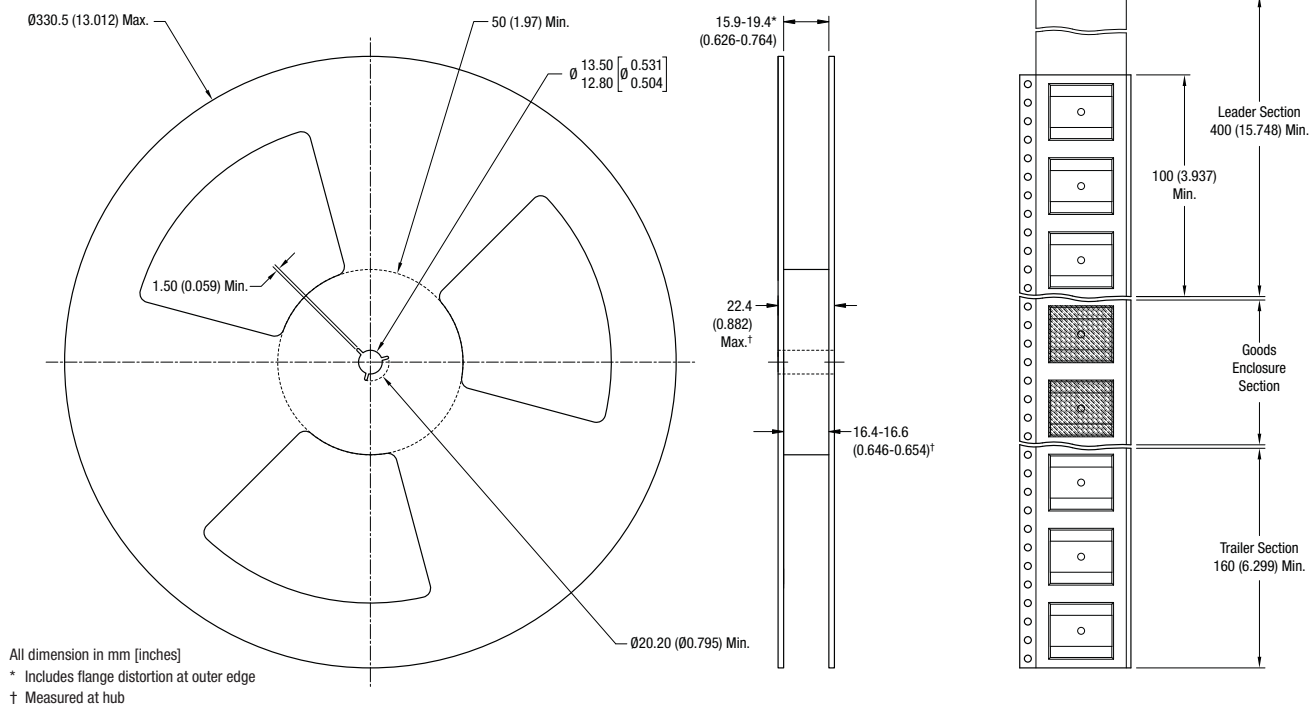


INDUCTANCE Vs FREQUENCY

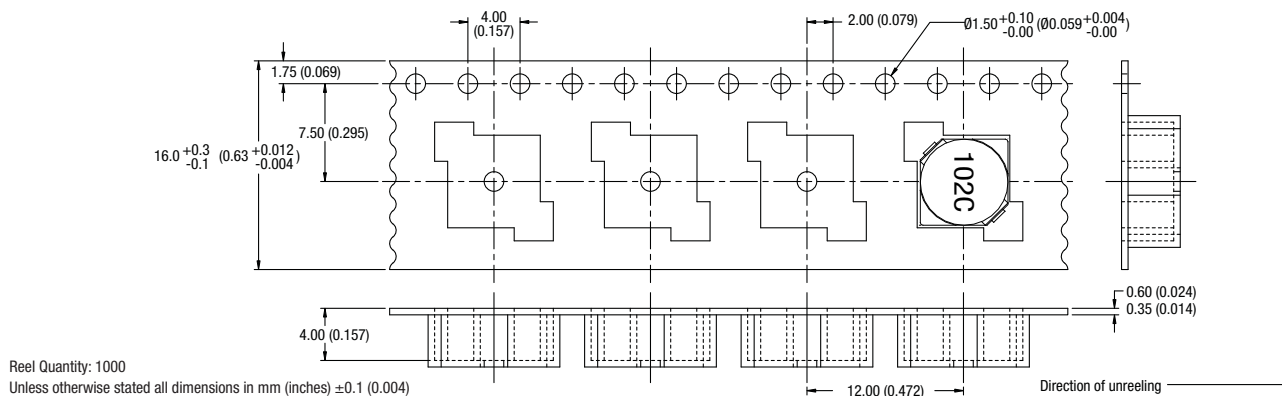


PACKAGE SPECIFICATIONS

Reel Dimensions



Tape Outline Dimensions



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 Osaka, Tel: 6-6354-2025, email: sales_osaka@murata-ps.com
Website: www.murata-ps.jp
China: Shanghai, Tel: +86 215 027 3678, email: shanghai@murata-ps.com
 Guangzhou, Tel: +86 208 221 8066, email: guangzhou@murata-ps.com



FEATURES

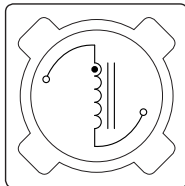
- RoHS compliant
- 0.28μH to 1.0mH
- Up to 8A I_{DC}
- Bobbin format
- Surface mount
- Integral EMI shield
- Compact size
- Tape and reel packaging
- UL 94V-0 materials
- J-STD-020-C reflow

DESCRIPTION

The 4500 series is a lower profile version of our 4600 series range of bobbin-wound, shielded inductors. They are suitable for power-line filtering found in consumer electronics such as desktop computers, LED applications and GPS systems, as well as in a vast range of industrial and telecom applications including network hubs, bridges & routers, and high frequency wireless communication devices.

These surface mount inductors are extremely compact and have an integral shield, making them useful in EMI sensitive applications.

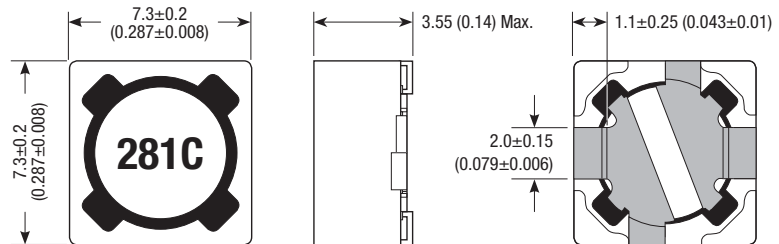
PIN CONNECTIONS (TOP VIEW)



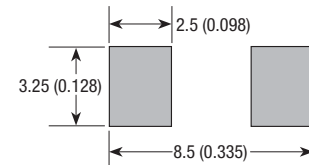
SELECTION GUIDE

Order Code	Inductance (10kHz, 0.1VAC) ±20%	DC Current ¹	DC Resistance
	Nom.	Max.	Max.
	μH	A	mΩ
45281C	0.28 (±30%)	8.0	9
45541C	0.54 (±30%)	7.0	11
45102C	1.0 (±30%)	6.0	14
45152C	1.5 (±30%)	5.5	17
45222C	2.2 (±30%)	4.5	26
45332C	3.3 (±30%)	3.7	34
45472C	4.7 (±30%)	3.2	47
45682C	6.8 (±30%)	2.6	66
45103C	10	2.2	82
45153C	15	1.8	120
45223C	22	1.35	180
45333C	33	1.25	250
45473C	47	1.05	360
45683C	68	0.82	510
45104C	100	0.70	710
45154C	150	0.58	1000
45224C	220	0.50	1550
45334C	330	0.35	2540
45474C	470	0.32	3250
45684C	680	0.26	5000
45105C	1000	0.23	6500

MECHANICAL DIMENSIONS



Recommended Footprint Details*



*Distance between the outside ends of the terminations is 7.1±0.1 (0.28±0.004)
Unless otherwise stated, all dimensions in mm (inches) ± 0.25 (0.010).
Package weight: 0.64g Typ.

ABSOLUTE MAXIMUM RATINGS

Operating temperature range	-40°C to 125°C
Storage temperature range	-40°C to 150°C

SOLDERING INFORMATION²

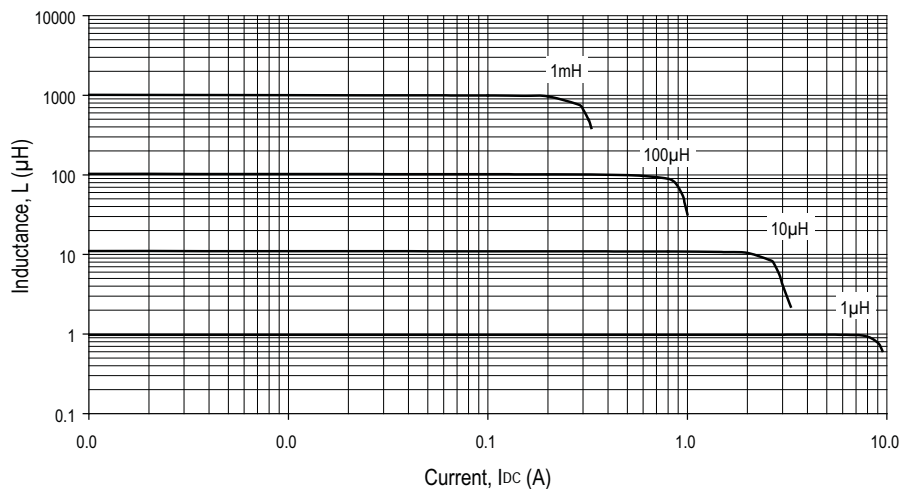
Peak reflow solder temperature	250°C
Pin finish	Tin

Specifications typical at T_A = 25°C

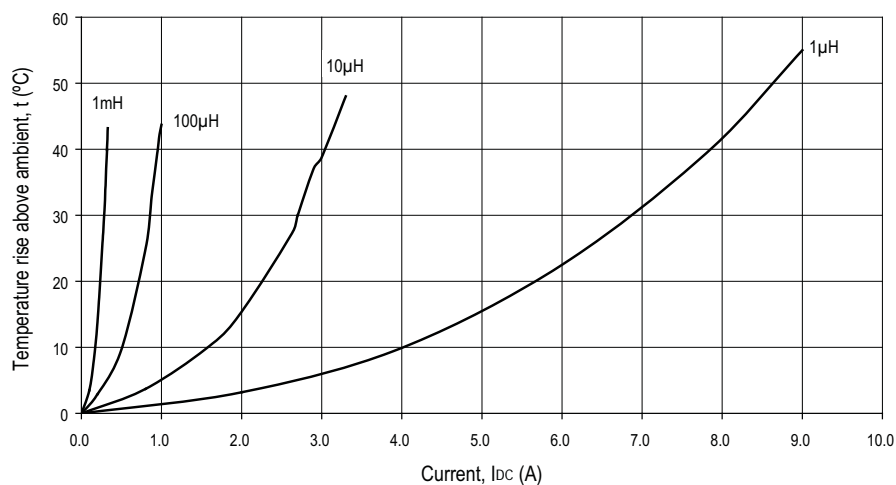
1 Maximum DC current occurs when either the inductance falls to 75% of its nominal value or when its temperature rise reaches 40°C, whichever is sooner.

2 For further information, please visit www.murata-ps.com/rohs

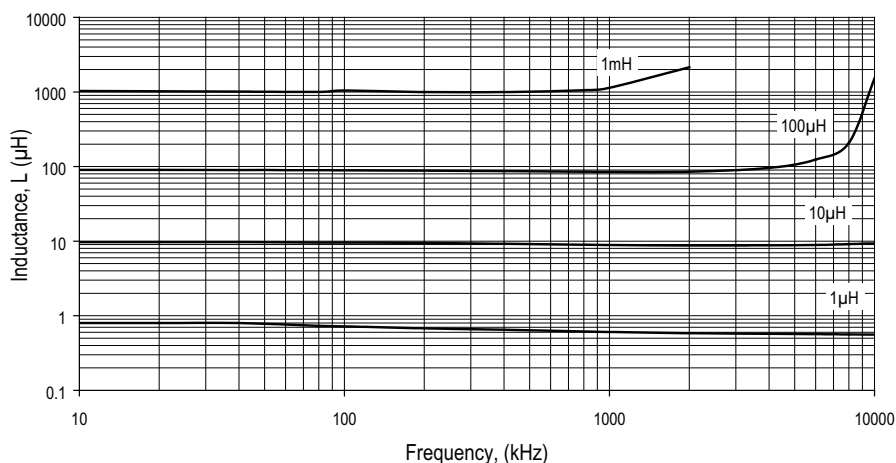
INDUCTANCE Vs CURRENT



TEMPERATURE Vs CURRENT

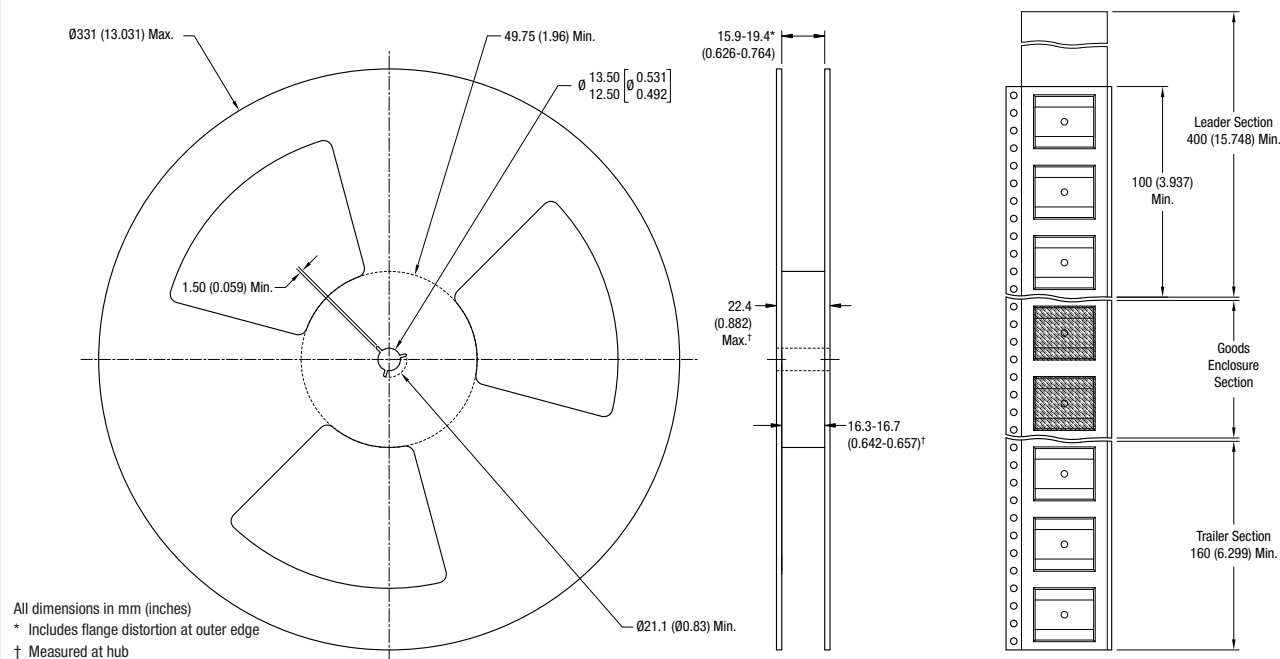


INDUCTANCE Vs FREQUENCY

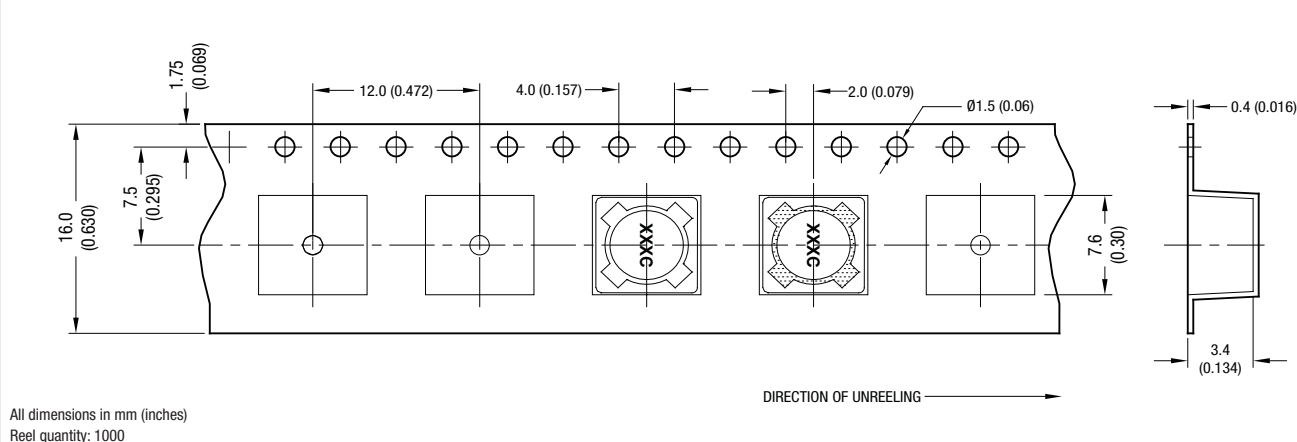


TAPE & REEL SPECIFICATIONS

REEL OUTLINE DIMENSIONS



TAPE OUTLINE DIMENSIONS



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11 Cabot Boulevard, Mansfield, MA 02048-1151 U.S.A.

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FEATURES

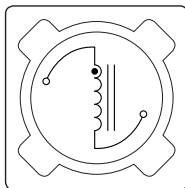
- RoHS compliant
- 0.28μH to 1.0mH
- Up to 8.7A I_{DC}
- Bobbin format
- Surface mount
- Integral EMI shield
- Compact size
- Tape and reel packaging
- UL 94V-0 materials
- J-STD-020-C reflow

DESCRIPTION

The 4600 series is a range of bobbin-wound, shielded inductors suitable for power-line filtering found in consumer electronics such as desktop computers, LED applications and GPS systems, as well as in a vast range of industrial and telecom applications including network hubs, bridges & routers, and high frequency wireless communication devices.

These surface mount inductors are extremely compact and have an integral shield, making them useful in EMI sensitive applications.

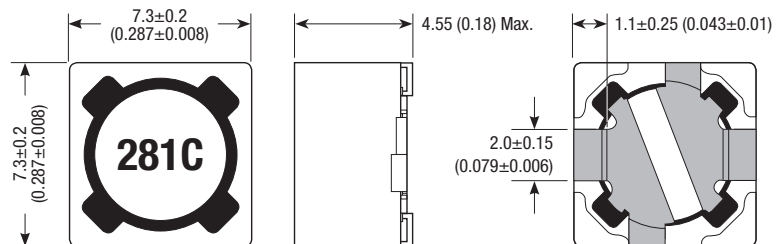
PIN CONNECTIONS (TOP VIEW)



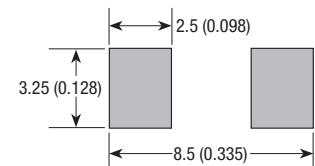
SELECTION GUIDE

Order Code	Inductance (10kHz, 0.1V _{AC}) ±20%	DC Current ¹	DC Resistance
	Nom.	Max.	Max.
	μH	A	mΩ
46281C	0.28 (±30%)	8.7	8
46541C	0.54 (±30%)	7.7	10
46102C	1.0 (±30%)	6.8	13
46152C	1.5 (±30%)	6.3	15
46222C	2.2 (±30%)	5.0	21
46332C	3.3 (±30%)	4.3	29
46472C	4.7 (±30%)	3.7	37
46682C	6.8 (±30%)	3.1	52
46103C	10	2.4	66
46153C	15	2.2	94
46223C	22	1.8	120
46333C	33	1.45	190
46473C	47	1.25	260
46683C	68	1.05	360
46104C	100	0.86	500
46154C	150	0.72	720
46224C	220	0.57	1050
46334C	330	0.46	1850
46474C	470	0.39	2800
46684C	680	0.32	3900
46105C	1000	0.27	4900

MECHANICAL DIMENSIONS



Recommended Footprint Details*



*Distance between the outside ends of the terminations is 7.1±0.1 (0.28±0.004)
Unless otherwise stated, all dimensions in mm (inches) ± 0.25 (0.010).
Package weight: 0.8g Typ.

ABSOLUTE MAXIMUM RATINGS

Operating temperature range	-40°C to 125°C
Storage temperature range	-40°C to 150°C

SOLDERING INFORMATION²

Peak reflow solder temperature	250°C
Pin finish	Tin

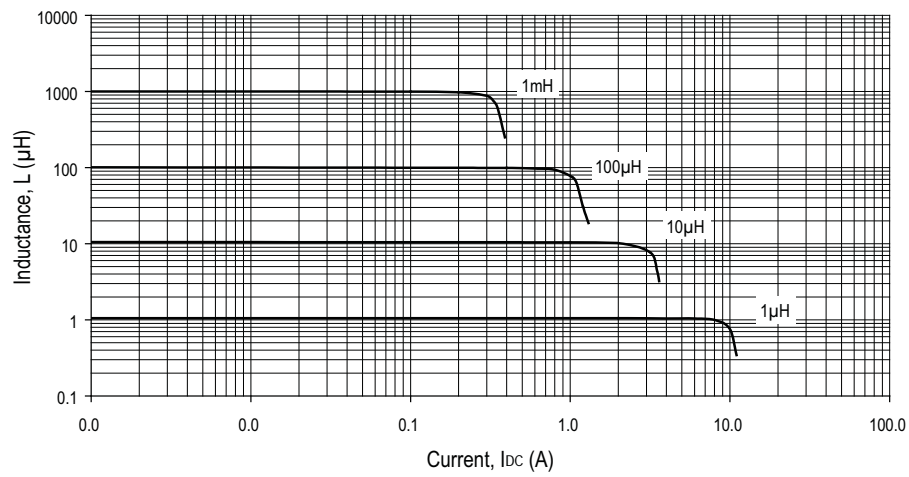
Specifications typical at T_A = 25°C

1 Maximum DC current occurs when either the inductance falls to 75% of its nominal value or when its temperature rise reaches 40°C, whichever is sooner.

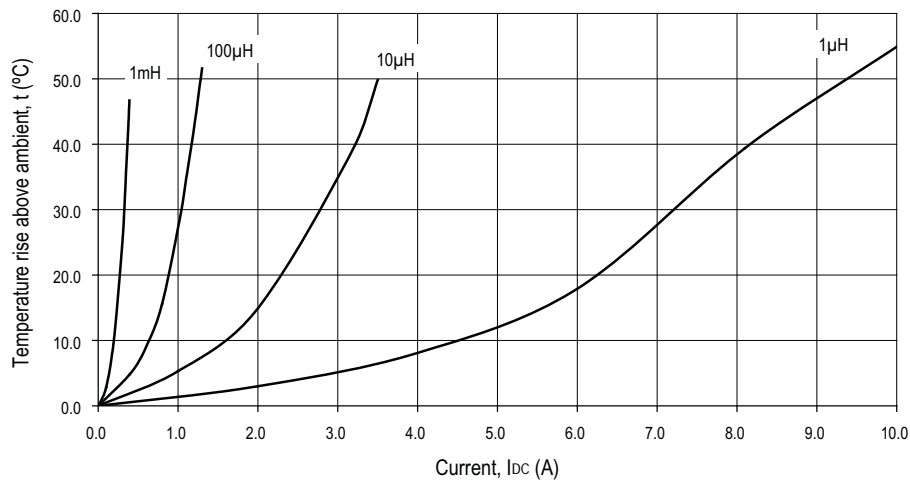
2 For further information, please visit www.murata-ps.com/rohs



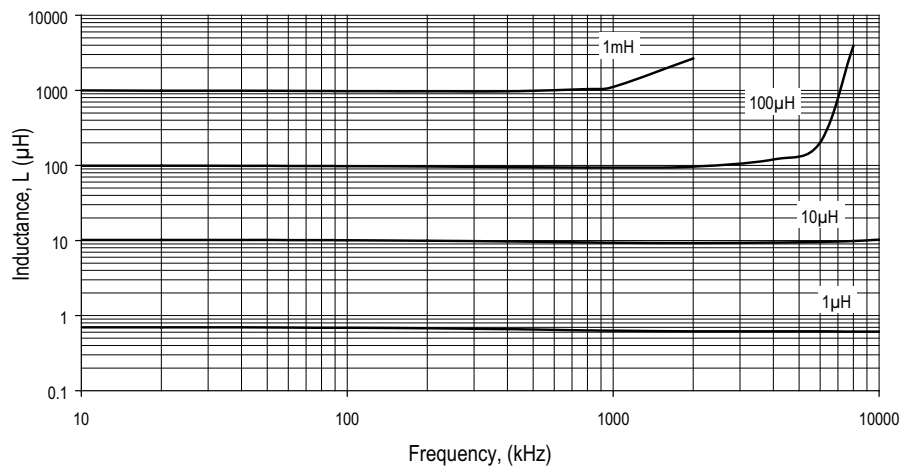
INDUCTANCE Vs CURRENT



TEMPERATURE Vs CURRENT

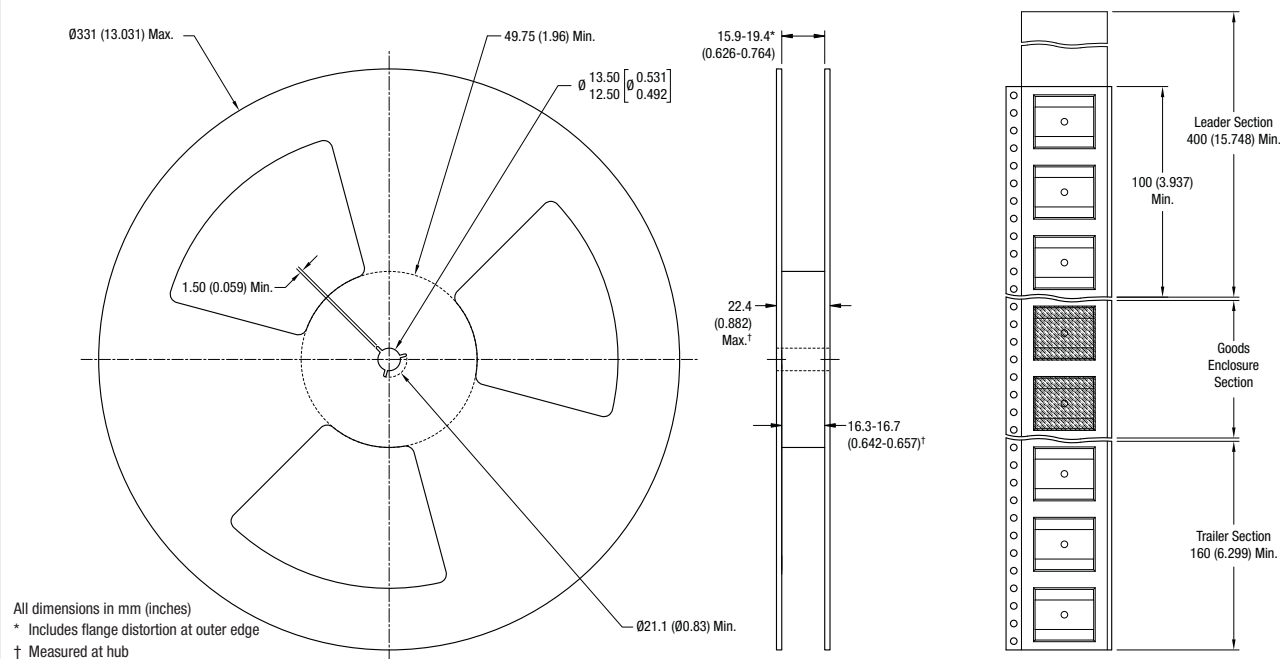


INDUCTANCE Vs FREQUENCY

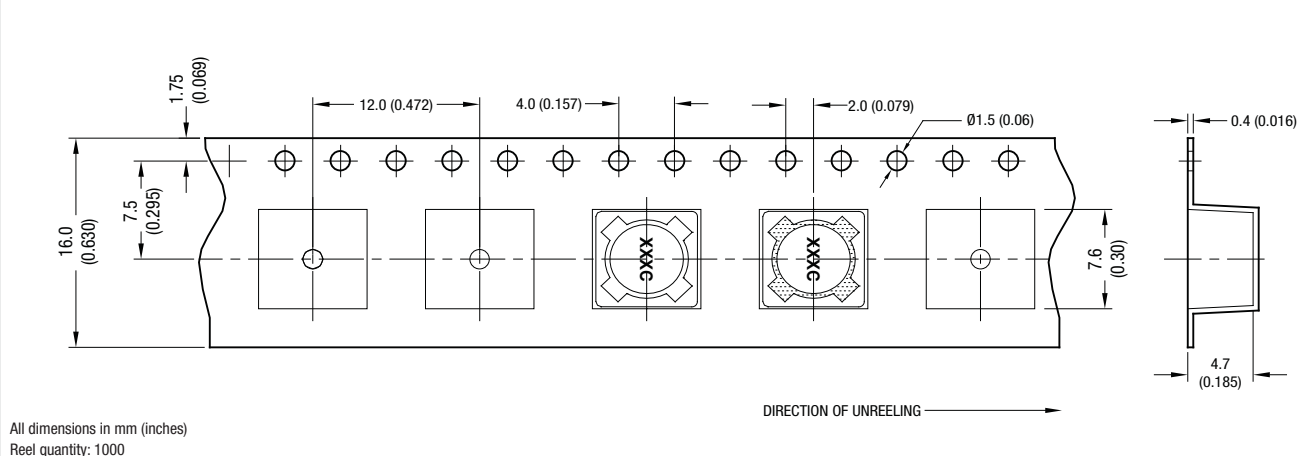


TAPE & REEL SPECIFICATIONS

REEL OUTLINE DIMENSIONS



TAPE OUTLINE DIMENSIONS



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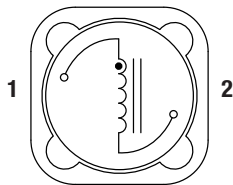
FEATURES

- RoHS compliant
- 1.0μH to 1.0mH
- Up to 10A lrc
- Bobbin format
- Surface mount
- Integral EMI shield
- Compact size
- Tape and reel packaging
- UL 94V-0 materials
- J-STD-020-C reflow

DESCRIPTION

The 4700S series is a range of bobbin-wound, surface-mount inductors designed for use in switching power supply, and power line filter circuits. The parts are suitable for any application requiring a high saturation current in a low-profile package. The devices have an integral ferrite shield to reduce EMI.

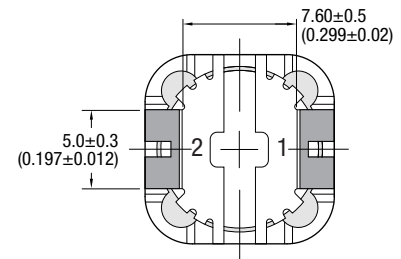
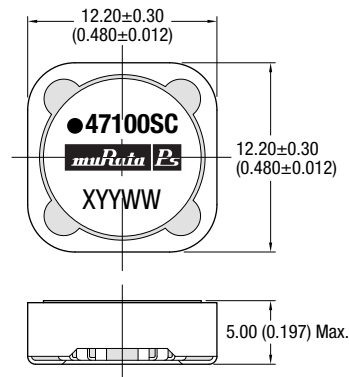
PIN CONNECTIONS (TOP VIEW)



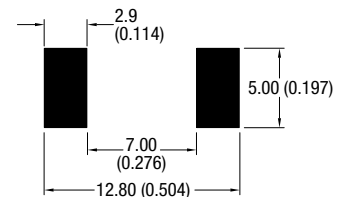
SELECTION GUIDE

Order Code	Inductance (10kHz, 100mVAC) ±20%	DC Current ¹	DC Resistance	SRF	Q Factor	
	Nom.	Max.	Max.	Typ.	Typ.	
	μH	A	mΩ	MHz	Q	@ f (MHz)
471R0SC	1.0 (±30%)	10.0	4.8	79	24	1
472R2SC	2.2 (±30%)	7.0	8.5	44	24	1
473R3SC	3.3 (±30%)	6.4	11.1	36	25	1
474R7SC	4.7 (±30%)	5.8	16.4	34	25	1
476R8SC	6.8 (±30%)	4.6	26.9	24	24	1
47100SC	10	3.8	32.3	22	22	1
47150SC	15	3.2	46.5	18	29	1
47220SC	22	2.7	62.9	14	29	1
47330SC	33	2.2	91.1	13	23	1
47470SC	47	1.9	168	11	23	1
47680SC	68	1.6	210	9	23	1
47101SC	100	1.3	267	8	20	0.8
47151SC	150	1.1	410	7	19	0.8
47221SC	220	0.8	629	6	20	0.8
47331SC	330	0.7	940	5	21	0.8
47471SC	470	0.58	1330	5	23	0.8
47681SC	680	0.48	1780	4	17	0.8
47102SC	1000	0.40	2540	4	17	0.8

MECHANICAL DIMENSIONS



Recommended Footprint Details



Dot signifies the innermost turn of the winding.
All dimensions in mm (inches). Package weight: 2.4g Typ.

ABSOLUTE MAXIMUM RATINGS

Operating free air temperature range	-40°C to 85°C
Storage temperature range	-40°C to 125°C

SOLDERING INFORMATION²

Peak reflow solder temperature	245°C
Pin finish	Tin

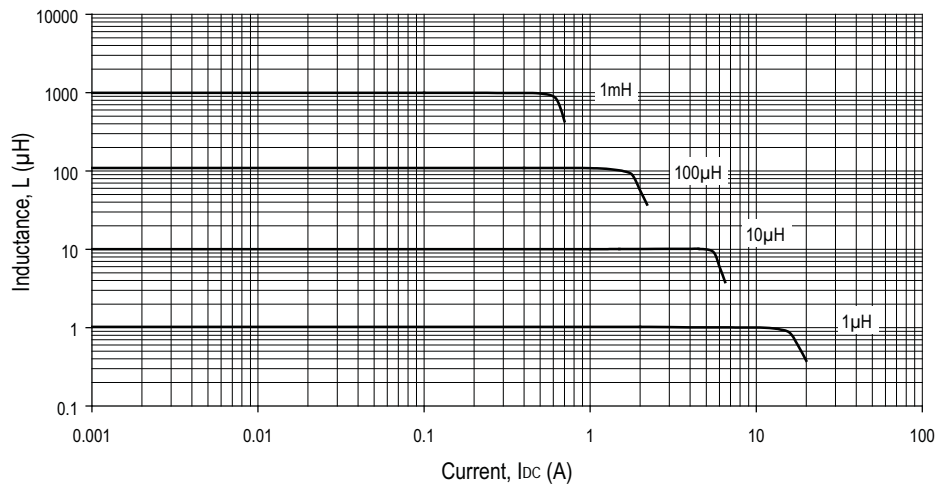
Specifications typical at T_A = 25°C

1 Maximum DC current occurs when either the inductance falls to 75% of its nominal value or when its temperature rise reaches 40°C, whichever is sooner.

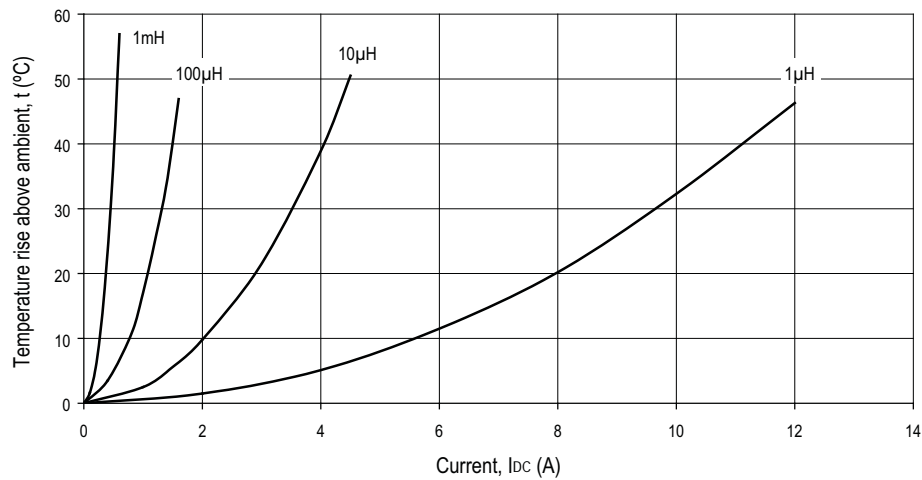
2 For further information, please visit www.murata-ps.com/rohs



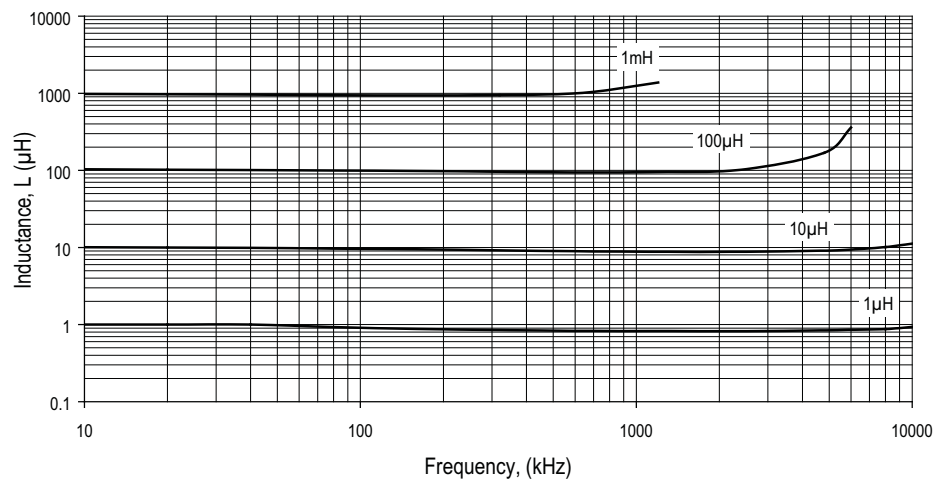
INDUCTANCE Vs CURRENT



TEMPERATURE Vs CURRENT

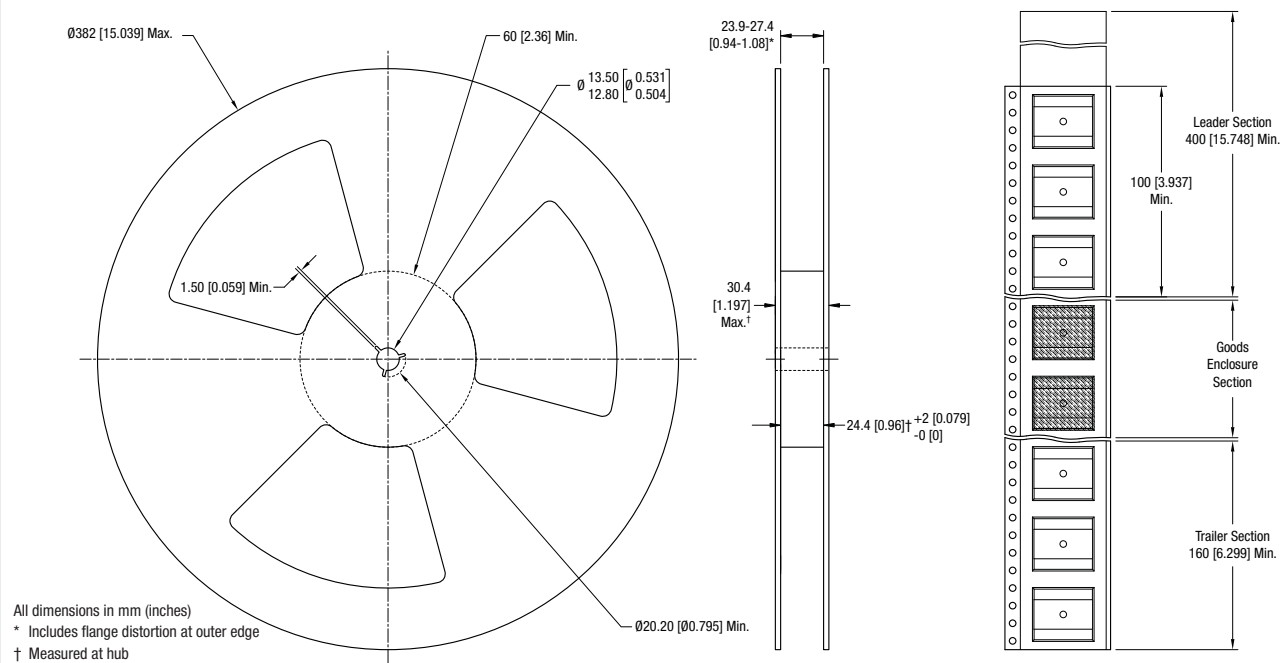


INDUCTANCE Vs FREQUENCY

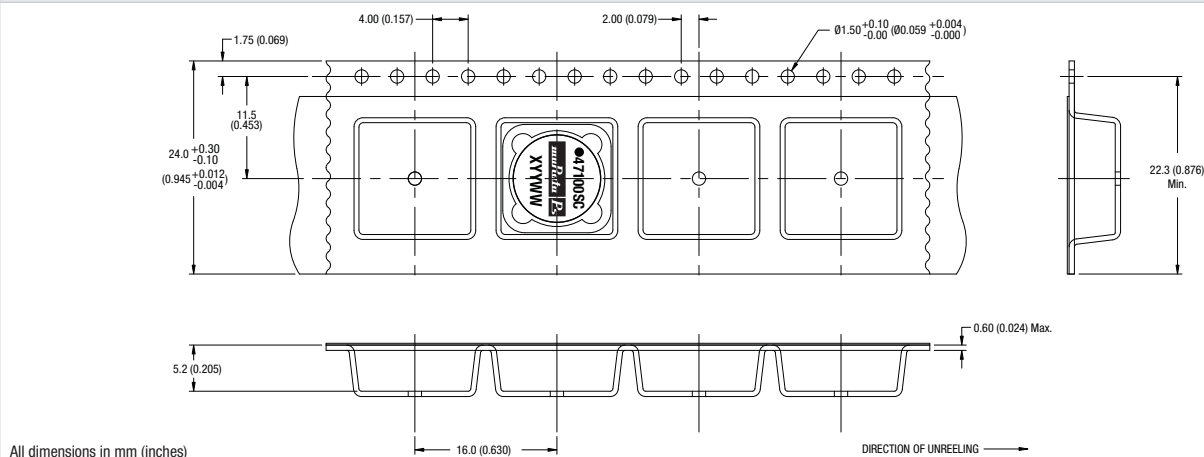


TAPE & REEL SPECIFICATIONS

REEL OUTLINE DIMENSIONS



TAPE OUTLINE DIMENSIONS



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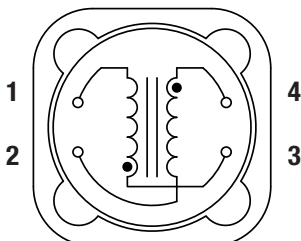
FEATURES

- RoHS compliant
- 1.0μH to 400μH¹
- Up to 9.5A IDC
- Bobbin format
- Dual winding
- Surface mount
- Integral EMI shield
- Compact size
- Tape and reel packaging
- J-STD-020-C reflow
- Backwards compatible with Sn/Pb soldering systems

PRODUCT OVERVIEW

The 4700 series is a range of dual wound inductors offering flexible options. Windings can be connected in series or parallel to create a wide range of inductance combinations. They can also be used as common mode chokes or 1:1 transformers with the secondary winding used as a feedback winding in switched mode power supplies.

PIN CONNECTIONS (TOP VIEW)



3 & 1 = Primary winding
4 & 2 = Secondary winding

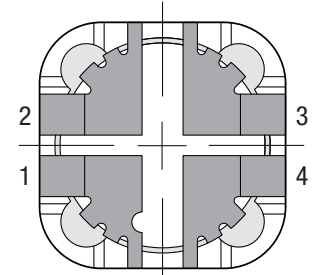
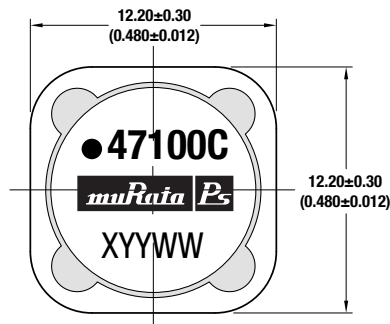


For full details go to
www.murata-ps.com/rohs

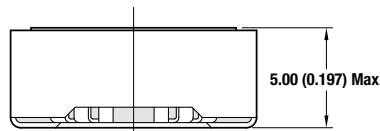
SELECTION GUIDE

Order Code	Inductance ¹ (10kHz, 100mV _{AC}) 1&3, 2&4	Inductance Range (10kHz, 100mV _{AC}) 1&3, 2&4	DC Current ² (parallel connection)	DC Resistance 1&3, 2&4
	Nom.	Min. - Max.	Max.	Max.
	μH	μH	A	mΩ
471R0C	1.0	0.83 - 1.39	9.50	8.9
472R2C	2.2	1.38 - 2.30	6.80	13.7
473R3C	3.3	2.87 - 4.79	5.50	23.3
474R7C	4.7	4.08 - 6.12	4.60	32.4
476R8C	6.8	5.24 - 7.86	3.90	44.8
47100C	10	8.00 - 12.0	3.20	70.2
47150C	15	11.3 - 17.0	2.60	106
47220C	22	17.4 - 26.1	2.10	165
47330C	33	27.6 - 41.4	1.80	207
47470C	47	36.7 - 55.1	1.47	298
47680C	68	54.9 - 82.3	1.22	456
47101C	100	81.4 - 122	1.01	686

MECHANICAL DIMENSIONS



Recommended Footprint Details



All dimensions in mm (inches). Package weight: 2.5g Typ.

ABSOLUTE MAXIMUM RATINGS

Isolation voltage (flash tested for 1 second), pins 3 & 4	500V _{DC}
Operating free air temperature range	-40°C to 85°C
Storage temperature range	-40°C to 125°C

SOLDERING INFORMATION³

Peak reflow temperature	245°C
Pin finish	Tin

Specifications typical at T_a = 25°C

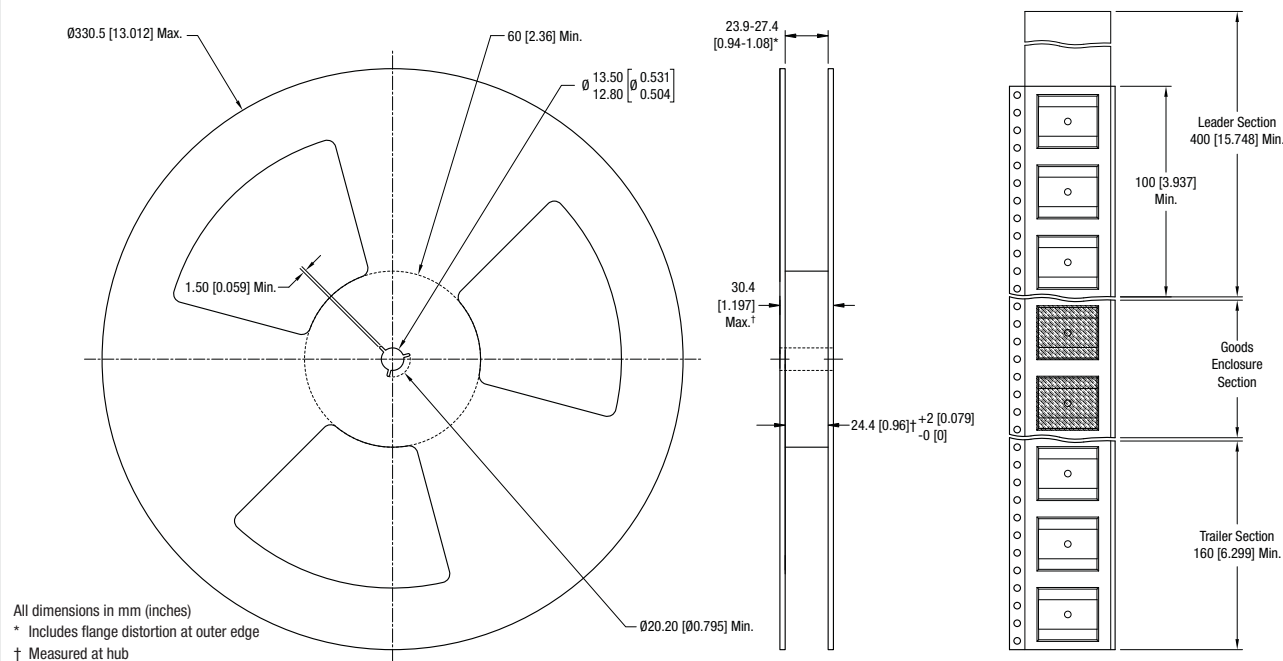
1 When connecting windings in series, inductance will be 4 times the nominal figure shown.

2 If current is flowing in both windings, the maximum DC current occurs when either the inductance falls to 85% of its nominal value or when its temperature rise reaches 40°C, whichever is sooner.

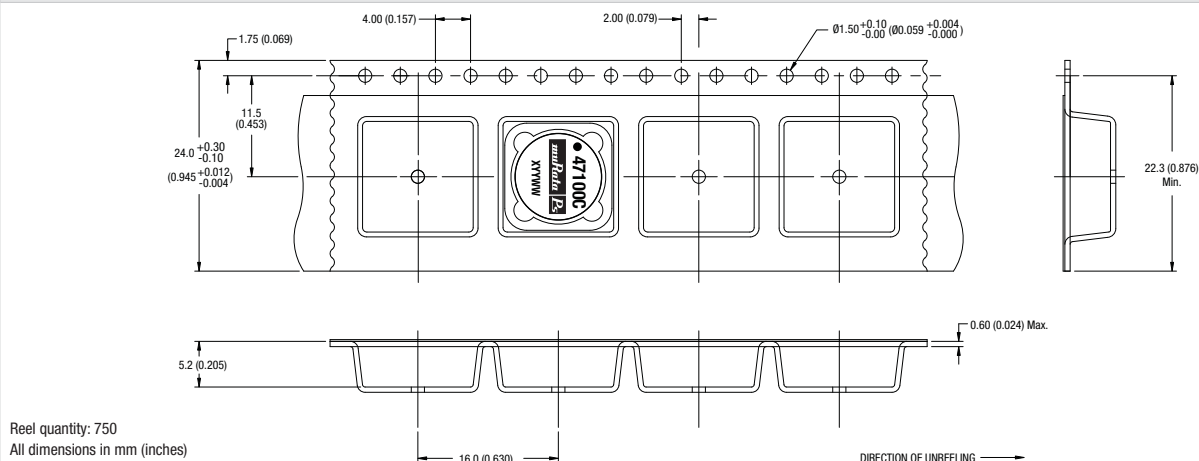
3 For further information, please visit www.murata-ps.com/rohs

TAPE & REEL SPECIFICATIONS

REEL OUTLINE DIMENSIONS



TAPE OUTLINE DIMENSIONS



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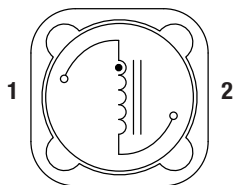
FEATURES

- RoHS compliant
- 1.0μH to 1.0mH
- Up to 10A loc
- Bobbin format
- Surface mount
- Integral EMI shield
- Compact size
- Tape and reel packaging
- UL 94V-0 materials
- J-STD-020-C reflow

DESCRIPTION

The 4800S series is a range of bobbin-wound, surface-mount inductors designed for use in switching power supply, and power line filter circuits. The parts are suitable for any application requiring a high saturation current in a low-profile package. The devices have an integral ferrite shield to reduce EMI.

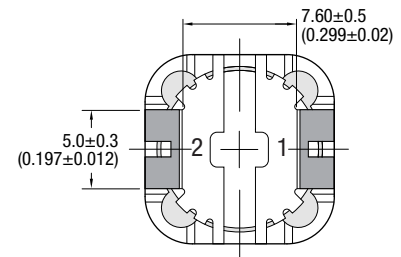
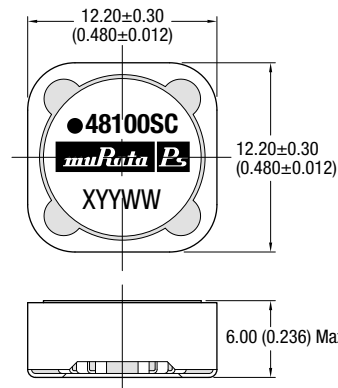
PIN CONNECTIONS (TOP VIEW)



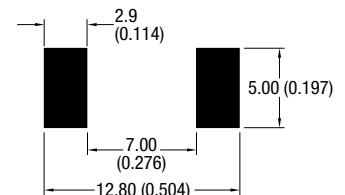
SELECTION GUIDE

Order Code	Inductance (10kHz, 100mVAC) ±20%	DC Current ¹	DC Resistance	SRF	Q Factor	
	Nom.	Max.	Max.	Typ.	Typ.	
	μH	A	mΩ	MHz	Q	@ f (MHz)
481R0SC	1.0 (±30%)	10.0	6	83	35	1
482R2SC	2.2 (±30%)	8.2	10	48	36	1
483R3SC	3.3 (±30%)	7.3	12	39	34	1
484R7SC	4.7 (±30%)	6.3	16	28	34	1
486R8SC	6.8 (±30%)	5.1	21	26	34	1
48100SC	10	4.5	28	20	32	1
48150SC	15	3.7	40	17	31	1
48220SC	22	3.1	53	13	31	1
48330SC	33	2.8	73	11	31	1
48470SC	47	2.4	100	10	32	1
48680SC	68	1.8	145	9	33	1
48101SC	100	1.6	200	7	20	0.8
48151SC	150	1.35	280	6	23	0.8
48221SC	220	1.00	430	5	23	0.8
48331SC	330	0.85	630	5	22	0.8
48471SC	470	0.76	900	4	20	0.8
48681SC	680	0.66	1250	4	18	0.8
48102SC	1000	0.52	1850	4	17	0.8

MECHANICAL DIMENSIONS



Recommended Footprint Details



Dot signifies the innermost turn of the winding.
All dimensions in mm (inches). Package weight: 3.1g Typ.

ABSOLUTE MAXIMUM RATINGS

Operating free air temperature range	-40°C to 85°C
Storage temperature range	-40°C to 125°C

SOLDERING INFORMATION²

Peak reflow solder temperature	245°C
Pin finish	Tin

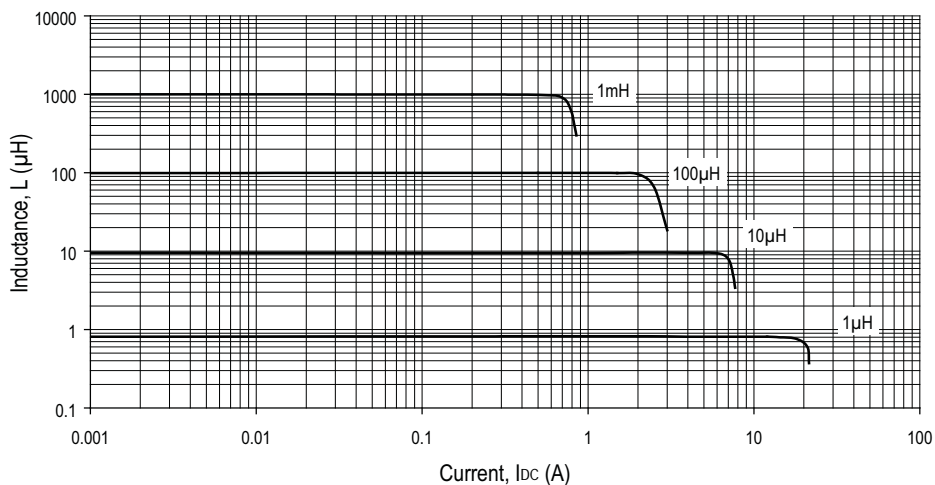
Specifications typical at T_A = 25°C

1 Maximum DC current occurs when either the inductance falls to 75% of its nominal value or when its temperature rise reaches 40°C, whichever is sooner.

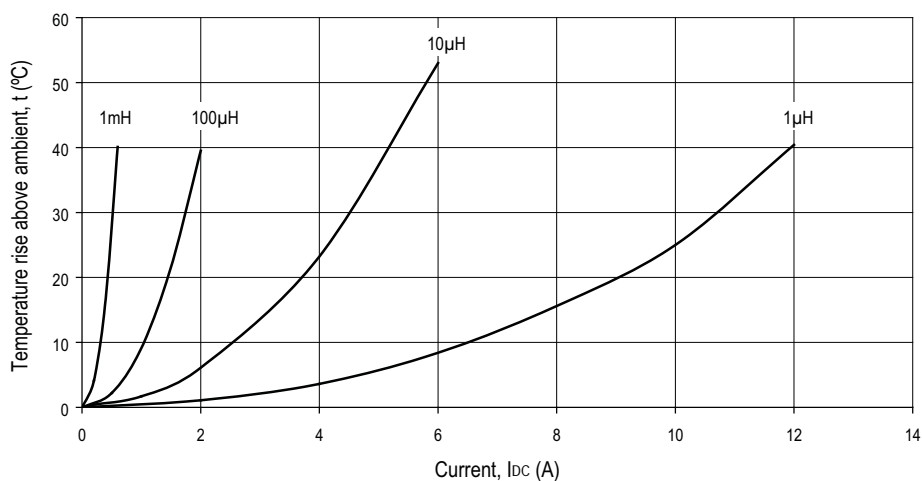
2 For further information, please visit www.murata-ps.com/rohs



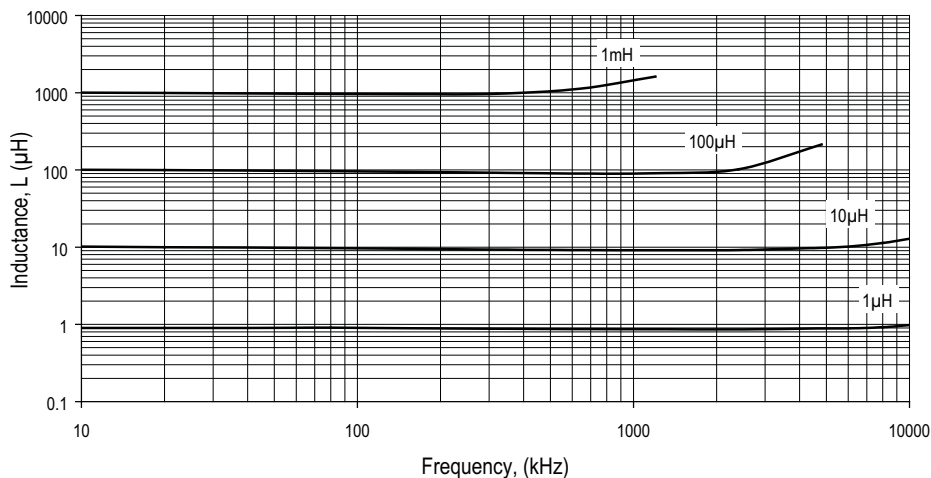
INDUCTANCE Vs CURRENT



TEMPERATURE Vs CURRENT

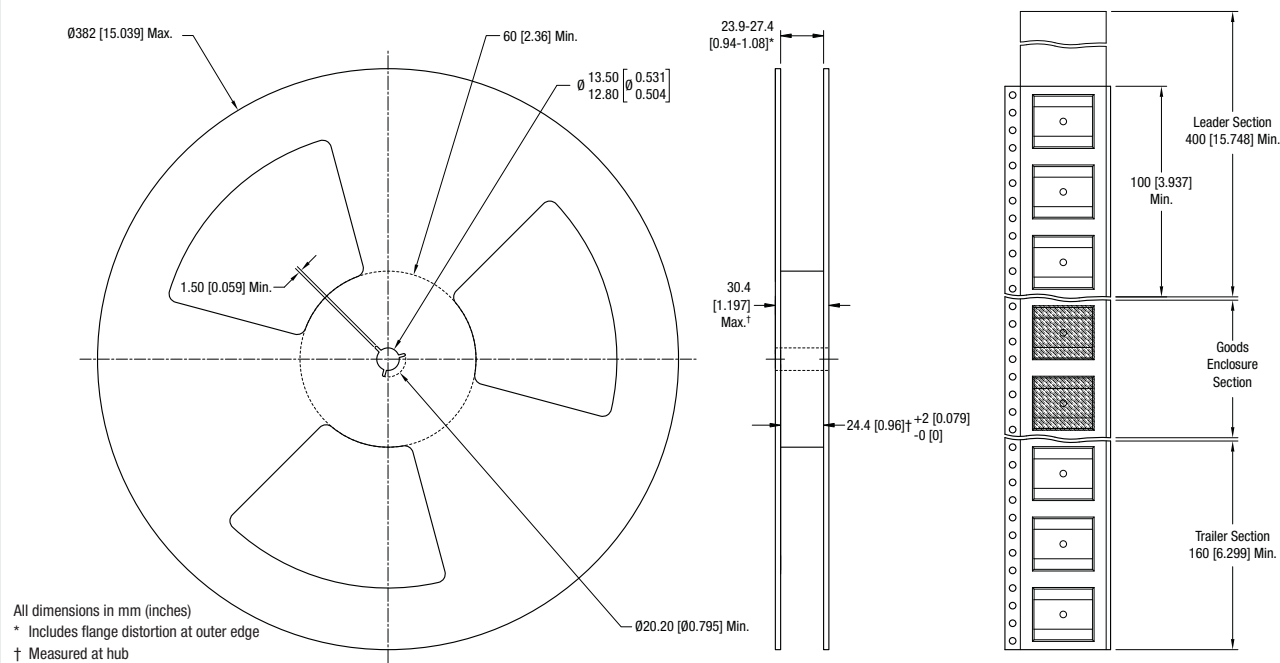


INDUCTANCE Vs FREQUENCY

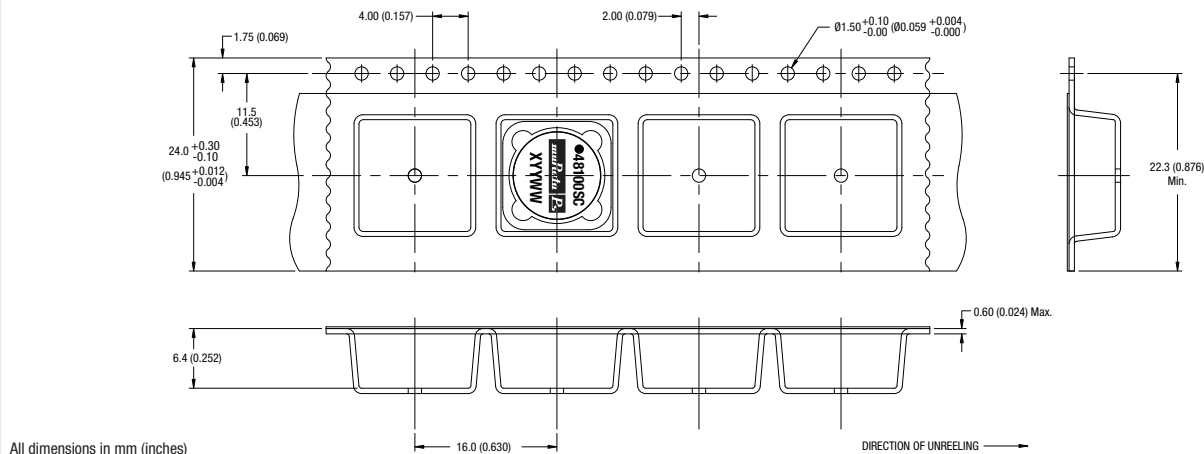


TAPE & REEL SPECIFICATIONS

REEL OUTLINE DIMENSIONS



TAPE OUTLINE DIMENSIONS



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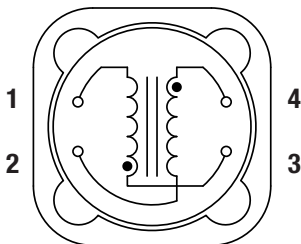
FEATURES

- RoHS compliant
- 1.0μH to 400μH¹
- Up to 12.3A IDC
- Bobbin format
- Dual winding
- Surface mount
- Integral EMI shield
- Compact size
- Tape and reel packaging
- J-STD-020-C reflow
- Backwards compatible with Sn/Pb soldering systems

DESCRIPTION

The 4800 series is a range of dual wound inductors offering flexible options. Windings have a 1:1 ratio and can be connected in series or parallel to create a wide range of inductance combinations. The secondary winding could also be used as a feedback winding in switched mode power supplies.

PIN CONNECTIONS (TOP VIEW)

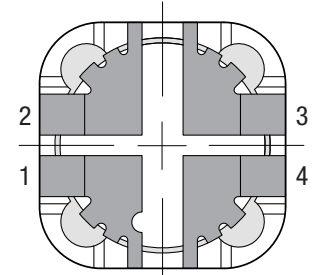
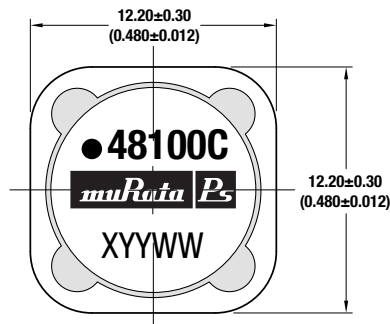


3 & 1 = Primary winding
4 & 2 = Secondary winding

SELECTION GUIDE

Order Code	Inductance ¹ (10kHz, 100mVAC) 1&3, 2&4	Inductance Range (10kHz, 100mVAC) 1&3, 2&4	DC Current ² (parallel connection)	DC Resistance 1&3, 2&4
	Nom.	Min. - Max.	Max.	Max.
	μH	μH	A	mΩ
481R0C	1.0	0.66 - 1.11	12.3	9.00
482R2C	2.2	1.64 - 2.73	8.30	13.5
483R3C	3.3	2.29 - 3.82	6.80	19.1
484R7C	4.7	4.18 - 6.27	5.70	29.4
486R8C	6.8	5.22 - 7.83	4.70	39.9
48100C	10	7.65 - 11.5	3.90	61.4
48150C	15	12.2 - 18.2	3.20	77.4
48220C	22	17.7 - 26.6	2.60	119
48330C	33	26.7 - 40.1	2.10	184
48470C	47	37.6 - 56.4	1.80	274
48680C	68	53.8 - 80.7	1.50	409
48101C	100	81.3 - 122	1.23	503

MECHANICAL DIMENSIONS



Recommended Footprint Details

All dimensions in mm (inches). Package weight: 3.1g Typ.

ABSOLUTE MAXIMUM RATINGS

Isolation voltage (flash tested for 1 second), pins 3 & 4	500VDC
Operating free air temperature range	-40°C to 85°C
Storage temperature range	-40°C to 125°C

SOLDERING INFORMATION³

Peak reflow temperature	245°C
Pin finish	Tin

Specifications typical at T_a = 25°C

1 When connecting windings in series, inductance will be 4 times the nominal figure shown.

2 If current is flowing in both windings, the maximum DC current occurs when either the inductance falls to 85% of its nominal value or when its temperature rise reaches 40°C, whichever is sooner.

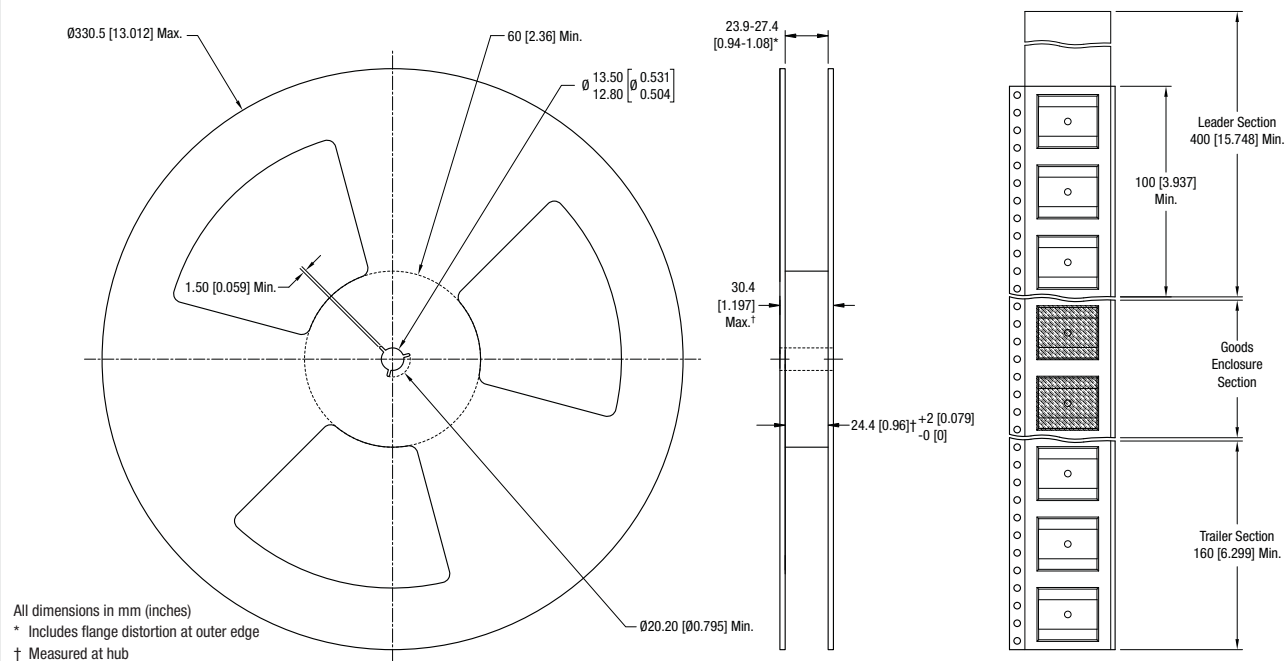
3 For further information, please visit www.murata-ps.com/rohs



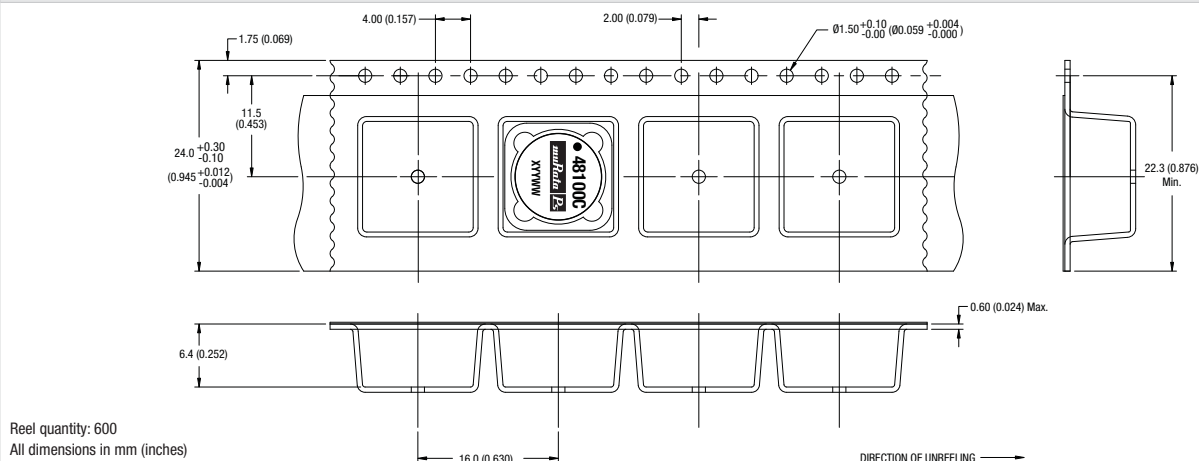
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TAPE & REEL SPECIFICATIONS

REEL OUTLINE DIMENSIONS



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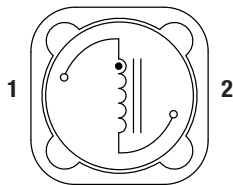
FEATURES

- RoHS compliant
- 1.0μH to 1mH
- Up to 11.8A I_{DC}
- Bobbin format
- Surface mount
- Integral EMI shield
- Compact size
- Tape and reel packaging
- UL 94V-0 materials
- J-STD-020-C reflow

DESCRIPTION

The 4900S series is a range of bobbin-wound, surface-mount inductors designed for use in switching power supply, and power line filter circuits. The parts are suitable for any application requiring a high saturation current in a low-profile package. The devices have an integral ferrite shield to reduce EMI.

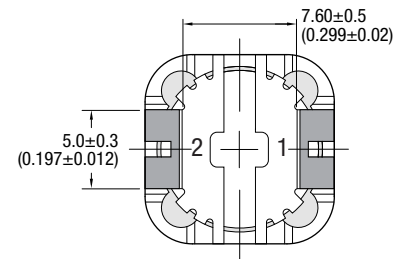
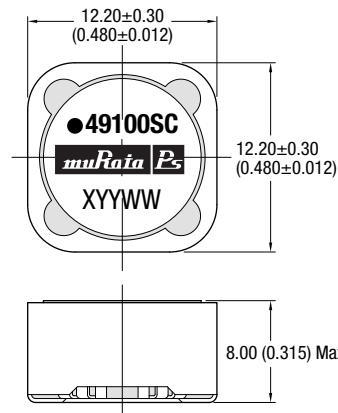
PIN CONNECTIONS (TOP VIEW)



SELECTION GUIDE

Order Code	Inductance (10kHz, 100mVAC) ±20%	DC Current ¹	DC Resistance	SRF	Q Factor	
	Nom.	Max.	Max.	Typ.	Typ.	
	μH	A	mΩ	MHz	Q	@ f (MHz)
491R0SC	1.0 (±30%)	11.8	5	91	32	1
492R2SC	2.2 (±30%)	9.8	8	48	45	1
493R3SC	3.3 (±30%)	8.4	10	37	42	1
494R7SC	4.7 (±30%)	7.7	12	32	42	1
496R8SC	6.8 (±30%)	6.2	16	24	43	1
49100SC	10	5.1	21	19	43	1
49150SC	15	4.4	27	16	44	1
49220SC	22	3.1	42	12	46	1
49330SC	33	2.9	60	10	51	1
49470SC	47	2.3	100	9	52	1
49680SC	68	2.0	143	7	47	1
49101SC	100	1.6	165	6	40	0.8
49151SC	150	1.3	250	5	35	0.8
49221SC	220	1.1	380	4	36	0.8
49331SC	330	0.90	550	4	33	0.8
49471SC	470	0.75	810	4	37	0.8
49681SC	680	0.62	1200	3	27	0.8
49102SC	1000	0.50	1500	3	26	0.8

MECHANICAL DIMENSIONS



Recommended Footprint Details

Dot signifies the innermost turn of the winding.
All dimensions in mm (inches). Package weight: 3.5g Typ.

ABSOLUTE MAXIMUM RATINGS

Operating free air temperature range	-40°C to 85°C
Storage temperature range	-40°C to 125°C

SOLDERING INFORMATION²

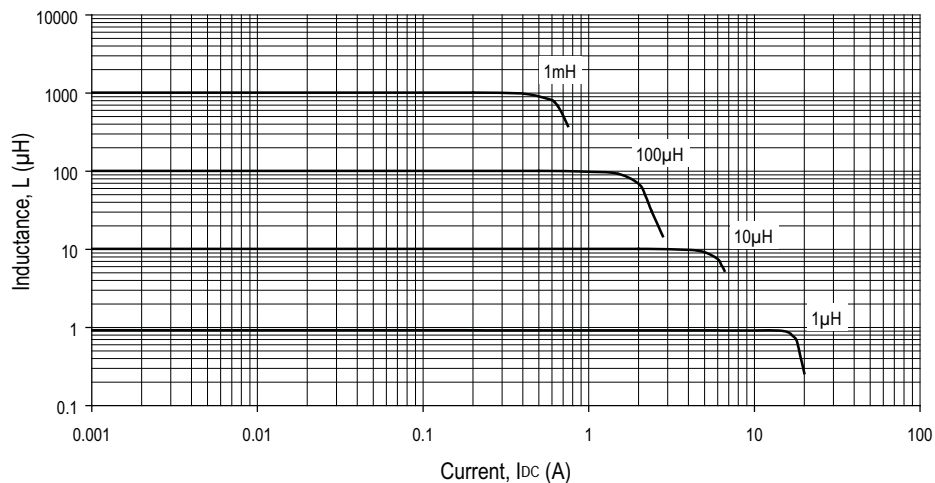
Peak reflow solder temperature	245°C
Pin finish	Tin

Specifications typical at T_A = 25°C

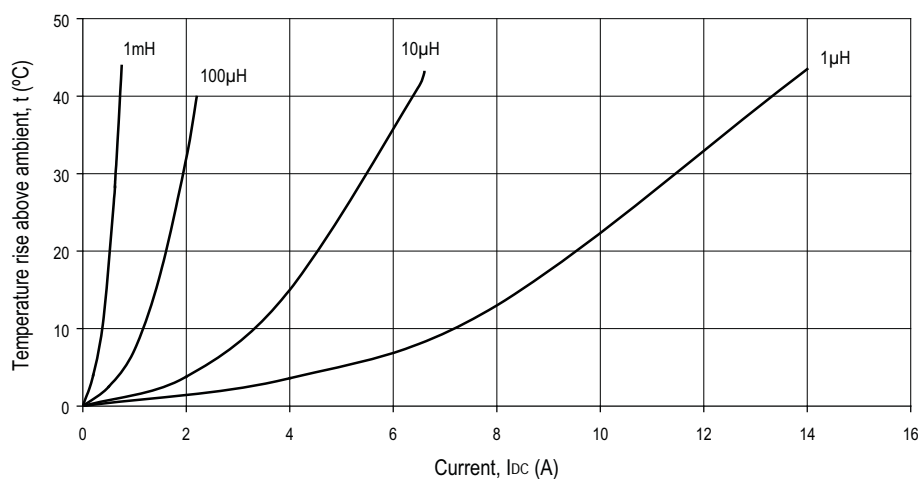
- 1 Maximum DC current occurs when either the inductance falls to 75% of its nominal value or when its temperature rise reaches 40°C, whichever is sooner.
- 2 For further information, please visit www.murata-ps.com/rohs



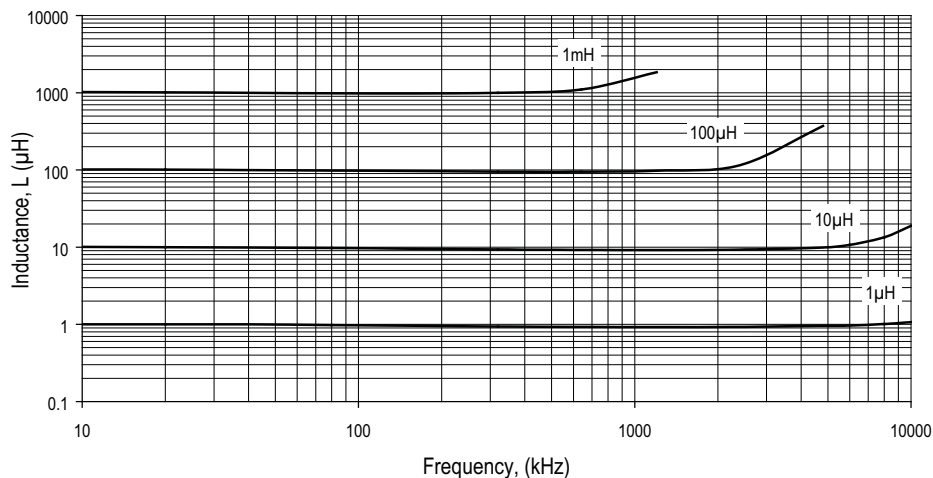
INDUCTANCE Vs CURRENT



TEMPERATURE Vs CURRENT

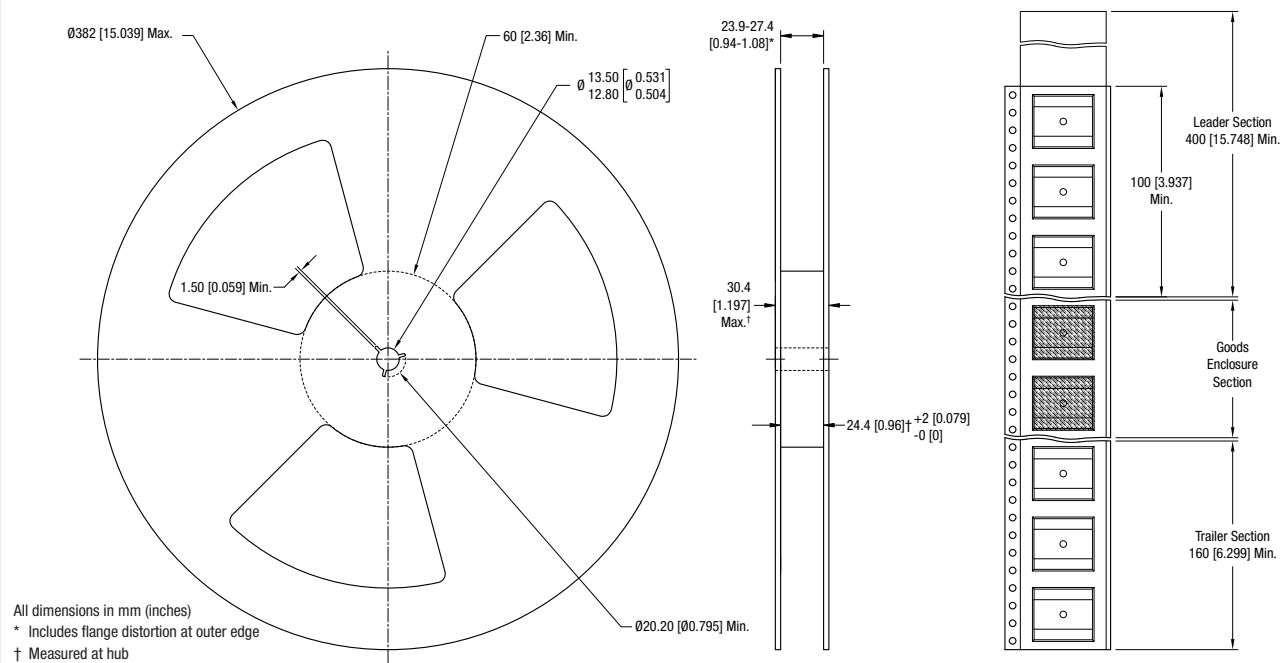


INDUCTANCE Vs FREQUENCY

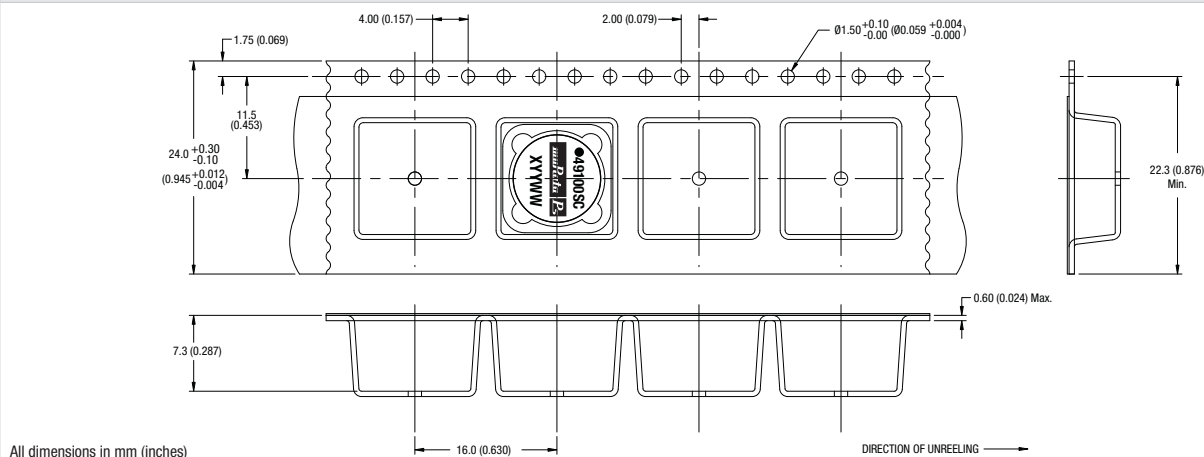


TAPE & REEL SPECIFICATIONS

REEL OUTLINE DIMENSIONS



TAPE OUTLINE DIMENSIONS



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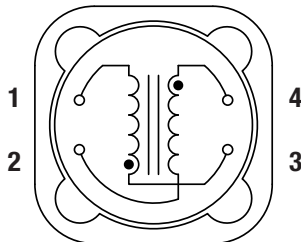
FEATURES

- RoHS compliant
- 2.2μH to 880μH¹
- Up to 9.5A I_{DC}
- Bobbin format
- Dual winding
- Surface mount
- Integral EMI shield
- Compact size
- Tape and reel packaging
- No voltage breakdown at 500V_{DC}
- J-STD-020C reflow
- Backward compatible with Sn/Pb soldering systems

DESCRIPTION

The 4900 series is a range of dual wound inductors offering flexible options. Windings have a 1:1 ratio and can be connected in series or parallel to create a wide range of inductance combinations. The secondary winding could be used as a feedback winding in switched mode power supplies.

PIN CONNECTIONS (TOP VIEW)



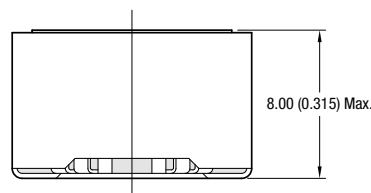
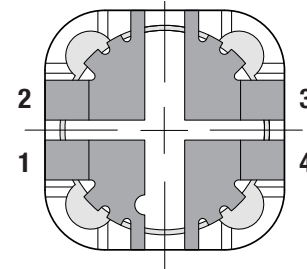
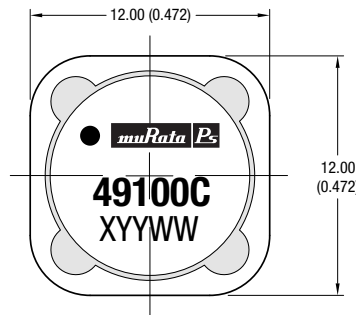
3 & 1 = Primary winding
4 & 2 = Secondary winding



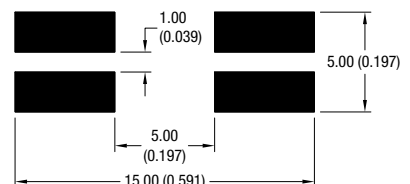
For full details go to
www.murata-ps.com/rohs

SELECTION GUIDE				
Order Code	Inductance ¹ (10kHz, 100mV _{AC}) 1&3, 2&4	Inductance Range (10kHz, 100mV _{AC}) 1&3, 2&4	DC Current ² (parallel connection)	DC Resistance
	Nom.	Min. - Max.	Max.	Max.
	μH	μH	A	mΩ
492R2C	2.2	1.77 - 2.65	9.50	12.6
493R3C	3.3	2.47 - 3.70	7.80	14.9
494R7C	4.7	3.29 - 4.93	6.50	17.1
496R8C	6.8	5.27 - 7.91	5.40	27.0
49100C	10	7.70 - 11.6	4.50	41.0
49150C	15	10.6 - 16.0	3.70	53.0
49220C	22	15.9 - 23.8	3.00	81.0
49330C	33	24.5 - 36.8	2.50	128
49470C	47	35.1 - 52.6	2.10	191
49680C	68	50.8 - 76.2	1.71	233
49101C	100	73.6 - 110	1.41	343
49151C	150	111 - 166	1.15	529
49221C	220	167 - 251	0.95	805

MECHANICAL DIMENSIONS



Recommended Footprint Details



All dimensions in mm (inches). Package weight: 4g Typ.

ABSOLUTE MAXIMUM RATINGS

Isolation voltage (flash tested for 1 second), pins 3 & 4	500V _{DC}
Operating free air temperature range	-40°C to 85°C
Storage temperature range	-40°C to 125°C

SOLDERING INFORMATION³

Peak reflow temperature	245°C
Pin finish	Tin

Specifications typical at T_a = 25°C

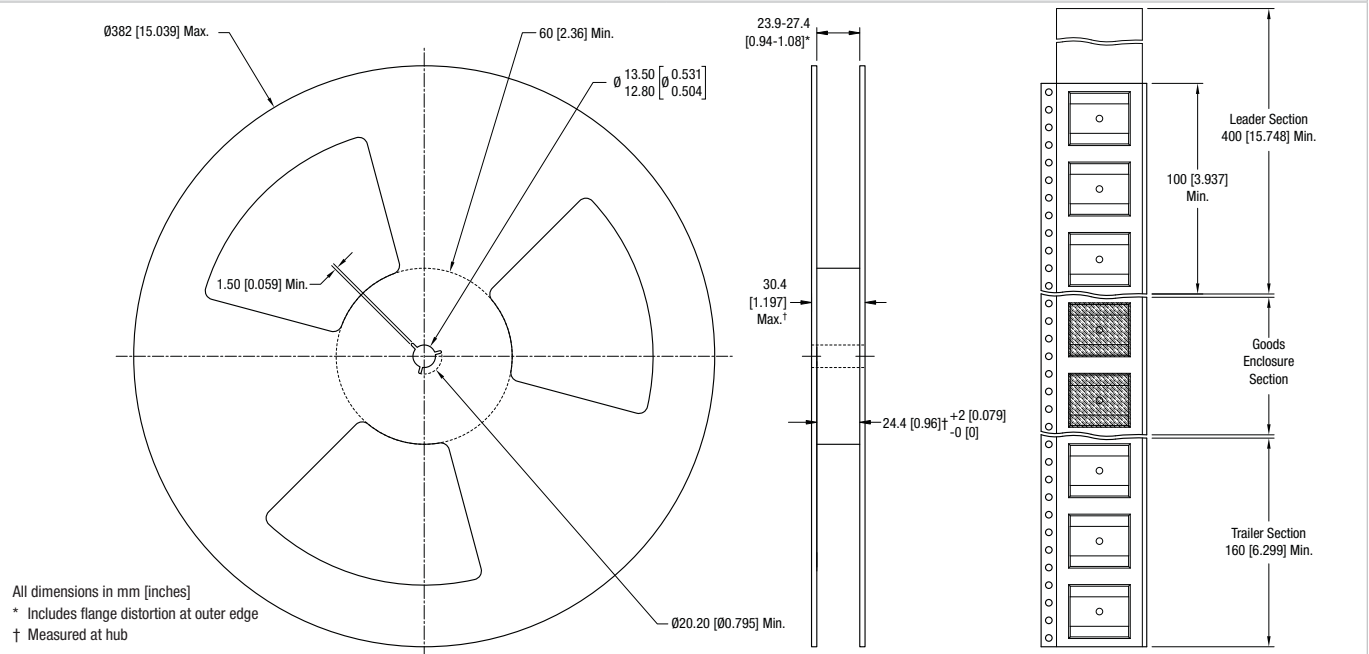
1 When connecting windings in series, inductance will be 4 times the nominal figure shown.

2 If current is flowing in both windings, the maximum DC current occurs when either the inductance falls to 75% of its nominal value or when its temperature rise reaches 40°C, whichever is sooner.

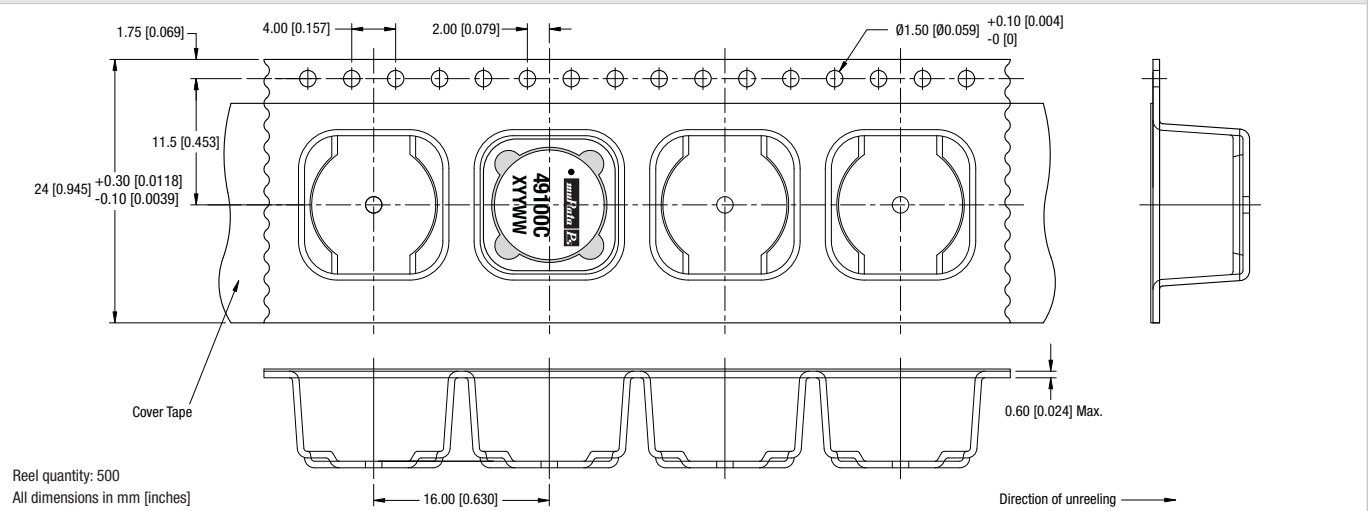
3 For further information, please visit www.murata-ps.com/rohs

TAPE & REEL SPECIFICATIONS

REEL OUTLINE DIMENSIONS



TAPE OUTLINE DIMENSIONS



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FEATURES

- RoHS compliant
- Inductance range from 0.25μH to 1.5μH
- Small footprint
- Ultra-low profile
- UL 94V-0 packaging materials
- Custom inductance values available

PRODUCT OVERVIEW

The 3500 series is a range of flat-coil power inductors. They are ideal for high power designs which demand reliability in high temperature environments. Used to provide filtering or energy storage, they are suited to many power applications including portable devices, computers and telecom equipment.

SELECTION GUIDE

Order Code	Inductance, L	DC Current ²	DC Resistance
	±25%	Max.	Max.
	μH	A	mΩ
35251C	0.25	15.5	4.5
35501C	0.50	11.5	7.0
35801C	0.80	9.5	10
35112C	1.10	8.0	15
35152C	1.50	6.5	19

ABSOLUTE MAXIMUM RATINGS

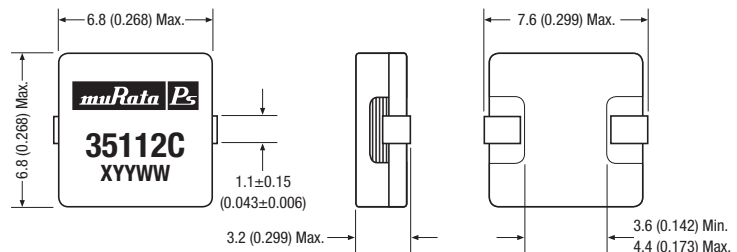
Operating free air temperature range	-40°C to 125°C
Storage temperature range	-40°C to 150°C

SOLDERING INFORMATION¹

Peak reflow solder temperature	250°C
Pin finish	Tin dip
Moisture sensitivity level	1

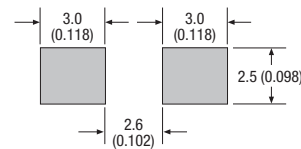
PACKAGE SPECIFICATIONS

Mechanical Dimensions



Package weight: 0.6g Typ.

Recommended Footprint Details



Unless otherwise stated, all dimensions in mm (inches) ± 0.25 (0.010).

Specifications typical at $T_a = 25^\circ\text{C}$

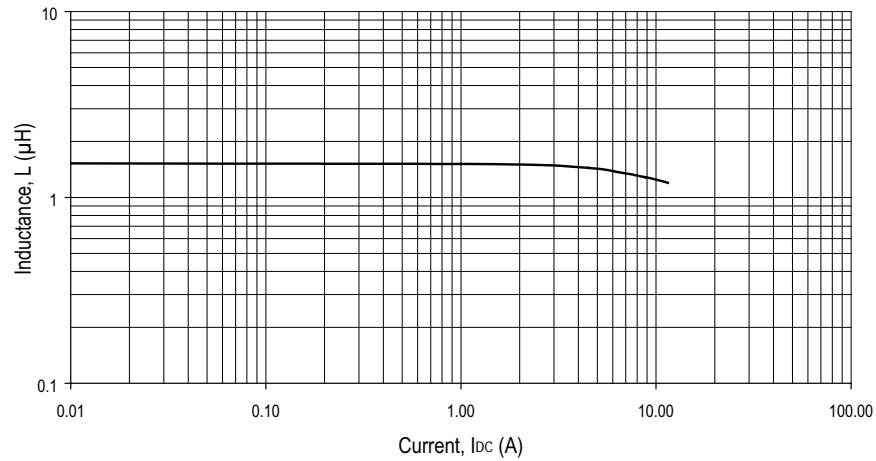
¹ For further information, please visit www.murata-ps.com/rohs

² The maximum DC current is the value at which the inductance falls to 75% of its nominal value or when its temperature rise reaches 40°C, whichever is sooner.



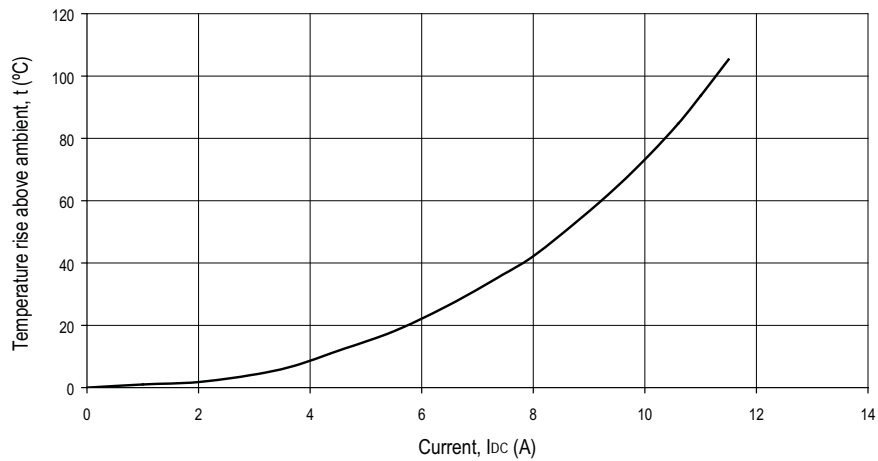
INDUCTANCE Vs CURRENT

35152C
Typical performance characteristics



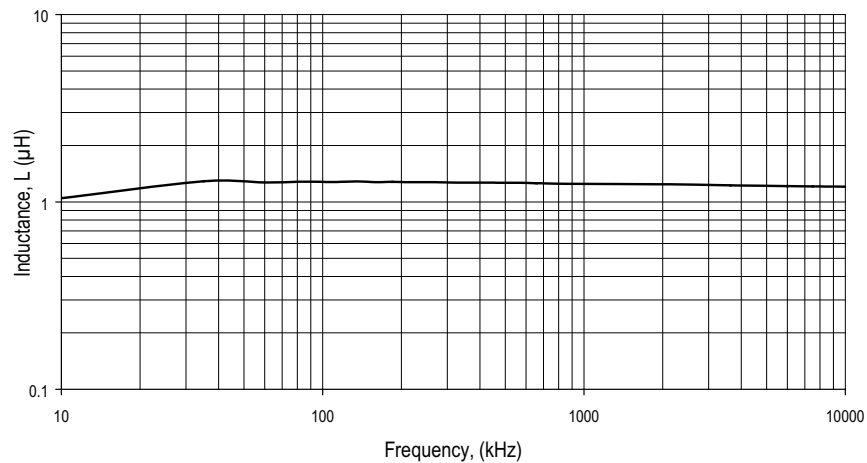
TEMPERATURE Vs CURRENT

35152C
Typical performance characteristics



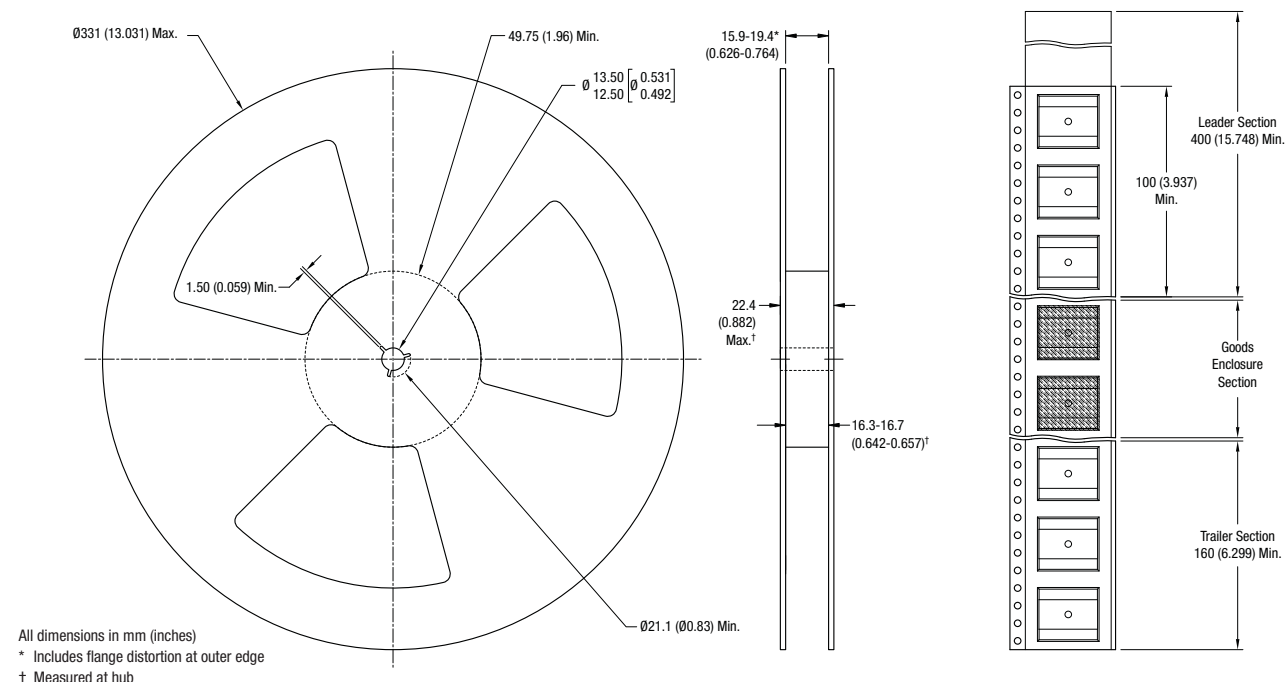
INDUCTANCE Vs FREQUENCY

35152C
Typical performance characteristics

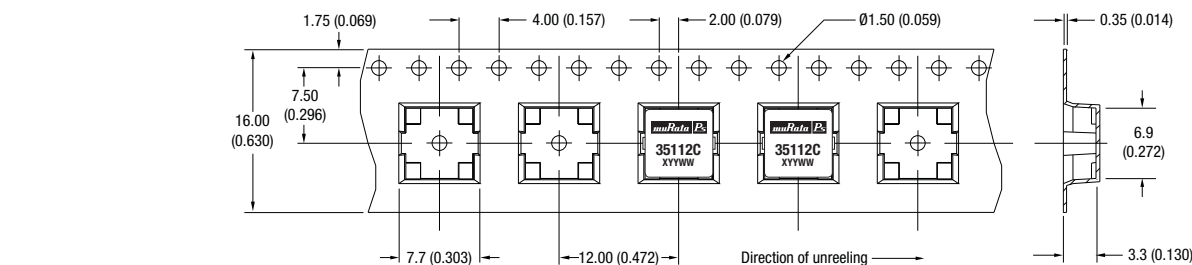


PACKAGE SPECIFICATIONS

Mechanical Dimensions



Tape Outline Dimensions



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FEATURES

- RoHS compliant
- Inductance range from 0.4μH to 4.7μH
- Small footprint
- Low profile
- UL 94V-0 packaging materials
- Custom inductance values available

PRODUCT OVERVIEW

The 3600 series is a range of flat-coil power inductors. They are ideal for high power designs which demand reliability in high temperature environments. Used to provide filtering or energy storage, they are suited to many power applications including portable devices, computers and telecom equipment.

SELECTION GUIDE

Order Code	Inductance, L	DC Current ²	DC Resistance
	±25%	Max.	Max.
	μH	A	mΩ
36401C	0.40	14.5	4
36601C	0.60	12.5	5
36102C	1.00	9.5	7.5
36182C	1.80	7.0	14
36232C	2.30	6.0	20
36332C	3.30	4.6	35
36472C	4.70	3.6	41

ABSOLUTE MAXIMUM RATINGS

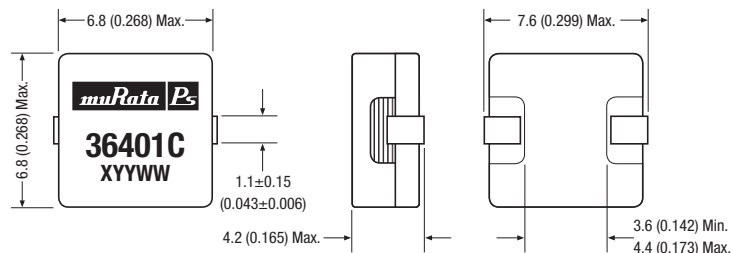
Operating free air temperature range	-40°C to 125°C
Storage temperature range	-40°C to 150°C

SOLDERING INFORMATION¹

Peak reflow solder temperature	250°C
Pin finish	Tin dip
Moisture sensitivity level	1

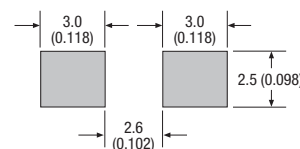
PACKAGE SPECIFICATIONS

Mechanical Dimensions



Package weight: 0.8g Typ.

Recommended Footprint Details



Unless otherwise stated, all dimensions in mm (inches) ± 0.25 (0.010).

Specifications typical at $T_A = 25^\circ\text{C}$

¹ For further information, please visit www.murata-ps.com/rohs

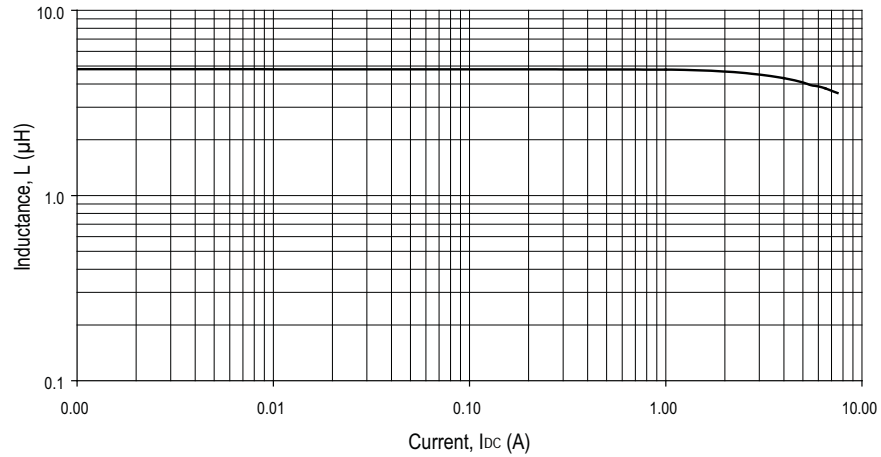
² The maximum DC current is the value at which the inductance falls to 75% of its nominal value or when its temperature rise reaches 40°C, whichever is sooner.



INDUCTANCE Vs CURRENT

36472C

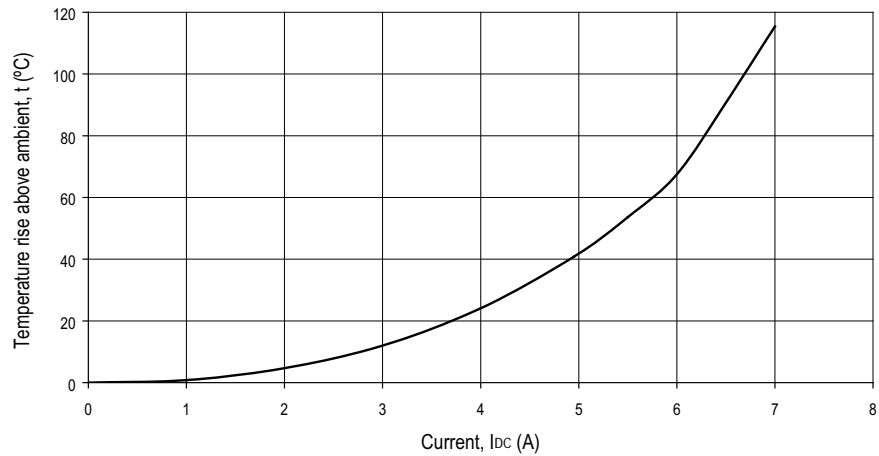
Typical performance characteristics



TEMPERATURE Vs CURRENT

36472C

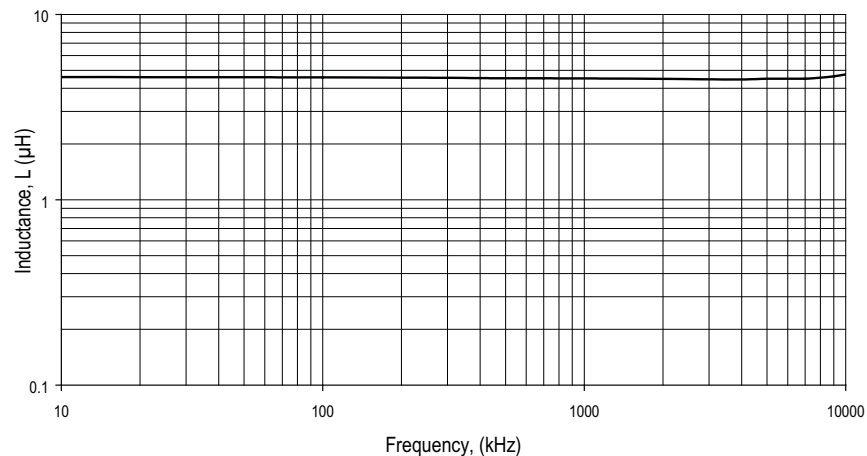
Typical performance characteristics



INDUCTANCE Vs FREQUENCY

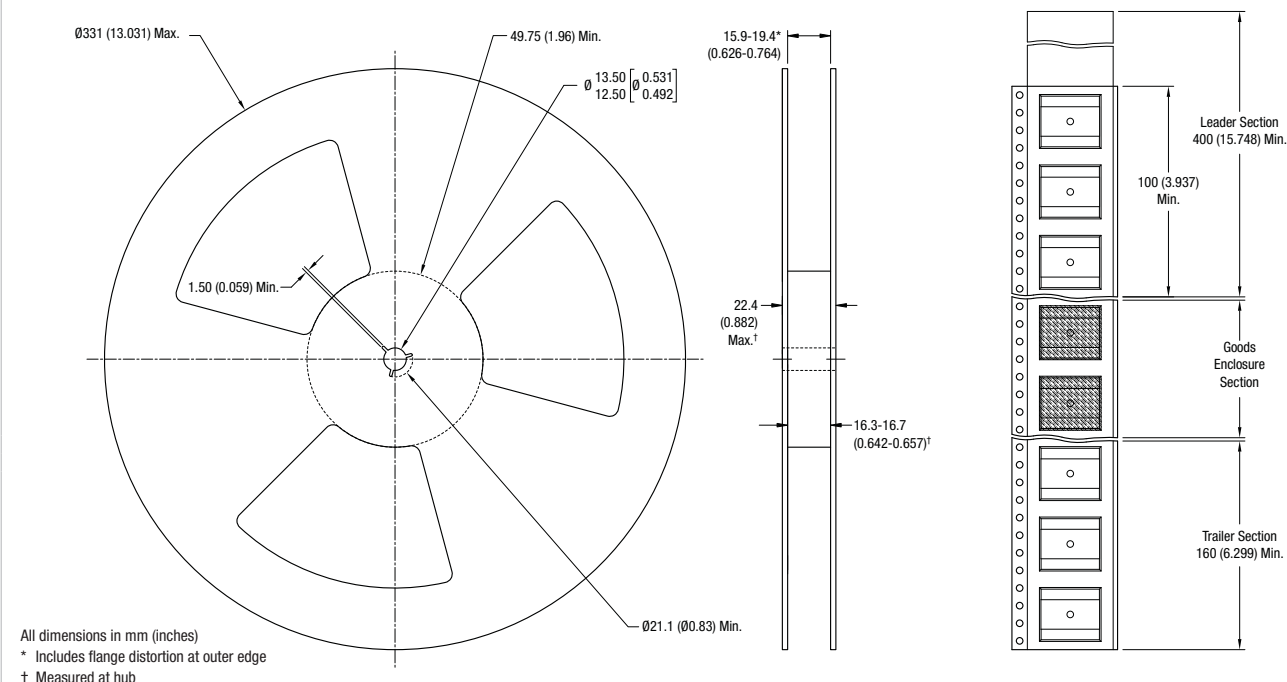
36472C

Typical performance characteristics

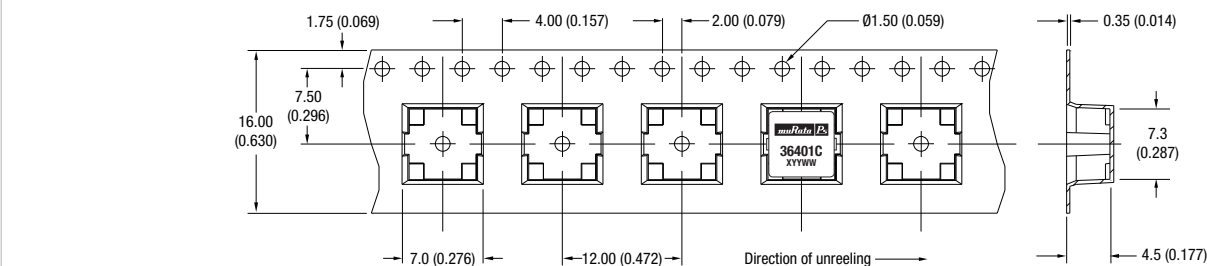


PACKAGE SPECIFICATIONS

Mechanical Dimensions



Tape Outline Dimensions



Reel quantity: 1000
Unless otherwise stated, all dimensions in mm (inches).

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FEATURES

- RoHS compliant
- 3.3μH to 330μH
- Surface mount
- J-STD-020C reflow
- Up to 5.20A I_{DC}
- UL94 V-0 package materials
- Compact size
- Toroidal construction minimizes EMI
- Pick & place compatible
- Backward compatible with Sn/Pb soldering systems

PRODUCT OVERVIEW

The 4000 series is a range of surface mount toroidal inductors designed for use in switching power supplies and DC/DC converters. The parts are ideal for applications requiring low profile compact components in a surface mount package.

4000 Series

Toroidal Surface Mount Inductors

SELECTION GUIDE

Order Code	Inductance (10kHz, 10mV _{AC})	Inductance Range (10kHz, 10mV _{AC})	DC Current ¹	DC Resistance
	Nom. μH	Min. - Max. μH	Max. A	Max. mΩ
403R3C	3.3	2.4-3.9	5.20	17
404R7C	4.7	3.7-6.1	4.40	19
406R8C	6.8	5.3-8.8	3.60	20
40100C	10	7.2-12.0	3.00	23
40150C	15	11.9-19.8	2.40	30
40220C	22	16.2-27.0	2.10	35
40330C	33	24.8-41.4	1.66	54
40470C	47	35.3-58.9	1.42	79
40680C	68	50.3-83.9	1.20	148
40101C	100	74.4-124	0.94	177
40151C	150	115-192	0.76	273
40221C	220	165-275	0.67	405
40331C	330	247-412	0.54	610

ABSOLUTE MAXIMUM RATINGS

Operating free air temperature range	-40°C to 85°C
Storage temperature range	-40°C to 125°C

SOLDERING INFORMATION²

Peak reflow temperature	245°C
Pin finish	Pure tin dip

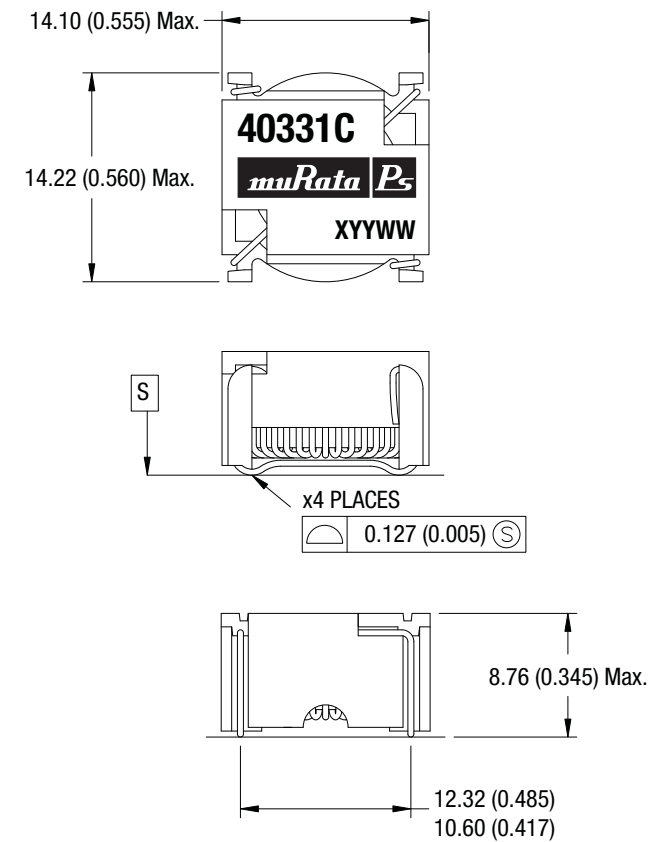
All specifications typical at T_A=25°C

- 1 Maximum DC current occurs when either the inductance falls to 75% of its nominal value or when its temperature rise reaches 40°C, whichever is sooner.
- 2 For further information, please visit www.murata-ps.com/rohs



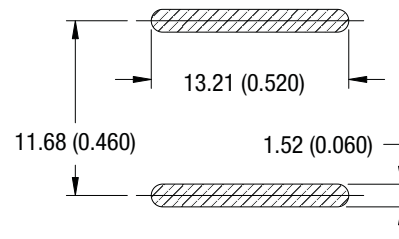
PACKAGE SPECIFICATIONS

MECHANICAL DIMENSIONS



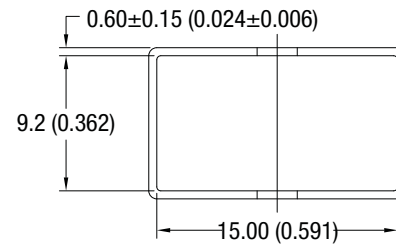
All dimensions in mm (inches).
Package weight 3.2g.

RECOMMENDED FOOTPRINT DETAILS



All dimensions in mm (inches).

TUBE OUTLINE DIMENSIONS



All dimensions in mm (inches).
Tube quantity: 30
Tube material: Antistatic coated clear PVC
Tube length: 475±2 [18.701±0.079]



FEATURES

- RoHS compliant
- 2.7μH to 330μH
- Surface mount
- J-STD-020C reflow
- Up to 8.10A I_{DC}
- UL94 V-0 package materials
- Compact size
- Toroidal construction minimizes EMI
- Pick & place compatible
- Backward compatible with Sn/Pb soldering systems

DESCRIPTION

The 4100 series is a range of surface mount toroidal inductors designed for use in switching power supplies and DC/DC converters. The parts are ideal for applications requiring low profile compact components in a surface mount package.

SELECTION GUIDE				
Order Code	Inductance (10kHz, 10mV _{AC})	Inductance Range (10kHz, 10mV _{AC})	DC Current ¹	DC Resistance
	Nom.	Min. - Max.	Max.	Max.
	μH	μH	A	mΩ
412R7C	2.7	2.1 - 3.5	8.1	14
414R7C	4.7	3.3 - 5.4	6.7	18
416R8C	6.8	4.7 - 7.8	5.7	20
41100C	10	7.3 - 12.2	4.7	24
41150C	15	10.6 - 17.6	4.0	28
41220C	22	15.8 - 26.3	3.3	33
41330C	33	23.8 - 39.6	2.7	38
41470C	47	35.5 - 59.2	2.2	62
41680C	68	52.2 - 87.0	1.75	110
41101C	100	75.2 - 125	1.47	158
41151C	150	114 - 189	1.16	247
41221C	220	164 - 274	1.03	377
41331C	330	247 - 412	0.83	462

ABSOLUTE MAXIMUM RATINGS

Operating free air temperature range	-40°C to 85°C
Storage temperature range	-40°C to 125°C

SOLDERING INFORMATION²

Peak reflow temperature	245°C
Pin finish	Pure tin dip

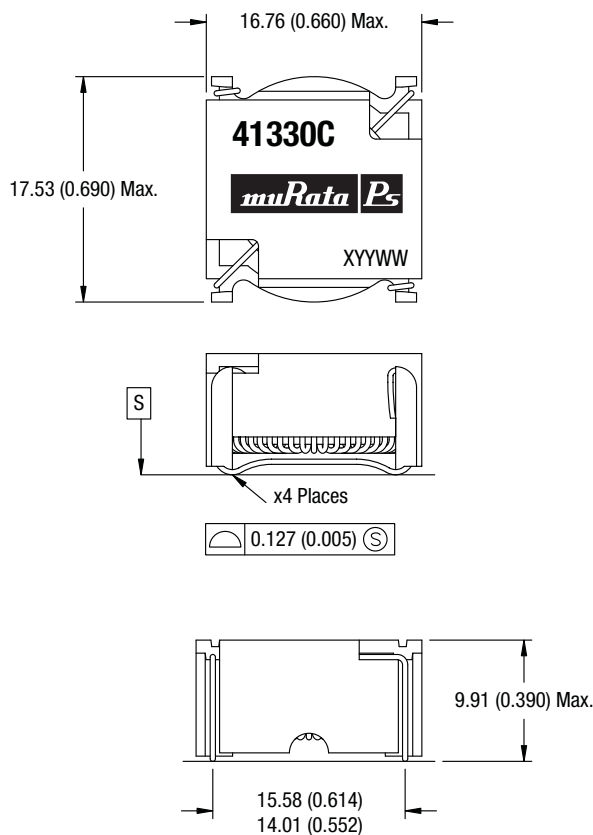
All specifications typical at T_A=25°C

- 1 Maximum DC current occurs when either the inductance falls to 75% of its nominal value or when its temperature rise reaches 40°C, whichever is sooner.
- 2 For further information, please visit www.murata-ps.com/rohs



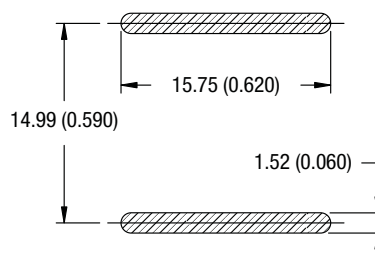
PACKAGE SPECIFICATIONS

MECHANICAL DIMENSIONS



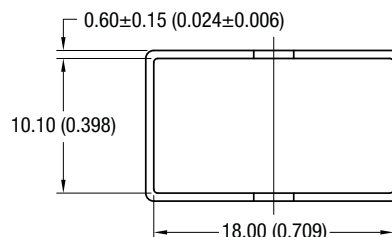
All dimensions in mm (inches).
Package weight 5.6g Typ.

RECOMMENDED FOOTPRINT DETAILS



All dimensions in mm (inches).

TUBE OUTLINE DIMENSIONS



All dimensions in mm (inches).
Tube quantity: 25
Tube material: Antistatic coated clear PVC
Tube length: 475±2mm (18.701±0.079)

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FEATURES

- RoHS compliant
- 1.27μH to 17.6μH
- Up to 15.4A I_{dc}
- Toroidal construction minimizes EMI
- Compact size
- Surface mount
- UL94 V-0 package materials
- Pick & place compatible
- J-STD-020C reflow
- Backward compatible with Sn/Pb soldering systems

DESCRIPTION

The 4200 series is a range of surface mount toroidal inductors designed for use in switching power supplies and DC/DC converters. The parts are ideal for applications requiring low profile compact components in a surface mount package.

SELECTION GUIDE

Order Code	Inductance (100kHz, 0.1V _{AC})	DC Current ¹	DC Resistance	SRF	Package Dimensions (Max.)			Pad Dimensions		Carrier Tape Dimensions			Package Weight	Reel (Box) Quantity ³
	±15%	Max.	Max.	Min.	A	B	C	D	E	F	G	H	Typ.	
	μH	A	mΩ	MHz	mm	mm	mm	mm	mm	mm	mm	mm	g	
42132C	1.27	14.3	2.5	244	15.70	9.4	15.37	12.70	11.18	20	24	9.5	3.5	300
42212C	2.10	11.5	3.8	162	15.70	9.4	15.37	12.70	11.18	20	24	9.5	3.4	(60)
42282C	2.84	13.9	3.5	116	17.00	9.9	17.00	14.48	12.45	24	32	10.5	5.0	250 (60)
42422C	4.23	11.4	5.2	90	17.00	9.9	17.00	14.48	12.45	24	32	10.5	4.8	
42652C	6.5	12.4	6.0	57	18.80	9.9	18.80	16.26	14.20	24	32	10.7	6.8	
42842C	8.45	10.4	8.0	50	18.80	9.9	18.80	16.26	14.20	24	32	10.7	6.4	180
42103C	10.2	15.4	6.0	38	23.88	9.9	23.88	21.08	17.78	32	44	1.08	12.3	
42183C	17.6	10.9	11.6	24	23.88	9.9	23.88	21.08	17.78	32	44	10.8	12.5	

ABSOLUTE MAXIMUM RATINGS

Operating temperature range	-40°C to +125°C
Storage temperature range	-40°C to +130°C

SOLDERING INFORMATION²

Peak reflow temperature	245°C
Pin finish	Pure tin dip
Moisture sensitivity level	1

All specifications typical at T_A=25°C

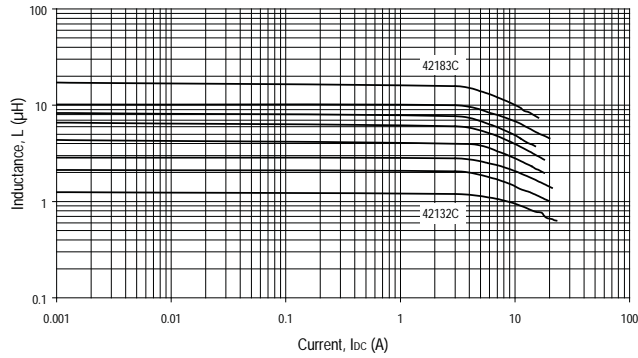
1 Maximum DC current occurs when the temperature rise reaches 55°C.

2 For further information, please visit www.murata-ps.com/rohs

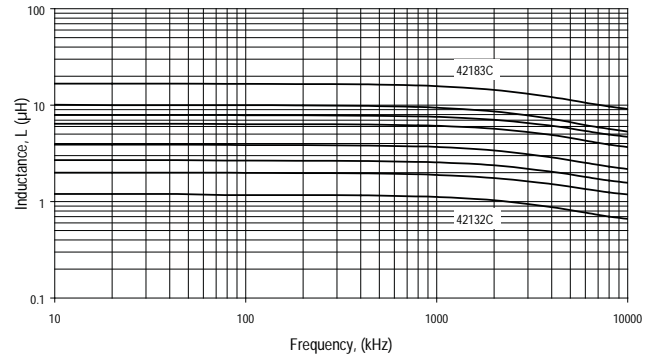
3 If components are required in tape & reel format, suffix order code with '-R', e.g. 42132C-R



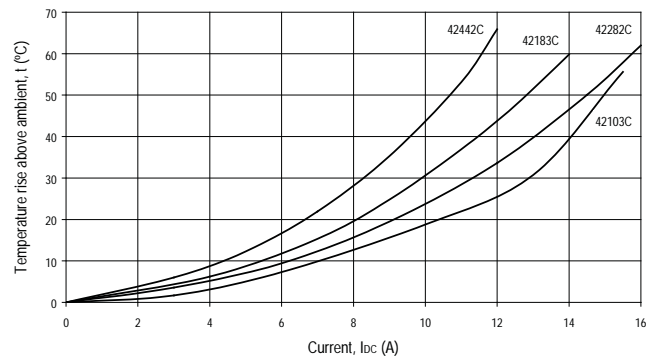
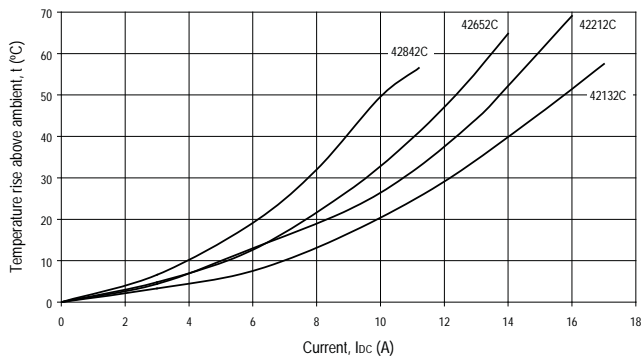
INDUCTANCE Vs CURRENT



INDUCTANCE Vs FREQUENCY



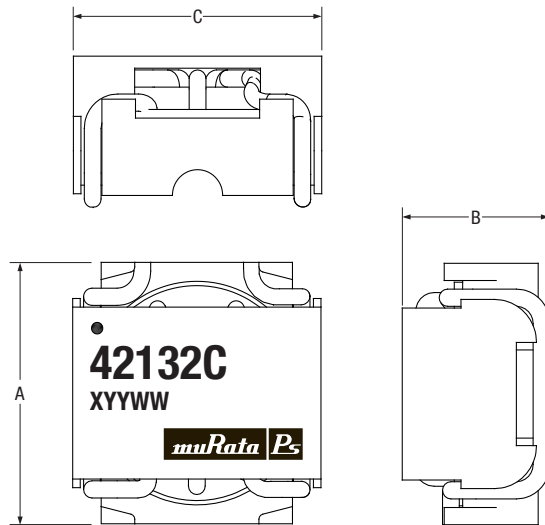
TEMPERATURE Vs CURRENT



PACKAGE SPECIFICATIONS

MECHANICAL DIMENSIONS

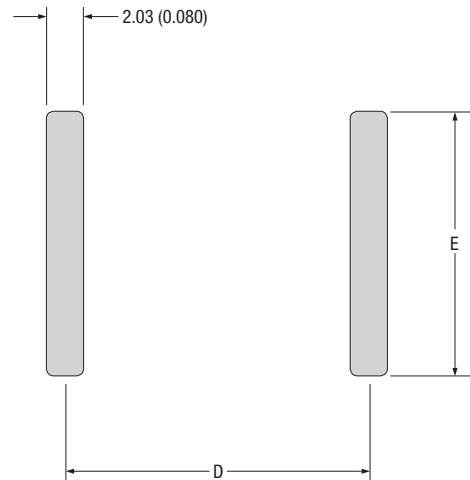
See Selection Guide for dimensions.



Package weight: See Selection Guide.

RECOMMENDED FOOTPRINT DETAILS

See Selection Guide for dimensions.

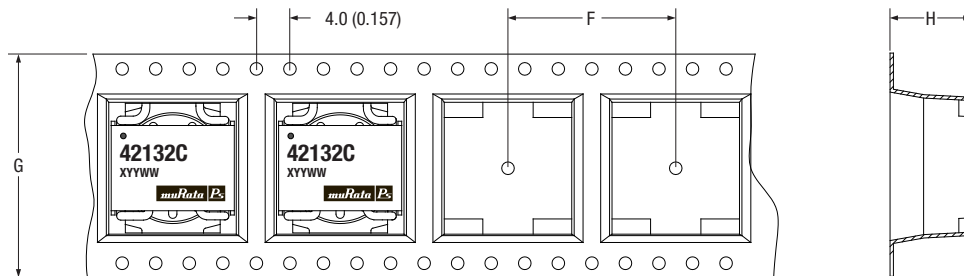


All dimensions in mm (inches).

TAPE & REEL SPECIFICATIONS

TAPE OUTLINE DIMENSIONS

See Selection Guide for dimensions.



All dimensions in mm (inches).
See Selection Guide for package quantities.

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FEATURES

- RoHS compliant
- Toroidal construction minimizes EMI
- Compact size
- Surface mount
- UL94 V-0 package materials
- Pick & place compatible
- J-STD-020C reflow
- Backward compatible with Sn/Pb soldering systems

DESCRIPTION

The 4300 series is a range of surface mount dual-winding toroidal inductors designed for use in switching power supplies and DC/DC converters. These devices can also be used as common-mode chokes, as the windings have a 1:1 ratio. They are ideal for applications requiring low profile compact components in a surface mount package.

SELECTION GUIDE

Order Code	Inductance (100kHz, 0.1V _{AC}) ¹	DC Current ²	DC Resistance	SRF	Package Dimensions (Max.)		Pad Dimensions		Carrier Tape Dimensions		Package Weight
	±15% μH	Max. A	Max. mΩ	Min. MHz	A	B	C	D	E	F	Typ. g
43212C	2.10	21	2.22	106	20.30	23.10	11.18	20.57	32.0	10.3	7.4
43402C	4.00	22.4	3.10	69	25.40	28.20	15.75	25.65	36.0	10.6	12.5

ABSOLUTE MAXIMUM RATINGS

Isolation voltage (flash tested for 1 second), pins 1 & 2	500V _{DC}
Operating temperature range	-40°C to +125°C
Storage temperature range	-40°C to +130°C

SOLDERING INFORMATION³

Peak reflow temperature	245°C
Pin finish	Pure tin dip
Moisture sensitivity level	1

PACKAGING INFORMATION

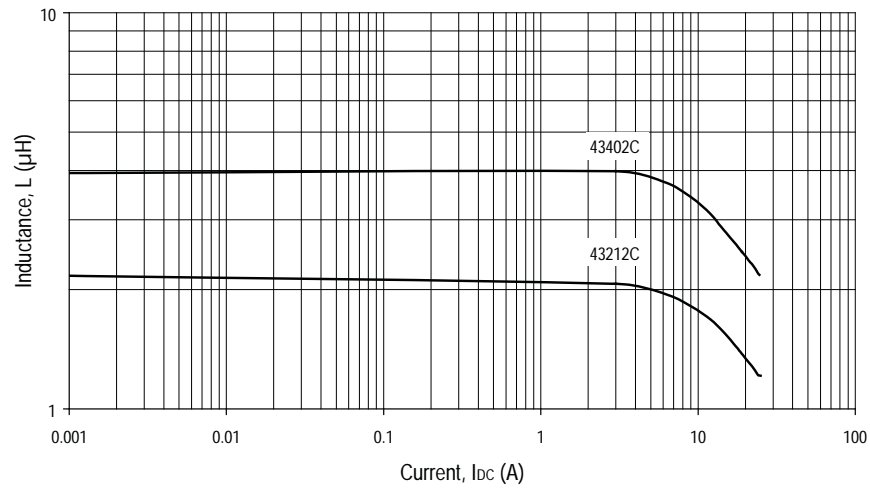
	43212C	43402C
Tape & Reel (add suffix -R to part No. e.g. 43212C-R)	180 per reel	160 per reel
Box	35 per box	20 per box

All specifications typical at T_A=25°C

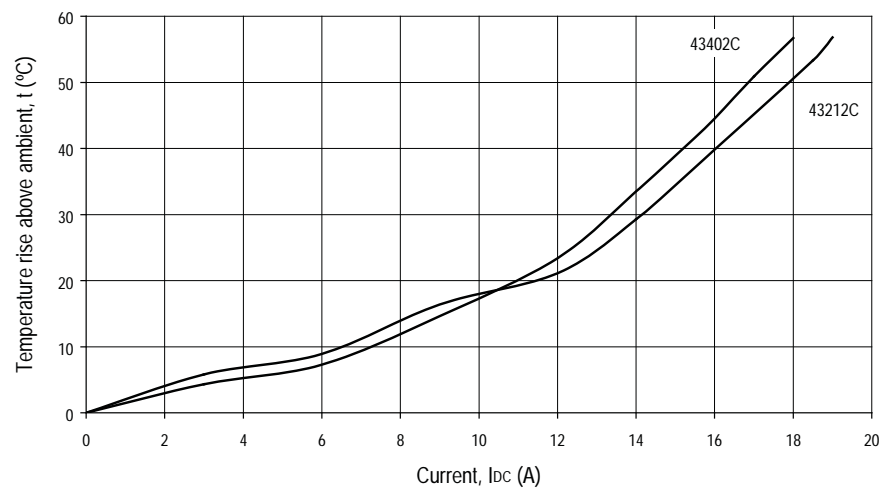
- 1 When connecting windings in series, inductance will be 4 times the figure shown.
- 2 With windings connected in parallel. Maximum DC current occurs when the temperature rise reaches 55°C.
- 3 For further information, please visit www.murata-ps.com/rohs



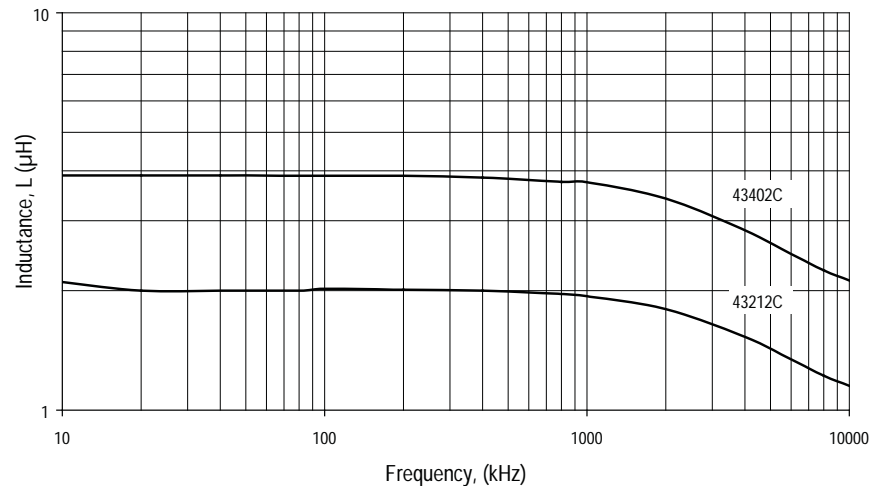
INDUCTANCE Vs CURRENT



TEMPERATURE Vs CURRENT



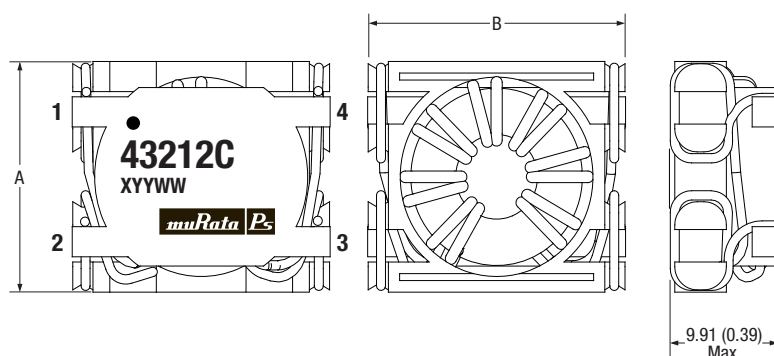
INDUCTANCE Vs FREQUENCY



PACKAGE SPECIFICATIONS

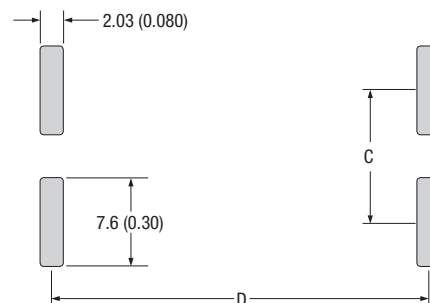
MECHANICAL DIMENSIONS

See Selection Guide for dimensions.



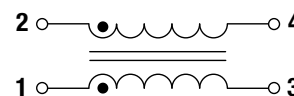
RECOMMENDED FOOTPRINT DETAILS

See Selection Guide for dimensions.



All dimensions in mm (inches).

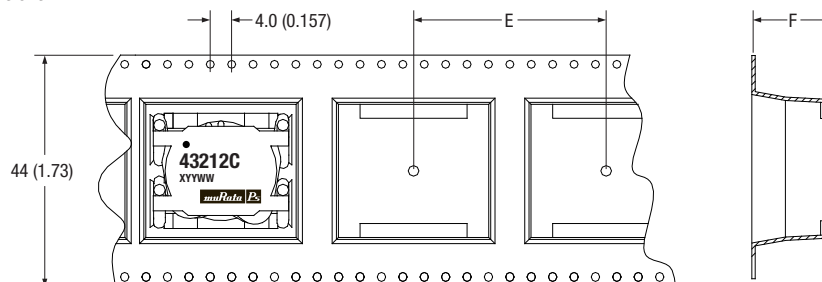
SCHEMATIC



TAPE & REEL SPECIFICATIONS

TAPE OUTLINE DIMENSIONS

See Selection Guide for dimensions.



All dimensions in mm (inches).
See Selection Guide for package quantities.

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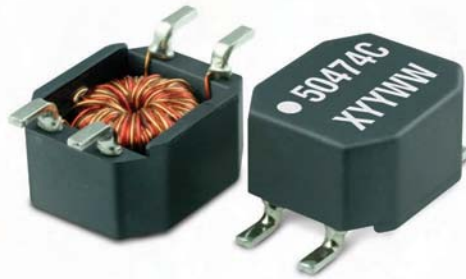
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Guangzhou, Tel: +86 208 221 8066, email: guangzhou@murata-ps.com



FEATURES

- RoHS compliant
- 0.47mH to 4.7mH
- Surface mount
- Up to 0.7A I_{DC}
- UL94 V-0 package materials
- Compact size
- J-STD-020C reflow
- Backward compatible with Sn/Pb soldering systems

PRODUCT OVERVIEW

The 5000 series is a range of surface-mount common mode chokes designed to attenuate up to 100MHz common mode noise where line filtering is required, such as low current switching power supplies and telecom applications.



5000 Series

Surface Mount Common Mode Chokes

SELECTION GUIDE

Order Code	Inductance, L ¹ (0.1V @ 100kHz)		Leakage Inductance, L _L (0.1V @ 100kHz)		DC Resistance, R ¹	Current Rating ³ (series connection)	Isolation
	Nom.	Tolerance	Typ.	Max.	Max.		
	mH	%	μH	μH	Ω	mA _{DC}	V _{rms}
50474C	0.47	+50%/-30%	0.2	0.40	0.30	700	500
50105C	1.00		0.2	0.40	0.30	700	
50225C	2.20		0.25	0.60	0.40	500	
50475C	4.70		0.4	0.80	0.70	400	

ABSOLUTE MAXIMUM RATINGS

Operating free air temperature range	-40°C to 85°C
Storage temperature range	-40°C to 125°C

SOLDERING INFORMATION²

Peak reflow temperature	250°C
Pin finish	Pure tin dip

All specifications typical at T_A=25°C

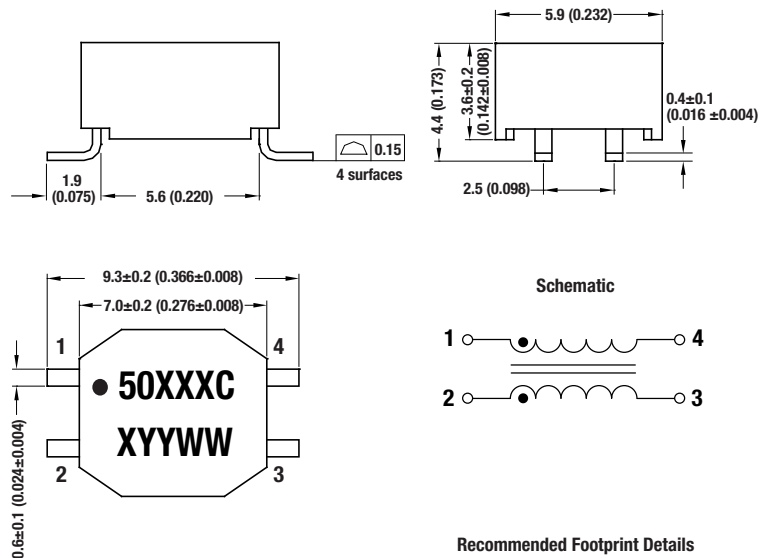
1 Measured between pins 1-4 or 2-3

2 For further information, please visit www.murata-ps.com/rohs

3 The maximum DC current occurs when its temperature rise reaches 40°C.

PACKAGE SPECIFICATIONS

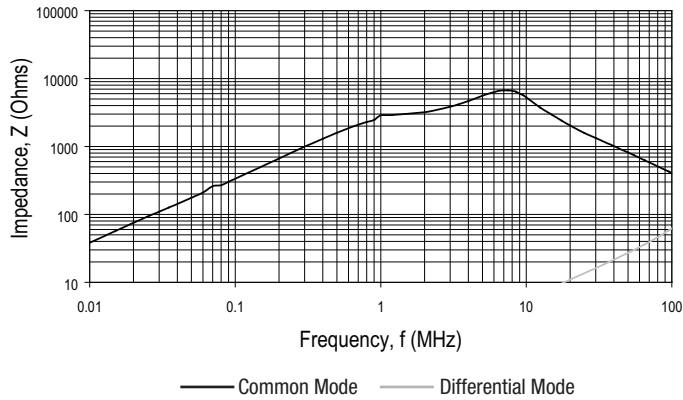
Mechanical Dimensions



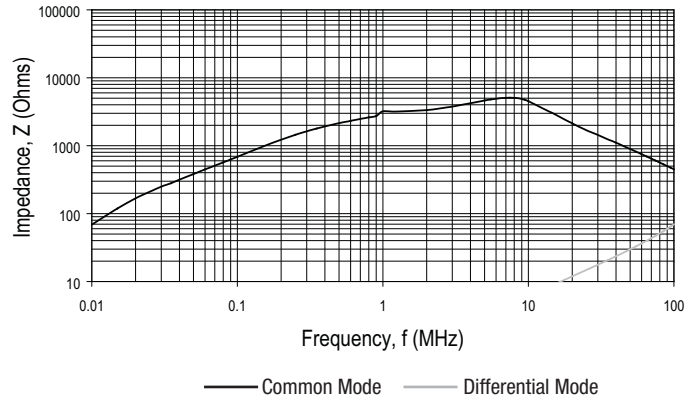
Unless otherwise stated, all dimensions in mm (inches) ±0.25 (0.010).
Package weight 0.30g Typ.

IMPEDANCE IN COMMON MODE AND DIFFERENTIAL MODE VS FREQUENCY

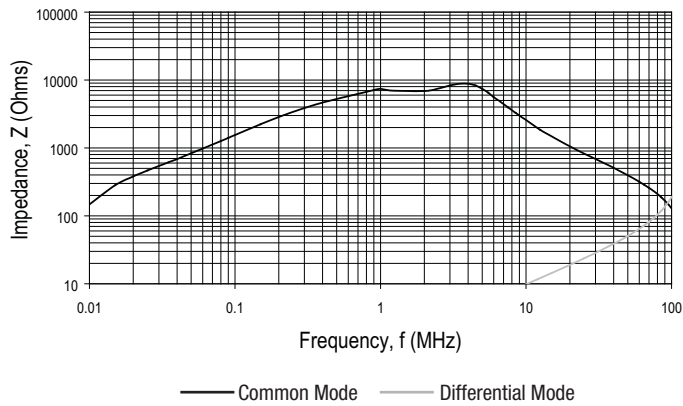
50474C



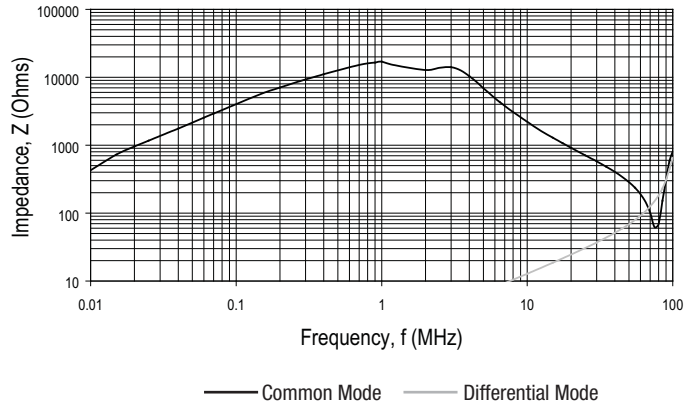
50105C



50225C

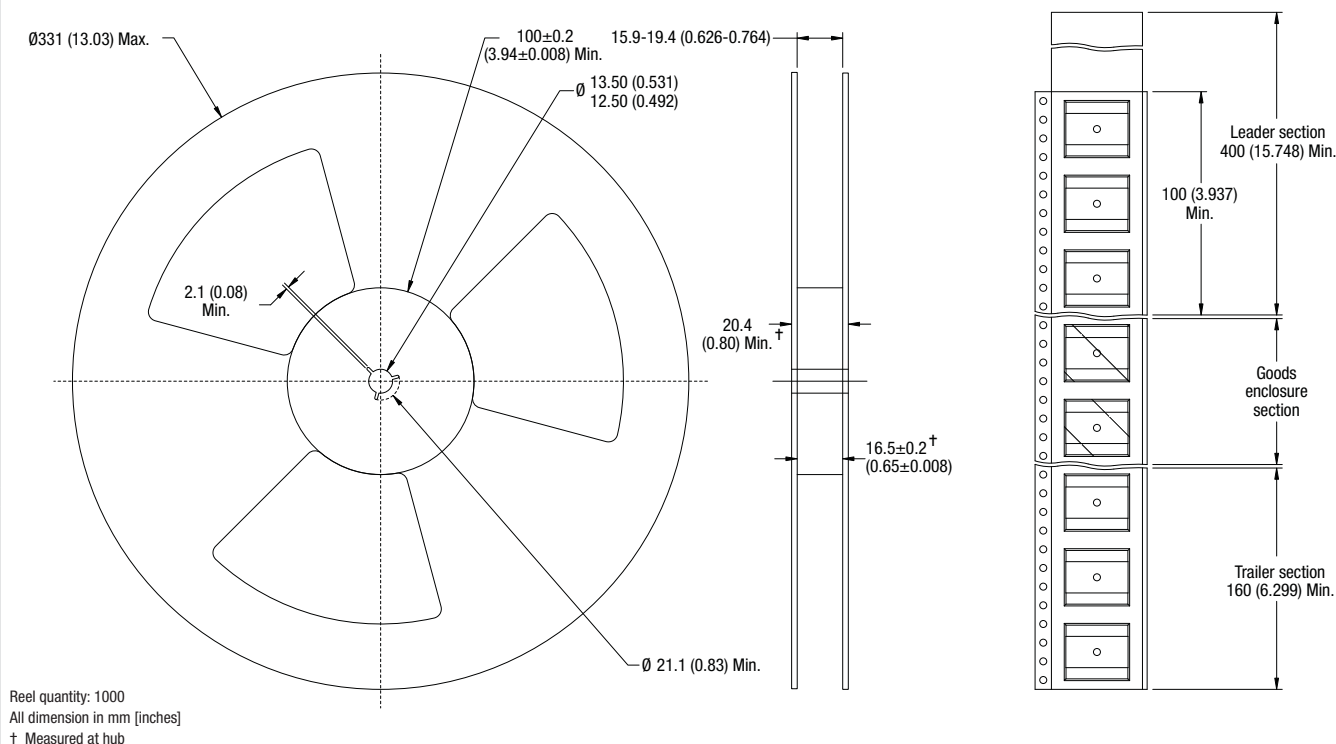


50475C

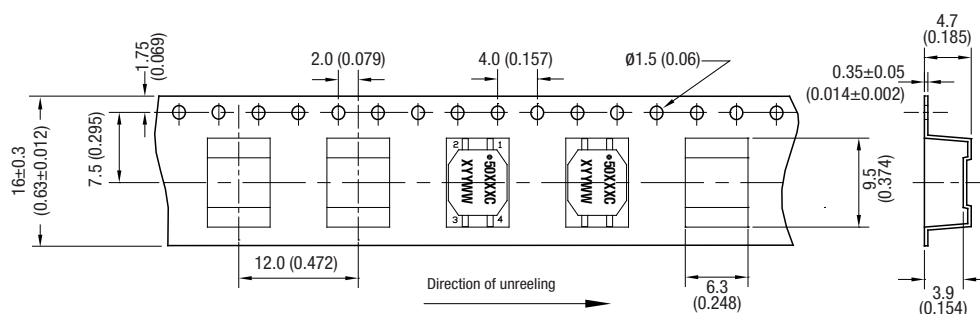


PACKAGE SPECIFICATIONS

Mechanical Dimensions



Tape Outline Dimensions



Unless otherwise stated, all dimensions in mm (inches) ± 0.1 (0.004).

Murata Power Solutions, Inc.

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Guangzhou, Tel: +86 208 221 8066, email: guangzhou@murata-ps.com



FEATURES

- RoHS compliant
- Toroidal construction
- Up to 4.1A loc
- Inductance range from 0.5 to 5.0mH
- Small footprint
- UL 94V-0 packaging materials
- Low DC resistance
- Guaranteed 3.0mm creepage and clearance between windings

PRODUCT OVERVIEW

The 5200 series is a range of through-hole common mode chokes designed to attenuate up to 100MHz common mode noise where line filtering is required, such as high current switching power supplies and telecom applications.

SELECTION GUIDE

Order Code	Inductance		DC Current	DC Resistance	Leakage Inductance
	Nom. mH	Range mH	Max. A	Max. mΩ	Max. μH
51504C	0.5	0.37-0.68	4.1	27	9
51105C	1.0	0.75-1.39	3.3	38	18
51305C	3.0	2.16-4.02	1.9	97	45
51505C	5.0	3.62-6.73	1.2	197	75

ABSOLUTE MAXIMUM RATINGS

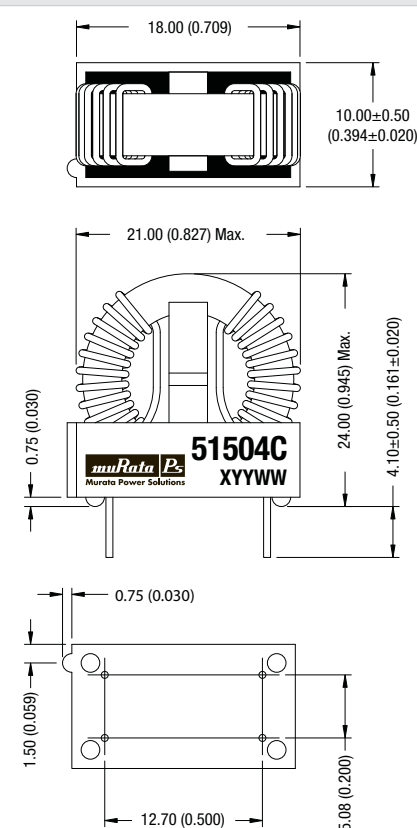
Operating free air temperature range	-40°C to 125°C
Storage temperature range	-40°C to 125°C
Isolation voltage	1500Vrms

SOLDERING INFORMATION¹

Peak wave solder temperature	260°C
Pin finish	Tin

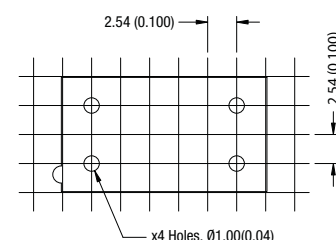
PACKAGE SPECIFICATIONS

Mechanical Dimensions

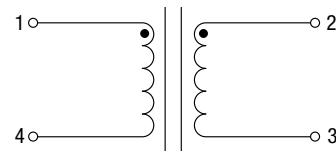


Package weight: 6.0g Typ.
All dimensions in mm (inches)

Recommended Footprint Details



Pin Connections



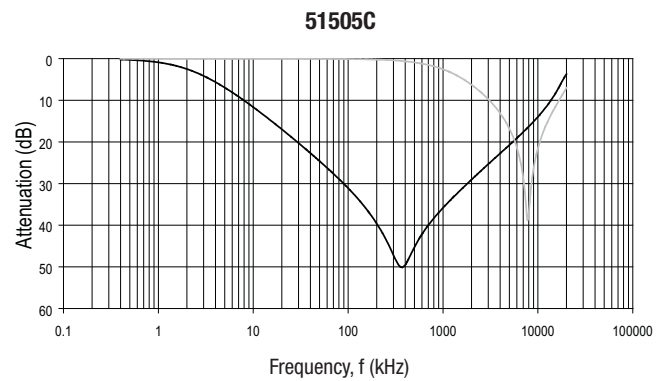
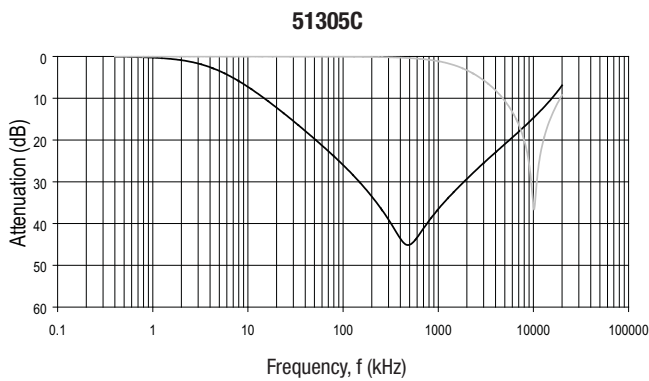
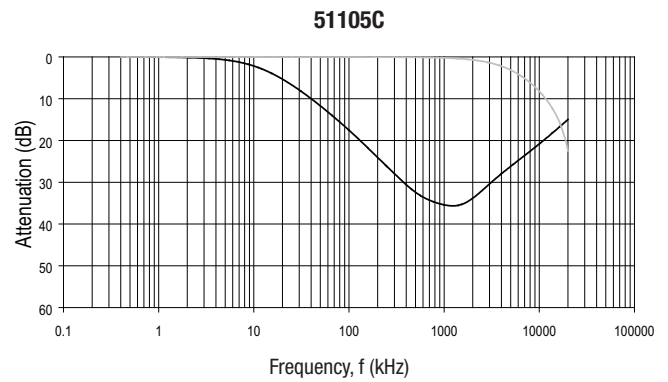
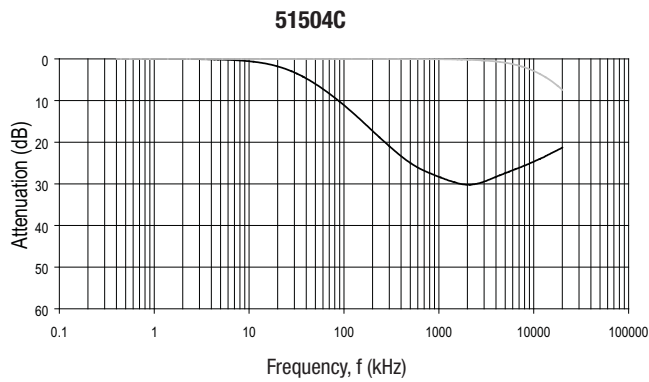
Packaging

Supplied in trays (30 pieces per tray)

Specifications typical at $T_a = 25^\circ\text{C}$
1 For further information, please visit www.murata-ps.com/rohs



COMMON AND DIFFERENTIAL MODE ATTENUATION VS FREQUENCY



— Common Mode — Differential Mode

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www.murata-ps.com email: sales@murata-ps.com ISO 9001 REGISTERED

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Guangzhou, Tel: +86 208 221 8066, email: guangzhou@murata-ps.com



FEATURES

- RoHS compliant
- Toroidal construction
- Up to 3.5A Ioc
- Inductance range from 10μH to 1.0mH
- Small footprint
- UL 94V-0 packaging materials
- Low DC resistance
- Guaranteed 3.0mm creepage and clearance between windings

PRODUCT OVERVIEW

The 5200 series is a range of through-hole common mode chokes designed to attenuate up to 100MHz common mode noise where line filtering is required, such as high current switching power supplies and telecom applications.



SELECTION GUIDE

Order Code	Inductance		DC Current	DC Resistance	Leakage Inductance
	Nom. mH	Range mH	Max. A	Max. mΩ	Max. μH
52305C	3.0	2.24-4.00	3.5	45	40
52505C	5.0	3.60-6.60	2.4	91	75
52705C	7.0	4.90-9.00	2.2	107	90
52106C	10.0	6.90-12.8	1.7	193	130

ABSOLUTE MAXIMUM RATINGS

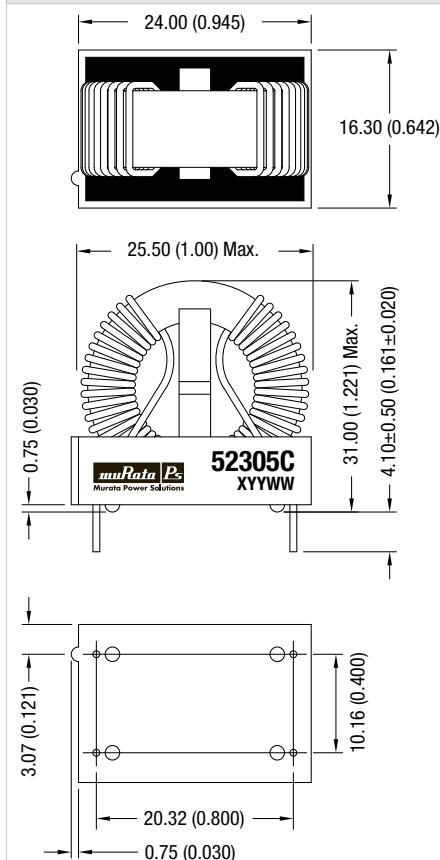
Operating free air temperature range	-40°C to 125°C
Storage temperature range	-40°C to 125°C
Isolation voltage	1500Vrms

SOLDERING INFORMATION¹

Peak wave solder temperature	260°C
Pin finish	Tin

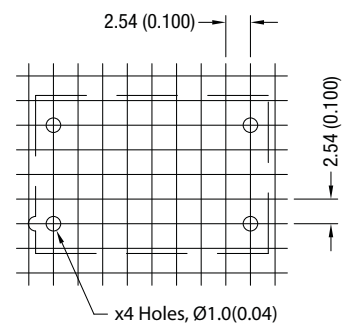
PACKAGE SPECIFICATIONS

Mechanical Dimensions

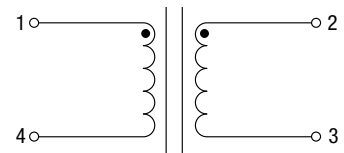


Package weight: 17.2g Typ.
All dimensions in mm (inches)

Recommended Footprint Details



Pin Connections



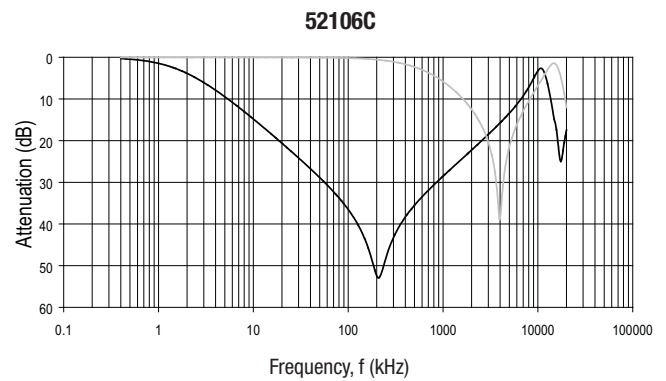
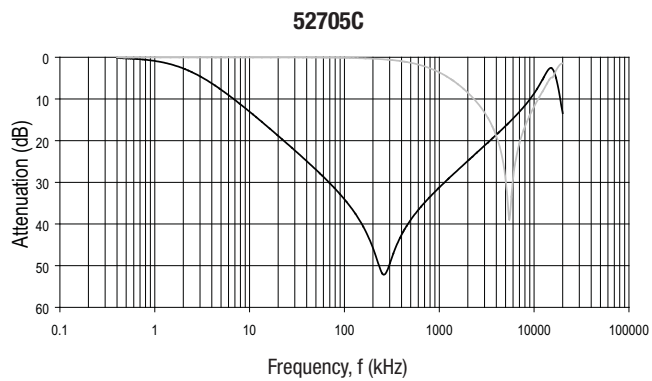
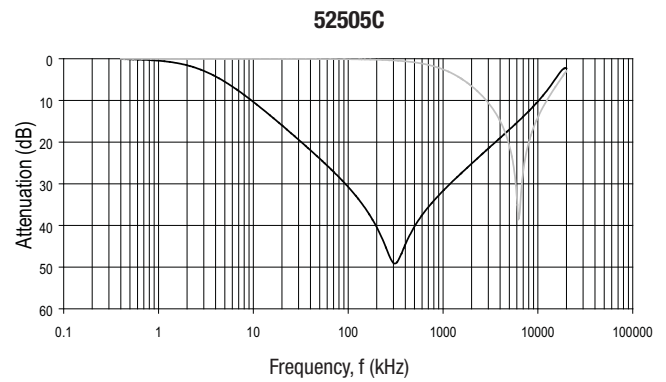
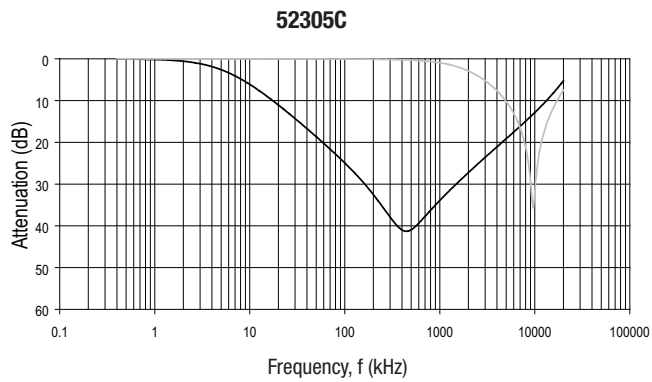
Packaging

Supplied in trays (16 pieces per tray)

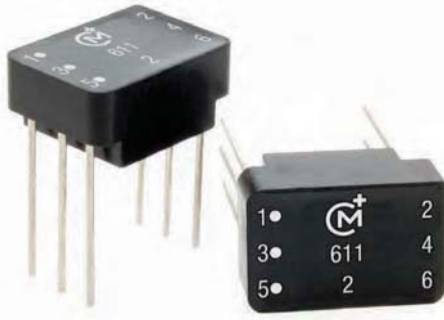
Specifications typical at $T_A = 25^\circ\text{C}$

¹ For further information, please visit www.murata-ps.com/rohs

COMMON AND DIFFERENTIAL MODE ATTENUATION VS FREQUENCY



— Common Mode — Differential Mode



FEATURES

- RoHS compliant
- 4 Configurations
- Inductance to 11.7mH
- Up to 50 V μ s Er
- Industry standard pinout
- 500V_{DC} Isolation
- PCB mounting
- UL 94 V-0 package materials
- Toroidal construction
- Fully encapsulated

DESCRIPTION

The 766 Series is a range of general purpose pulse transformers. Common applications include line coupling, impedance-matching, or isolating. The devices can also be used in small isolated power supplies or as common-mode chokes in filtering applications.

SELECTION GUIDE¹

Order Code	Turns Ratio ±2%	Min. Primary Inductance	Min. Primary Constant, E _p	Max. Leakage Inductance	Max. Interwinding Capacitance	Max. DC Resistance	Max. Isolation Voltage	Pin Connection Style	Mechanical Dimensions	
		μH	Vμs	μH	pF	Ω				Vrms
76600/1C	1:1	1916	17.5	0.60	49	1.50	500	A	1	
76600/2C	1:1	492	8.5	0.30	22	0.80				
76600/3C	1:1	219	5.5	0.25	14	0.50				
76600/4C	1:1	50	4.0	0.20	10	0.40				
76601/1C	1:1	1916	17.5	0.60	49	1.50		B		
76601/2C	1:1	492	8.5	0.30	22	0.80				
76601/3C	1:1	219	5.5	0.25	12	0.50				
76601/6C	1:1	9.5	6	0.20	13	0.40				
76601/20C	1:1	20.1	2.5	0.20	5	0.20		C		
76601/23C	1:1	938	10.5	0.20	35	0.15				
76601/24C	1:1	11.7mH	50.5	0.40	250	1.35				
76602/1C	1:1:1	2060	17.5	0.60	72	1.50				
76615/1C	1CT:1CT	3200	45	2.00	52	1.00	500	D	2	
76616/3C	2CT:1CT	4350	23	3.00	35	1.00				

Please note: For additional variants please see 786 series datasheet.

ABSOLUTE MAXIMUM RATINGS

Operating free air temperature range	0°C to 70°C
Storage temperature range	-60°C to 125°C

SOLDERING INFORMATION¹

Peak wave solder temperature	300°C for 10 seconds
Pin finish	Matte tin with nickel pre-plate

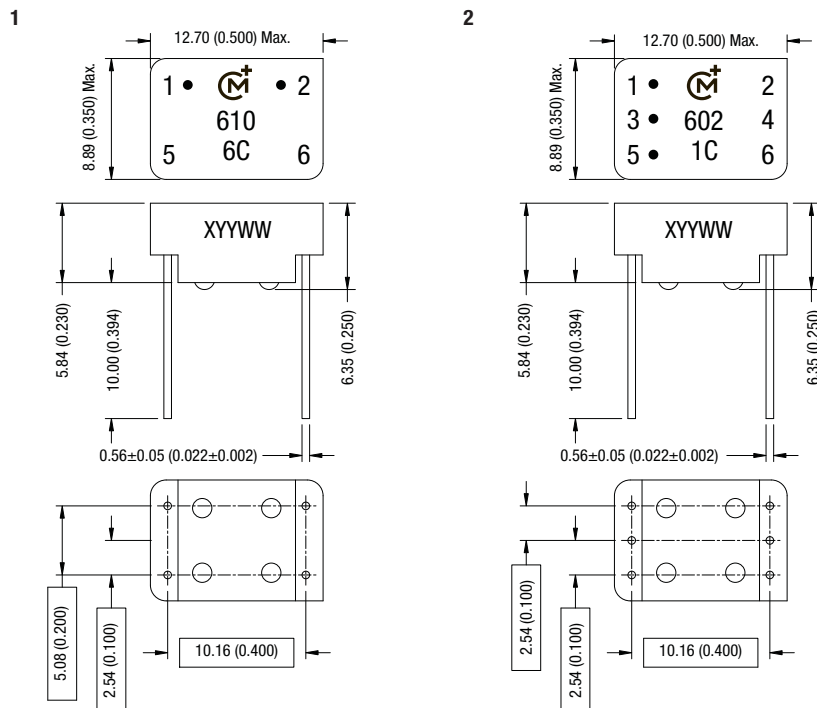
¹ For further information, please visit www.murata-ps.com/rohs

All specifications typical at T_A=25°C.



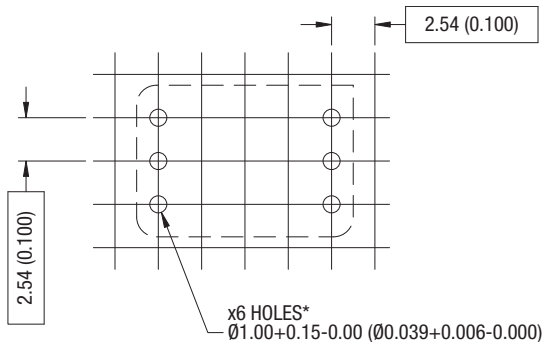
PACKAGE SPECIFICATIONS

MECHANICAL DIMENSIONS



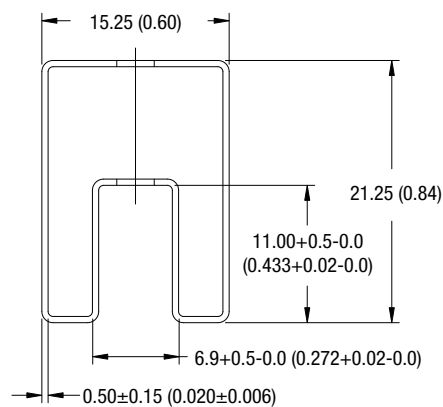
Unless otherwise stated all dimensions in mm (inches) ± 0.25 (0.01).
All pins on a 2.54 (0.1) pitch and within ± 0.25 (0.01) of true position.
Package Weight: 1.1g Typ.

RECOMMENDED FOOTPRINT DETAILS



Holes may be omitted for variants with fewer than 6 pins.
Unless otherwise stated all dimensions in mm (inches) ± 0.25 (0.01).
All pins on a 2.54 (0.1) pitch and within ± 0.25 (0.01) of true position.

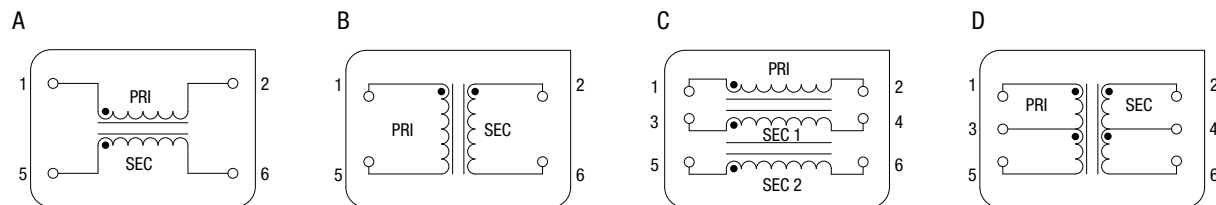
TUBE DIMENSIONS



Tube length: 520 \pm 2.0 (20.47 \pm 0.08)
Unless otherwise stated all dimensions in mm (inches) ± 0.55 (0.022).

PACKAGE SPECIFICATIONS (continued)

PIN CONNECTION STYLE - 6 PIN DIP (TOP VIEW)



TECHNICAL NOTES

ISOLATION VOLTAGE

'Hi Pot Test', 'Flash Tested', 'Withstand Voltage', 'Proof Voltage', 'Dielectric Withstand Voltage' & 'Isolation Test Voltage' are all terms that relate to the same thing, a test voltage, applied for a specified time, across a component designed to provide electrical isolation, to verify the integrity of that isolation.

All products in this series are 100% production tested at their stated isolation voltage.

A question commonly asked is, "What is the continuous voltage that can be applied across the part in normal operation?"

For a part holding no specific agency approvals both input and output should normally be maintained within SELV limits i.e. less than 42.4V peak, or 60VDC. The isolation test voltage represents a measure of immunity to transient voltages and the part should never be used as an element of a safety isolation system. The part could be expected to function correctly with several hundred volts offset applied continuously across the isolation barrier; but then the circuitry on both sides of the barrier must be regarded as operating at an unsafe voltage and further isolation/insulation systems must form a barrier between these components and any user-accessible circuitry according to safety standard requirements.

REPEATED HIGH-VOLTAGE ISOLATION TESTING

It is well known that repeated high-voltage isolation testing of a barrier component can actually degrade isolation capability, to a lesser or greater degree depending on materials, construction and environment. This series has toroidal isolation transformers, with no additional insulation between primary and secondary windings of enameled wire. While parts can be expected to withstand several times the stated test voltage, the isolation capability does depend on the wire insulation. Any material, including this enamel (typically polyurethane) is susceptible to eventual chemical degradation when subject to very high applied voltages thus implying that the number of tests should be strictly limited. We therefore strongly advise against repeated high voltage isolation testing, but if it is absolutely required, that the voltage be reduced by 20% from specified test voltage.

This consideration equally applies to agency recognized parts rated for better than functional isolation where the wire enamel insulation is always supplemented by a further insulation system of physical spacing or barriers.



FEATURES

- RoHS compliant
- 4 Configurations
- Primary inductance to 10mH
- 1kVrms isolation
- Industry standard pinout
- Surface mount option
- UL 94 V-0 package materials
- Low profile
- Toroidal construction
- Fully encapsulated

DESCRIPTION

The 786 series is a comprehensive range of general purpose pulse transformers. Common applications include line coupling, matching or isolating. The devices can also be used in small isolated power supplies and also as common-mode chokes in filtering applications.

SELECTION GUIDE

Order Code	Turns Ratio ±2%	Min. Primary Inductance	Primary Min. Volt-time Product, Et	Typ. Leakage Inductance	Typ. Interwinding Capacitance	Max. DC Resistance	Isolation Voltage	Winding Configuration
		µH	Vµs	µH	pF	Ω	Vrms	
78601/4C	1:1	100	4	0.19	8	0.17	1000	1
78601/3C	1:1	200	6	0.20	14	0.25		
78601/2C	1:1	500	10	0.25	22	0.34		
78601/8C	1:1	1000	15	0.29	35	0.45		
78601/1C	1:1	2000	20	0.47	49	0.60		
78601/16C	1:1	4000	28	0.47	78	0.84	1000	2
78601/9C	1:1	10000	56	0.86	121	1.30		
78602/4C	1:1:1	100	4	0.11	12	0.18		
78602/3C	1:1:1	200	6	0.17	19	0.24		
78602/2C	1:1:1	500	10	0.27	32	0.34		
78602/8C	1:1:1	1000	15	0.35	47	0.46	1000	1
78602/1C	1:1:1	2000	20	0.60	72	0.66		
78602/16C	1:1:1	4000	28	0.71	116	0.92		
78602/9C	1:1:1	10000	56	0.71	167	1.34		
78604/4C	2:1	100	4	0.41	4	0.18	1000	3
78604/3C	2:1	200	6	0.49	9	0.25		
78604/2C	2:1	500	10	0.65	13	0.34		
78604/8C	2:1	1000	15	0.76	20	0.46		
78604/1C	2:1	2000	20	0.99	29	0.60		
78604/16C	2:1	4000	28	1.61	50	0.85	1000	4
78604/9C	2:1	10000	56	1.64	72	1.23		
78613/4C	1CT:1	100	4	0.30	7	0.20		
78613/3C	1CT:1	200	6	0.65	12	0.25		
78613/2C	1CT:1	500	10	1.07	20	0.36		
78613/8C	1CT:1	1000	15	1.13	35	0.48	1000	1
78613/1C	1CT:1	2000	20	1.53	47	0.63		
78613/16C	1CT:1	4000	28	1.98	64	0.88		
78613/9C	1CT:1	10000	56	3.83	72	1.33		
78615/4C	1CT:1CT	100	4	1.21	3	0.17	1000	2
78615/3C	1CT:1CT	200	6	3.64	5	0.24		
78615/2C	1CT:1CT	500	10	6.86	7	0.34		
78615/8C	1CT:1CT	1000	15	11.9	10	0.45		
78615/1C	1CT:1CT	2000	20	16.0	16	0.60		
78615/16C	1CT:1CT	4000	28	37.7	20	0.87	1000	3
78615/9C	1CT:1CT	10000	56	44.5	19	1.33		

ORDER CODE DETAILS

Order Code	Package Type	Packaging Type	Quantity
786XX/XC	6 Pin DIL	Tube	50
786XX/XMC	6 Pin SM	Tube	50
786XX/XMC-R	6 Pin SM	Tape & Reel	500

ABSOLUTE MAXIMUM RATINGS

Operating free air temperature range	0°C to 70°C
Storage temperature range	-60°C to 125°C

SOLDERING INFORMATION¹

Pin finish	Bright tin
Peak wave solder temperature	300°C for 10 seconds
Peak reflow temperature	220°C

All specifications typical at T_A=25°C

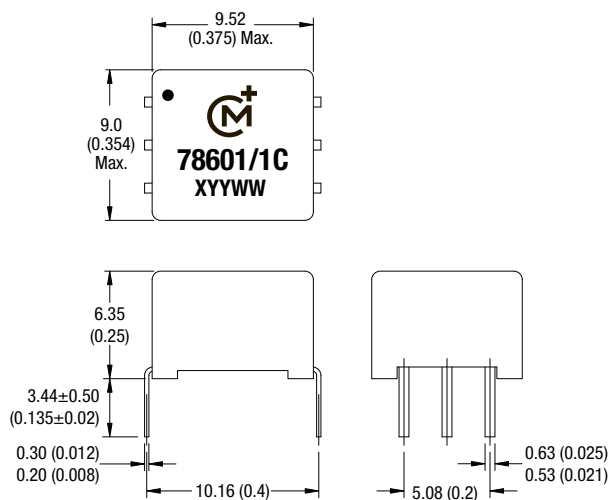
¹ For further information, please visit www.murata-ps.com/rohs



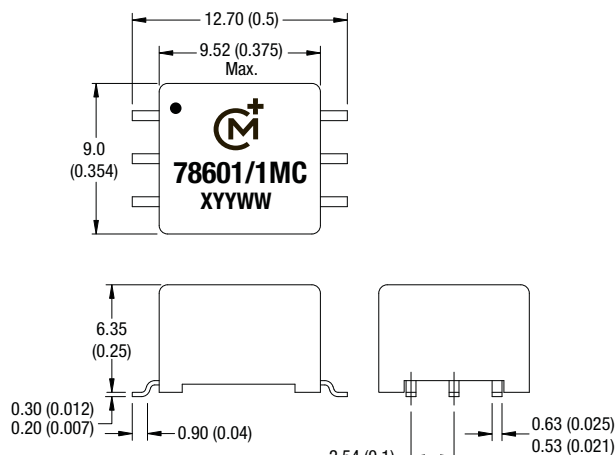
PACKAGE SPECIFICATIONS

MECHANICAL DIMENSIONS

6 Pin DIL Package Style



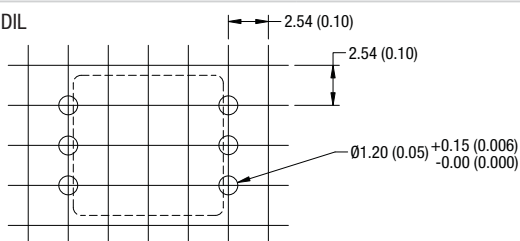
6 Pin SMD Package Style



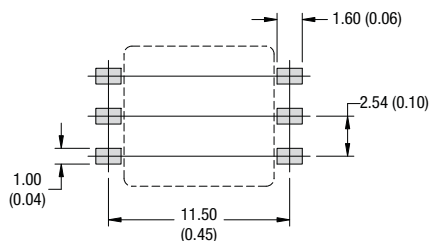
Unless otherwise stated all dimensions in mm (inches)
±0.25 (0.01). All pins on a 2.54 (0.1) pitch and within
±0.25 (0.01) of true position.
Package Weight: 1.1g Typ.

RECOMMENDED FOOTPRINT DETAILS

6 Pin DIL



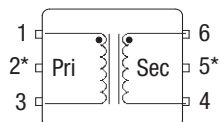
6 Pin SM



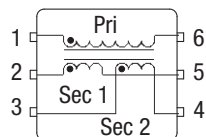
Unless otherwise stated all dimensions in mm (inches)
±0.25 (0.01). All pins on a 2.54 (0.1) pitch and within ±
0.25 (0.01) of true position.

WINDING CONFIGURATION - 6 PIN DIL/SMD (TOP VIEW)

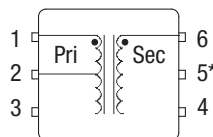
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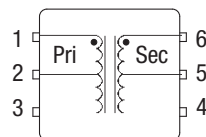
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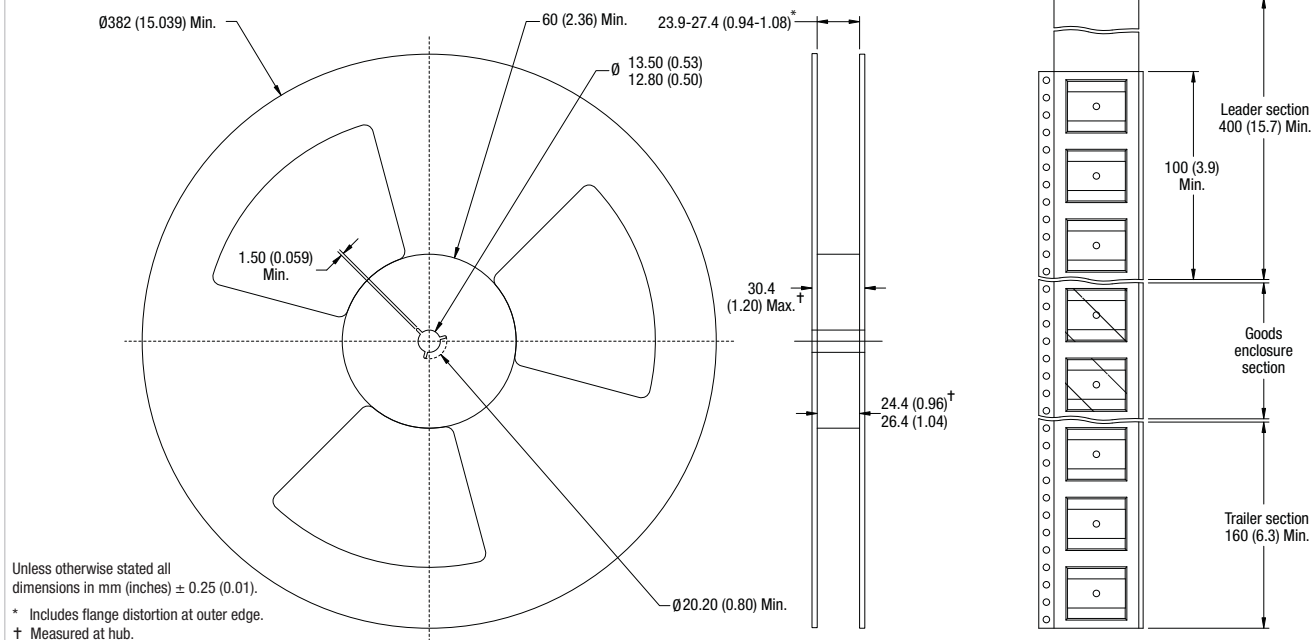
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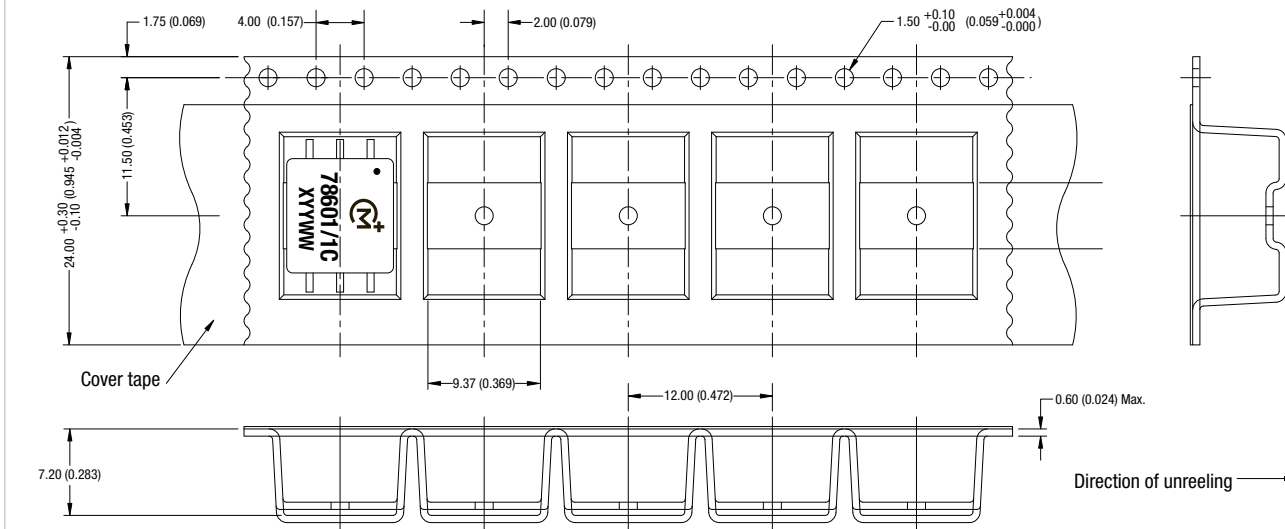
* Pins only fitted on 786XX/XMC and 786XX/XMC-R variants.

TAPE & REEL SPECIFICATIONS

REEL OUTLINE DIMENSIONS

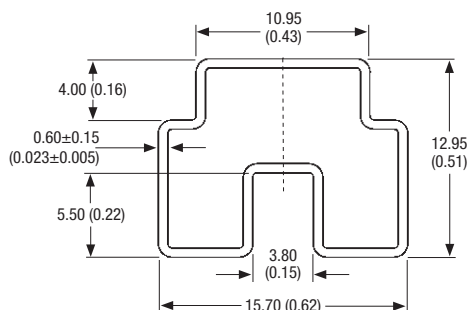


TAPE OUTLINE DIMENSIONS



Unless otherwise stated all dimensions in mm (inches) ± 0.25 (0.01).

TUBE OUTLINE DIMENSIONS



Tube length: 465±2 (18.3±0.08). Tube quantity: 50.

Tube material: Antistatic coated clear pvc.

Unless otherwise stated all dimensions in mm (inches) ±0.25 (0.01).

TECHNICAL NOTES

ISOLATION VOLTAGE

'Hi Pot Test', 'Flash Tested', 'Withstand Voltage', 'Proof Voltage', 'Dielectric Withstand Voltage' & 'Isolation Test Voltage' are all terms that relate to the same thing, a test voltage, applied for a specified time, across a component designed to provide electrical isolation, to verify the integrity of that isolation.

All products in this series are 100% production tested at their stated isolation voltage.

A question commonly asked is, "What is the continuous voltage that can be applied across the part in normal operation?"

For a part holding no specific agency approvals both input and output should normally be maintained within SELV limits i.e. less than 42.4V peak, or 60VDC. The isolation test voltage represents a measure of immunity to transient voltages and the part should never be used as an element of a safety isolation system. The part could be expected to function correctly with several hundred volts offset applied continuously across the isolation barrier; but then the circuitry on both sides of the barrier must be regarded as operating at an unsafe voltage and further isolation/insulation systems must form a barrier between these circuits and any user-accessible circuitry according to safety standard requirements.

REPEATED HIGH-VOLTAGE ISOLATION TESTING

It is well known that repeated high-voltage isolation testing of a barrier component can actually degrade isolation capability, to a lesser or greater degree depending on materials, construction and environment. This series has toroidal isolation transformers, with no additional insulation between primary and secondary windings of enameled wire. While parts can be expected to withstand several times the stated test voltage, the isolation capability does depend on the wire insulation. Any material, including this enamel (typically polyurethane) is susceptible to eventual chemical degradation when subject to very high applied voltages thus implying that the number of tests should be strictly limited. We therefore strongly advise against repeated high voltage isolation testing, but if it is absolutely required, that the voltage be reduced by 20% from specified test voltage.

This consideration equally applies to agency recognized parts rated for better than functional isolation where the wire enamel insulation is always supplemented by a further insulation system of physical spacing or barriers.

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 Guangzhou, Tel: +86 208 221 8066, email: guangzhou@murata-ps.com



FEATURES

- RoHS compliant
- UL 94V-0 Package Material
- Isolation to 4kVrms
- Compact Footprint
- PCB Mounting
- Backward compatible with Sn/Pb soldering systems

DESCRIPTION

The 1000 series are intended for wideband and pulse operations. They are also suitable for signal isolation and use in small isolated power supplies. The compact footprint makes them ideal for applications where space is at a premium.

1000 Series

Pulse Transformers

SELECTION GUIDE¹

Order Code	Turns Ratio $\pm 2\%$	Min. Primary Inductance	Min. Primary Constant, E_r	Max. Leakage Inductance	Max. Interwinding Capacitance	Max. DC Resistance Primary Winding	Max. DC Resistance Secondary 1 winding	Max. DC Resistance Secondary 2 winding	Isolation Voltage	Pin Connection Style	Mechanical Dimensions
		mH	V μ s	μ H	pF	Ω	Ω	Ω	Vrms		
1001C	1:1	3.0	200	22	23	1.2	1.0	-	2000	A	2
1002C	1:1:1	3.0	200	9	28	1.4	1.3	1.7	2000	B	1
1003C	2:1:1	12	400	35	30	4.0	1.8	2.4	2000	B	1
1007C	1:1:1	7.4	310	20	55	2.9	2.5	3.4	2000	B	1
1009C	1:1:1	22	550	85	18	10.6	8.9	12.2	2000	B	1
1013C	1:1:1	3.0	200	3	280	1.3	1.3	1.3	500V _{DC}	B	1
1016C	1:1	3.0	200	22	23	1.2	1.0	-	3500	A	2
1017C	1:1	0.8	130	4	20	0.4	0.3	-	4000	A	2
1024C	1.2CT:1CT	8.8	340	60	25	2.5	2.5	-	2000	C	1
1025C	2:1:1	24	570	70	20	7.5	3.5	4.5	2000	B	1
1026C	1:1:1	6.0	285	30	30	4.0	4.0	4.0	2000	B	1
1082C	100:1	6.1	280	-	6	0.7	0.1	-	2000	A	2

ABSOLUTE MAXIMUM RATINGS

Operating free air temperature range	0°C to 70°C
Storage temperature range	-60°C to 125°C

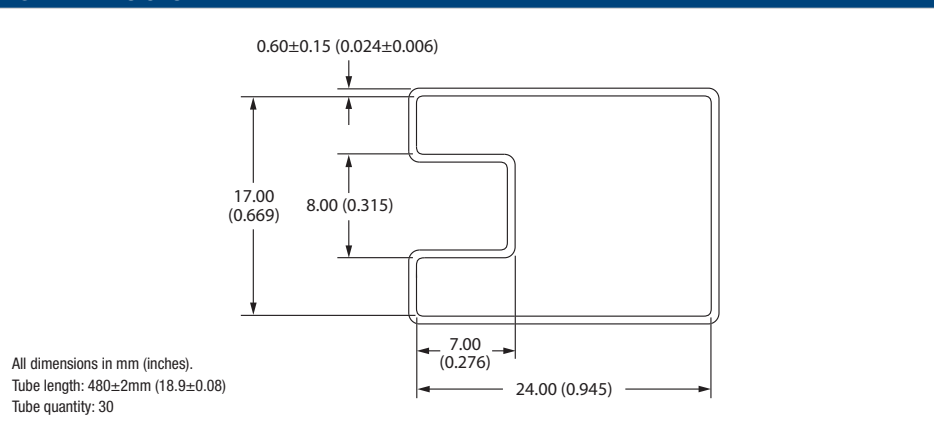
SOLDERING INFORMATION¹

Peak wave solder temperature	300°C for 10 seconds
Pin finish	Matte tin

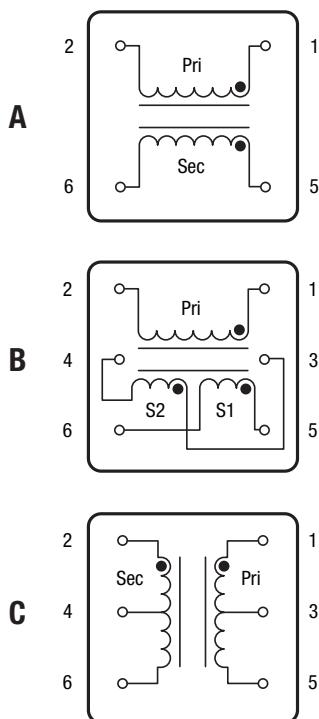
¹ For further information, please visit www.murata-ps.com/rohs

All specifications typical at $T_A = 25^\circ\text{C}$.

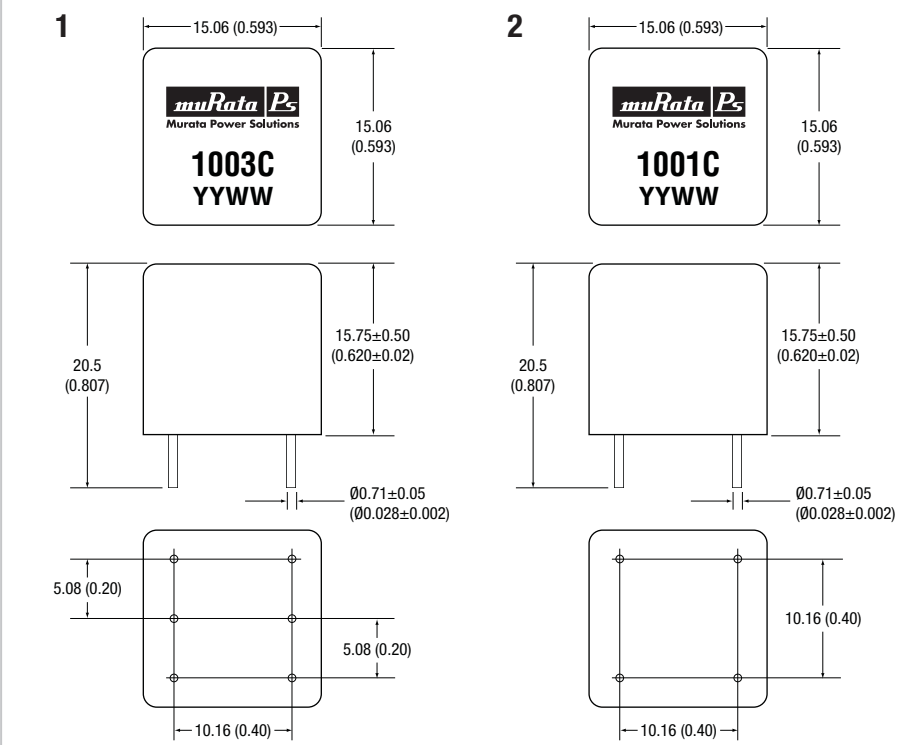
TUBE DIMENSIONS



PIN CONNECTIONS (TOP VIEW)



MECHANICAL DIMENSIONS



All dimensions in mm (inches). Package weight: 8.0g Typ.

TECHNICAL NOTES

ISOLATION VOLTAGE

'Hi Pot Test', 'Flash Tested', 'Withstand Voltage', 'Proof Voltage', 'Dielectric Withstand Voltage' & 'Isolation Test Voltage' are all terms that relate to the same thing, a test voltage, applied for a specified time, across a component designed to provide electrical isolation, to verify the integrity of that isolation.

All products in this series are 100% production tested at their stated isolation voltage.

A question commonly asked is, "What is the continuous voltage that can be applied across the part in normal operation?"

For a part holding no specific agency approvals both input and output should normally be maintained within SELV limits i.e. less than 42.4V peak, or 60VDC. The isolation test voltage represents a measure of immunity to transient voltages and the part should never be used as an element of a safety isolation system. The part could be expected to function correctly with several hundred volts offset applied continuously across the isolation barrier; but then the circuitry on both sides of the barrier must be regarded as operating at an unsafe voltage and further isolation/insulation systems must form a barrier between these circuits and any user-accessible circuitry according to safety standard requirements.

REPEATED HIGH-VOLTAGE ISOLATION TESTING

It is well known that repeated high-voltage isolation testing of a barrier component can actually degrade isolation capability, to a lesser or greater degree depending on materials, construction and environment. While parts can be expected to withstand several times the stated test voltage, the isolation capability does depend on the insulative materials used. Such materials are susceptible to chemical degradation when subject to very high applied voltages. We therefore strongly advise against repeated high voltage isolation testing, but if it is absolutely required, that the voltage be reduced by 20% from specified test voltage.

This consideration equally applies to agency recognized parts rated for better than functional isolation where wire enamel insulation is always supplemented by a further insulation system of physical spacing or barriers.



FEATURES

- RoHS compliant
- Inductance to 16.3mH
- Up to 482 V_{μs} Et rating
- PCB mounting
- UL 94 V-0 package materials
- Up to 4000Vrms isolation
- Backward compatible with Sn/Pb soldering systems

DESCRIPTION

The 772 series of pulse transformers are intended for medium power applications in switch mode power supplies and thyristor/triac firing (e.g. motor control applications). The standard turns ratios may be modified on any transformer with three windings by connecting any two windings in series.

SELECTION GUIDE

Parameter	Order Code											Units
	77201C	77202C	77203C	77203HVC	77204C	77205C	77205SC	77206C	77207C	77208C	77209C	
Turns ratio	1:1	1:1:1	2:1:1	2:1:1	1:1	1:1:1	1:1:1	2:1:1	1:1	1:1:1	2:1:1	
Primary Inductance (Min.)	1.0	1.0	1.0	1.0	4.0	4.0	4.0	4.0	16.3	16.3	16.3	mH
Primary Et Constant (Min.)	120	120	120	120	240	240	240	240	482	482	482	V _{μs}
Leakage Inductance (Max.)	2.0	3.0	3.5	3.5	5.0	11	11	11	18	40	40	μH
Interwinding Capacitance (Max.)	50	40	30	30	55	35	18	35	65	40	40	pF
DC Resistance (Max.) Primary winding	0.25	0.25	0.24	0.24	0.86	0.90	0.90	0.84	3.50	3.60	3.50	Ω
DC Resistance (Max.) Secondary1 winding	0.23	0.22	0.12	0.12	0.83	0.76	0.76	0.38	3.40	3.10	1.60	
DC Resistance (Max.) Secondary2 winding	-	0.28	0.15	0.15	-	1.10	1.10	0.50	-	4.20	2.00	
Isolation voltage (flash tested for 1 second)	2.5			4.0	2.5							kVrms

ABSOLUTE MAXIMUM RATINGS

Operating free air temperature range	0°C to 70°C
Storage temperature range	-60°C to 125°C
Lead Temperature 1.5mm from case for 10 seconds	300°C

SOLDERING INFORMATION¹

Peak wave solder temperature	300°C for 10 seconds
Pin finish	Matte tin with nickel pre-plate

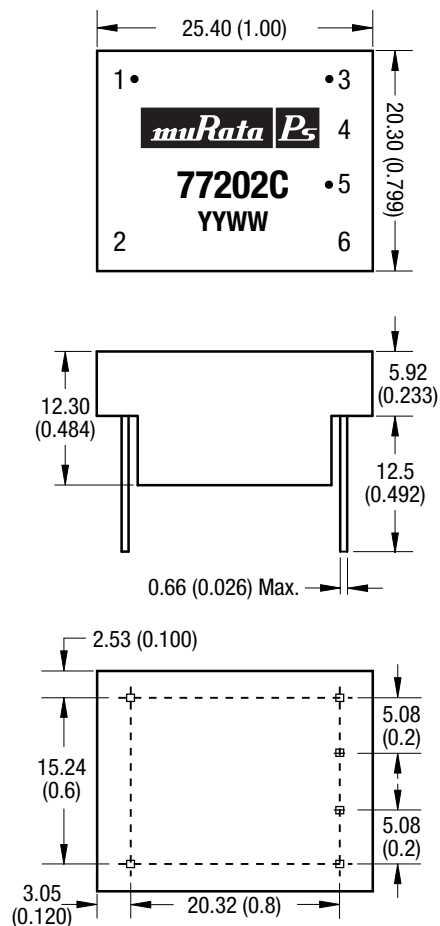
Specifications typical at T_A = 25°C

¹ For further information, please visit www.murata-ps.com/rohs



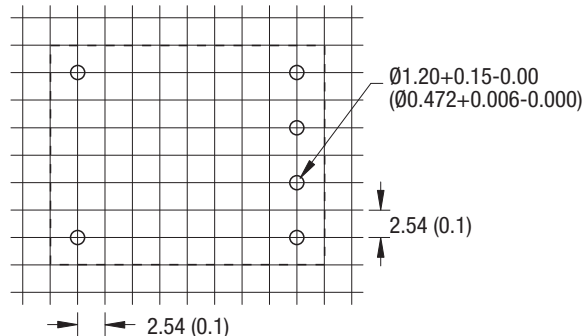
PACKAGE SPECIFICATIONS

MECHANICAL DIMENSIONS



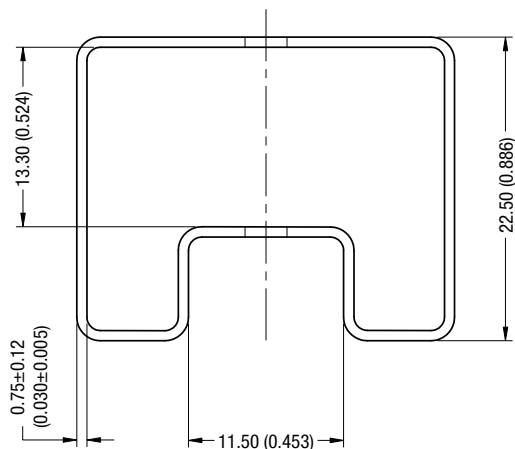
All dimensions in mm (inches) XX.X±0.50(0.02), XX.XX±0.25(0.01).
All pins on a 2.54 (0.1) pitch.

RECOMMENDED FOOTPRINT DETAILS



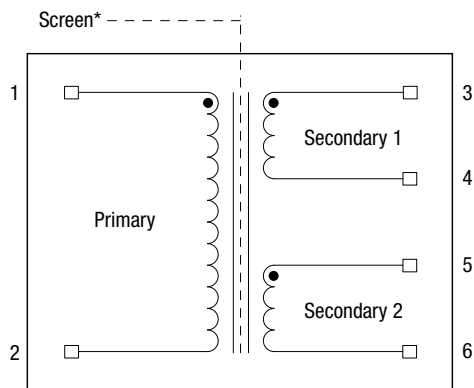
Unless otherwise stated all dimensions in mm (inches) ± 0.25 (0.01).

TUBE DIMENSIONS



Tube length: 530 (20.87) Max.
Unless otherwise stated all dimensions in mm (inches) ± 0.25 (0.01).

PIN CONNECTION STYLE - 8 PIN DIP (TOP VIEW)



* Only on 77205SC

TECHNICAL NOTES

ISOLATION VOLTAGE

'Hi Pot Test', 'Flash Tested', 'Withstand Voltage', 'Proof Voltage', 'Dielectric Withstand Voltage' & 'Isolation Test Voltage' are all terms that relate to the same thing, a test voltage, applied for a specified time, across a component designed to provide electrical isolation, to verify the integrity of that isolation.

All products in this series are 100% production tested at their stated isolation voltage.

A question commonly asked is, "What is the continuous voltage that can be applied across the part in normal operation?"

For a part holding no specific agency approvals both input and output should normally be maintained within SELV limits i.e. less than 42.4V peak, or 60VDC. The isolation test voltage represents a measure of immunity to transient voltages and the part should never be used as an element of a safety isolation system. The part could be expected to function correctly with several hundred volts offset applied continuously across the isolation barrier; but then the circuitry on both sides of the barrier must be regarded as operating at an unsafe voltage and further isolation/insulation systems must form a barrier between these circuits and any user-accessible circuitry according to safety standard requirements.

REPEATED HIGH-VOLTAGE ISOLATION TESTING

It is well known that repeated high-voltage isolation testing of a barrier component can actually degrade isolation capability, to a lesser or greater degree depending on materials, construction and environment. This series has toroidal isolation transformers, with no additional insulation between primary and secondary windings of enameled wire. While parts can be expected to withstand several times the stated test voltage, the isolation capability does depend on the wire insulation. Any material, including this enamel (typically polyurethane) is susceptible to eventual chemical degradation when subject to very high applied voltages thus implying that the number of tests should be strictly limited. We therefore strongly advise against repeated high voltage isolation testing, but if it is absolutely required, that the voltage be reduced by 20% from specified test voltage.

This consideration equally applies to agency recognized parts rated for better than functional isolation where the wire enamel insulation is always supplemented by a further insulation system of physical spacing or barriers.



FEATURES

- RoHS compliant
- Logic translation
- Bi-Directional
- Invert / non-invert
- TTL-CMOS conversion
- Toroidal construction
- Low profile
- 500Vrms isolation
- Backward compatible with Sn/Pb soldering systems

DESCRIPTION

The 1600 series are quad isolation transformer packs for use in digital circuits. They are particularly suited to isolating microprocessor bus connections and performing logic level translation. Being completely passive, power savings are offered over opto-coupled or emitter follower solutions.

SELECTION GUIDE

Order Code	Type	Function	Turns Ratio	Max. Pulse Width	Typ. Primary Inductance	Typ. Interwinding Capacitance
				μs	mH	pF
1600C	Quad isolator	5V to 5V logic isolation	1:1	5	3	60
1630C	Quad isolator	5V to 15V logic isolation	1:3	2.6	1	34

ABSOLUTE MAXIMUM RATINGS

Operating free air temperature range	0°C to 70°C
Storage temperature range	-40°C to 125°C
Isolation voltage (flash tested for 1 second)	500Vrms
Insulation resistance at 500Vdc	>10GΩ

SOLDERING INFORMATION²

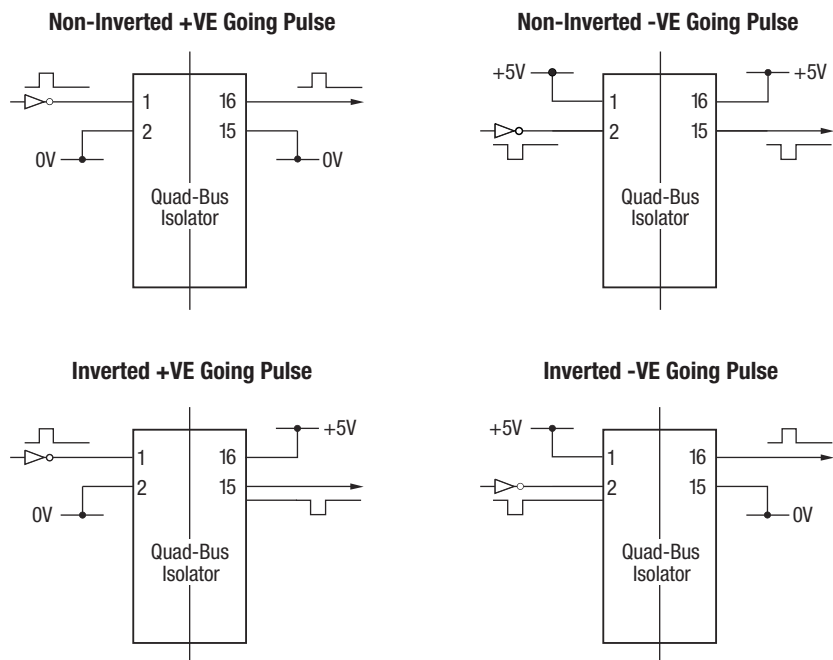
Peak wave solder temperature, 1.5mm from case	300°C for 10 seconds
Pin finish	Matte tin

¹ The maximum pulse width limit to be applied to the repetition curve.

² For further information, please visit www.murata-ps.com/rohs

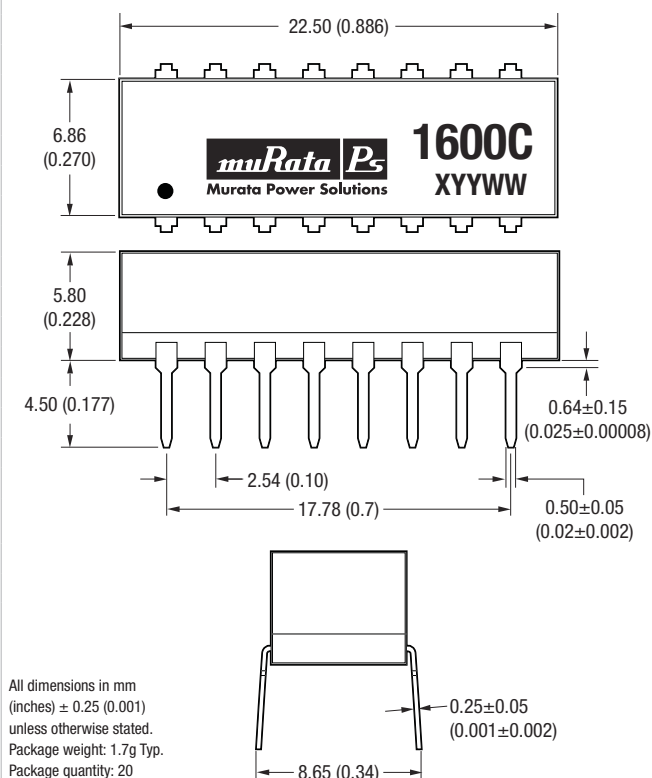
All specifications typical at T_A=25°C.

OPERATIONAL CONFIGURATIONS

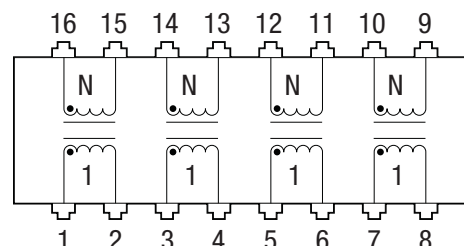


PACKAGE SPECIFICATIONS

MECHANICAL DIMENSIONS



PIN CONNECTIONS





FEATURES

- RoHS compliant
- 500Vrms isolation
- Industry-standard footprint
- Surface-mount versions available
- Compatible with standard networks
- Backward compatible with Sn/Pb soldering systems

DESCRIPTION

The 1605C is a package of unity-turns-ratio isolation transformers. The transformers are designed to have fast rise times with low phase shift and insertion loss to reduce signal distortion. The high shunt impedance of these devices minimises system loading and enables the correct termination conditions to be accurately defined by means of resistors. The devices can be used as network-node isolators in CSMA/CD systems.

SELECTION GUIDE

Order Code	Turns Ratio	Min. Primary Inductance	Max. DC Resistance	Min. ET Constant	Max. Leakage Inductance	Max. Interwinding Capacitance
		μH	Ω	V μs	μH	pF
1605C	1:1	26.0	0.2	1.8	0.2	8

ABSOLUTE MAXIMUM RATINGS

Operating free air temperature range	0°C to 70°C
Storage temperature range	-60°C to 125°C
Isolation voltage (flash tested for 1 second)	500Vrms

SOLDERING INFORMATION¹

Peak wave solder temperature, 1.5mm from case	300°C for 10 seconds
Pin finish	Matte Tin

All specifications typical at T_A=25°C.

¹ For further information, please visit www.murata-ps.com/rohs

TECHNICAL NOTES

ISOLATION VOLTAGE

'Hi Pot Test', 'Flash Tested', 'Withstand Voltage', 'Proof Voltage', 'Dielectric Withstand Voltage' & 'Isolation Test Voltage' are all terms that relate to the same thing, a test voltage, applied for a specified time, across a component designed to provide electrical isolation, to verify the integrity of that isolation.

All products in this series are 100% production tested at their stated isolation voltage.

A question commonly asked is, "What is the continuous voltage that can be applied across the part in normal operation?"

For a part holding no specific agency approvals both input and output should normally be maintained within SELV limits i.e. less than 42.4V peak, or 60VDC. The isolation test voltage represents a measure of immunity to transient voltages and the part should never be used as an element of a safety isolation system. The part could be expected to function correctly with several hundred volts offset applied continuously across the isolation barrier; but then the circuitry on both sides of the barrier must be regarded as operating at an unsafe voltage and further isolation/insulation systems must form a barrier between these circuits and any user-accessible circuitry according to safety standard requirements.

REPEATED HIGH-VOLTAGE ISOLATION TESTING

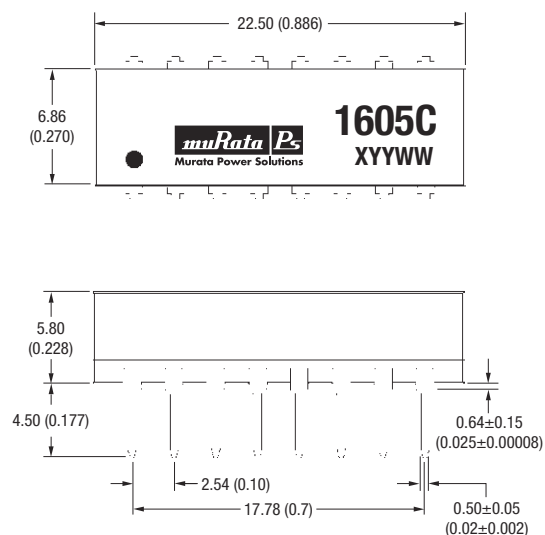
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This consideration equally applies to agency recognized parts rated for better than functional isolation where the wire enamel insulation is always supplemented by a further insulation system of physical spacing or barriers.



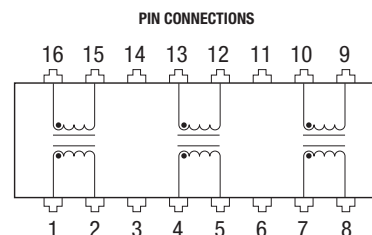
PACKAGE SPECIFICATIONS

MECHANICAL DIMENSIONS

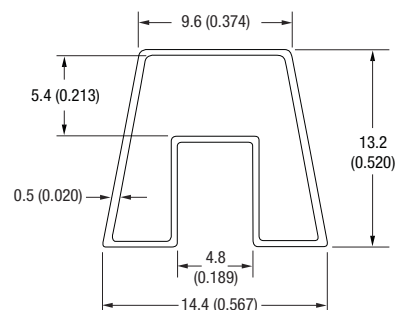


All dimensions in mm (inches) ± 0.25 (0.001) unless otherwise stated.
Package weight: 1.7g Typ.

PIN CONNECTIONS



TUBE DIMENSIONS



Tube length: 520mm (20.5)
All dimensions in mm (inches) ± 0.25 (0.001) unless otherwise stated.
Package quantity: 20



FEATURES

- RoHS compliant
- Maxim MAX250 compatible
- Isolation to 4kVrms
- Industry-standard pinout
- Surface mount option
- UL 94 V-0 package materials
- Low profile
- Toroidal construction
- Fully encapsulated
- Industrial temperature range

DESCRIPTION

The 78250 series of converter transformers are specifically designed for use with Maxim chipsets to provide isolated RS232 interfaces. Carefully controlled turns ratios ensure consistent performance whilst a toroidal construction minimises EMI.

CHARACTERISTICS 78250C/78250MC

Parameter	Conditions	Min.	Typ.	Max.	Units
Primary Inductance, L_p	10kHz, 100mV	1.0	2.0	2.5	mH
Leakage Inductance, L_L	100kHz, 100mV		2.0	3.0	μ H
Interwinding Capacitance, C_{ww}	100kHz, 100mV		69	90	pF
Primary D.C. Resistance, R_{dc}	<0.1VDC		1.0	2.0	Ω
Volt-time Product, Et	Pins1/2 or 2/3	50			V μ s

CHARACTERISTICS 78250VC/78250MVC

Parameter	Conditions	Min.	Typ.	Max.	Units
Primary Inductance, L_p	10kHz, 100mV	1.0	2.0	2.5	mH
Leakage Inductance, L_L	100kHz, 100mV		35	40	μ H
Interwinding Capacitance, C_{ww}	100kHz, 100mV		9	12	pF
Primary D.C. Resistance, R_{dc}	<0.1VDC		1.4	1.8	Ω
Volt-time Product, Et	Pins1/2 or 2/3	50			V μ s

ORDER CODE DETAILS

Order Code	Package Type	Packaging Type	Quantity
78250C / 78250VC	6 Pin DIL	Tube	50
78250MC / 78250MVC	6 Pin SM	Tube	50
78250MC-R / 78250MVC-R	6 Pin SM	Tape & Reel	500

ABSOLUTE MAXIMUM RATINGS

Operating free air temperature range	-40°C to 85°C
Storage temperature range	-50°C to 125°C
Lead temperature 1.5mm from case for 10 seconds	300°C
Peak current, I_{pk}	300mA
Isolation voltage 78250(M)C (flash tested for 1 second)	1.5kVrms
Isolation voltage 78250V(M)C (flash tested for 1 second)	4.0kVrms

All specifications typical at $T_A = 25^\circ\text{C}$

TECHNICAL NOTES

ISOLATION VOLTAGE

'Hi Pot Test', 'Flash Tested', 'Withstand Voltage', 'Proof Voltage', 'Dielectric Withstand Voltage' & 'Isolation Test Voltage' are all terms that relate to the same thing, a test voltage, applied for a specified time, across a component designed to provide electrical isolation, to verify the integrity of that isolation.

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A question commonly asked is, "What is the continuous voltage that can be applied across the part in normal operation?"

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REPEATED HIGH-VOLTAGE ISOLATION TESTING

It is well known that repeated high-voltage isolation testing of a barrier component can actually degrade isolation capability, to a lesser or greater degree depending on materials, construction and environment. This series has toroidal isolation transformers, with no additional insulation between primary and secondary windings of enameled wire. While parts can be expected to withstand several times the stated test voltage, the isolation capability does depend on the wire insulation. Any material, including this enamel (typically polyurethane) is susceptible to eventual chemical degradation when subject to very high applied voltages thus implying that the number of tests should be strictly limited. We therefore strongly advise against repeated high voltage isolation testing, but if it is absolutely required, that the voltage be reduced by 20% from specified test voltage.

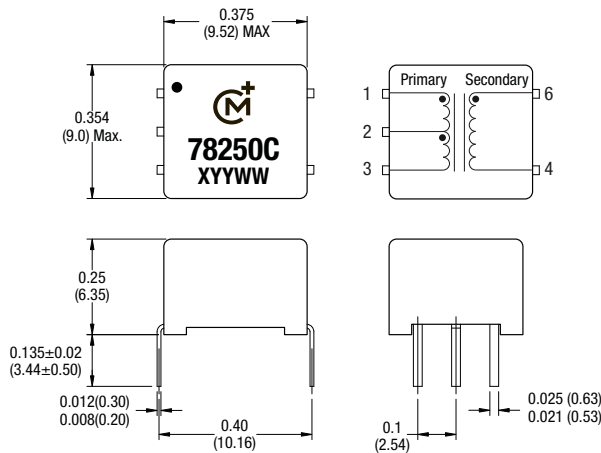
This consideration equally applies to agency recognized parts rated for better than functional isolation where the wire enamel insulation is always supplemented by a further insulation system of physical spacing or barriers.



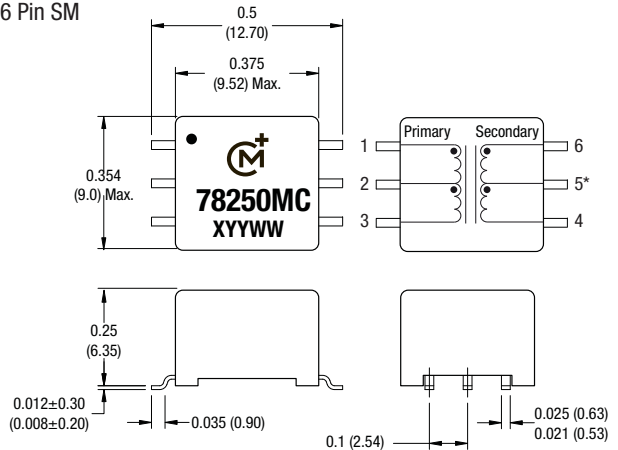
PACKAGE SPECIFICATIONS

MECHANICAL DIMENSIONS

6 Pin DIL



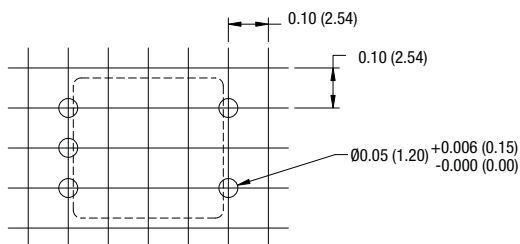
6 Pin SM



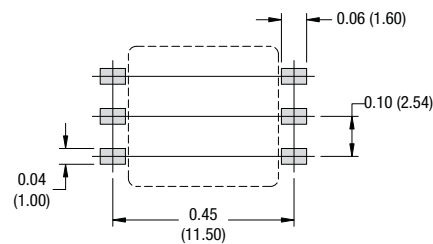
Unless otherwise stated all dimensions in inches (mm) ±0.01 (0.25).
All pins on a 0.1 (2.54) pitch and within ±0.01 (0.25) of true position.
*Pin 5 is connected to secondary center tap. Package Weight 1.0g TYP.

RECOMMENDED FOOTPRINT DETAILS

6 Pin DIL

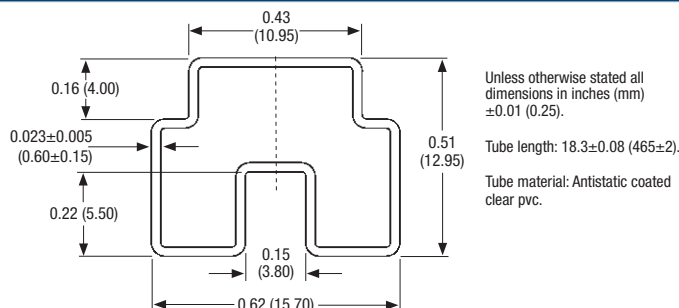


6 Pin SM



Unless otherwise stated all dimensions in inches (mm) ±0.01 (0.25). All pins on a 0.1 (2.54) pitch and within ±0.01 (0.25) of true position.

TUBE OUTLINE DIMENSIONS



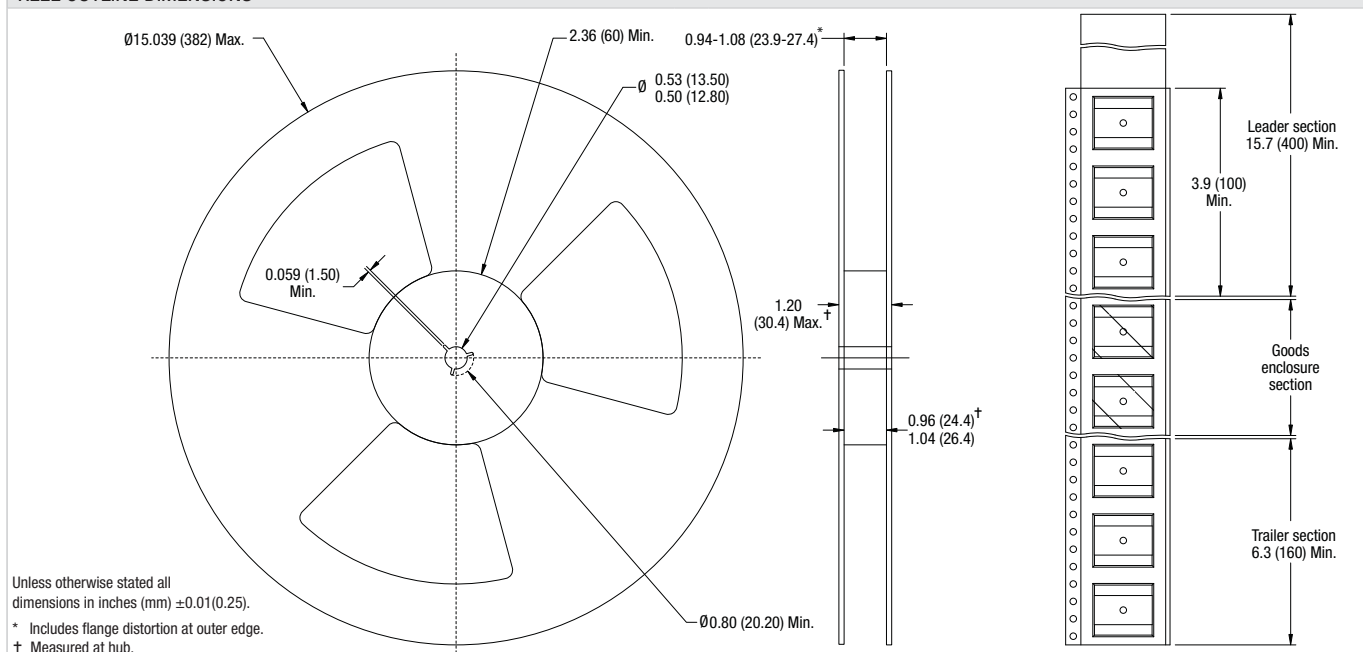
SOLDERING INFORMATION¹

Pin finish	Pure tin dip
Peak wave solder temperature	300°C for 10 seconds
Peak reflow temperature	220°C

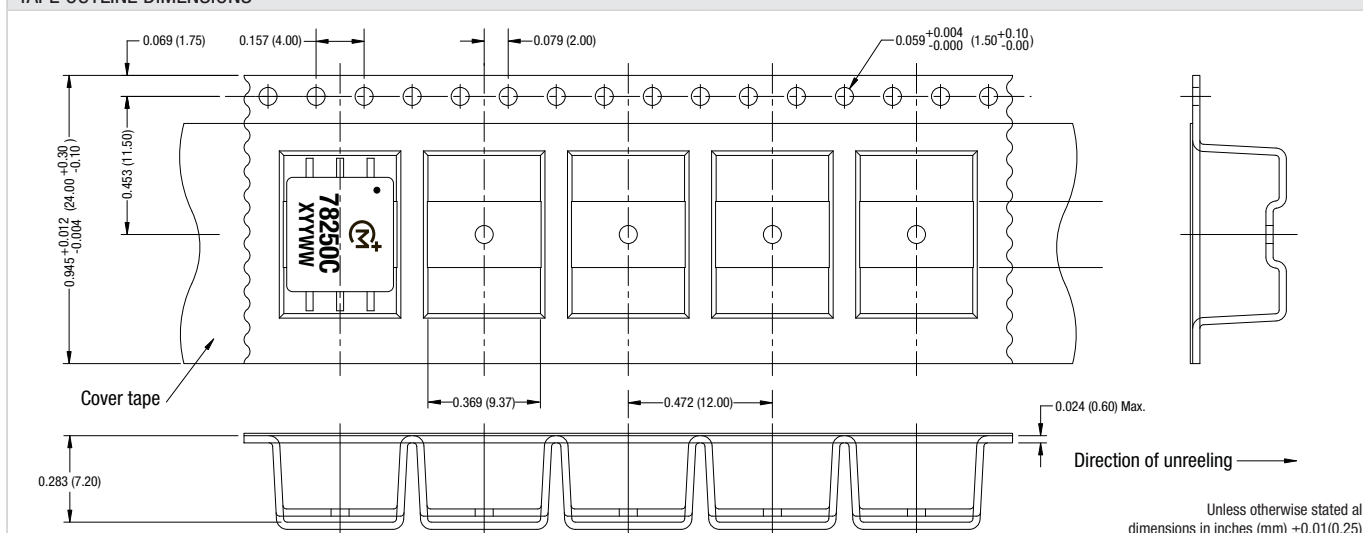
¹ For further information, please visit www.murata-ps.com/rohs

TAPE & REEL SPECIFICATIONS

REEL OUTLINE DIMENSIONS



TAPE OUTLINE DIMENSIONS



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FEATURES

- RoHS compliant
- Maxim MAX253 compatible
- 3.3V and 5V versions
- Isolation to 4kV_{DC}
- Frequency range to 500kHz
- Toroidal construction
- Industry-standard pinout
- UL 94 V-0 package materials
- Fully encapsulated
- Low profile
- Surface mount option
- Industrial temperature range

DESCRIPTION

The 78253 series of converter transformers are specifically designed for use with the MAX253 chip set to provide isolated power supplies. The 5V version can supply 1W and the 3.3V version can supply 500mW. A centre tapped secondary winding allows for full bridge, half bridge or voltage doubling.

SELECTION GUIDE

Order Code	Input Voltage	Output Voltage	Max. Output Current	Isolation Voltage	Turns Ratio	Package Style
	V	V	mA	V _{DC}		
78253/35C	3.3	5.0	100	1500	1:2.27	DIL
78253/35MC						SM
78253/55C	5.0	5.0	200	1500	1:1.31	DIL
78253/55MC						SM
78253/35VC	3.3	5.0	100	4000	1:2.14	DIL
78253/35MVC						SM
78253/55VC	5.0	5.0	200	4000	1:1.33	DIL
78253/55MVC						SM

ORDER CODE DETAILS

Order Code	Package Type	Packaging Type	Quantity
78253/XXC	6 Pin DIL	Tube	50
78253/XXMC	6 Pin SM	Tube	50
78253/XXMC-R	6 Pin SM	Tape & Reel	500

78253/35(M)C CHARACTERISTICS

Parameter	Conditions	Min.	Typ.	Max.	Units
Primary Inductance, L _p	100kHz, 250mV	0.30	0.38	0.46	mH
Secondary Inductance, L _s	100kHz, 250mV	1.60	2.00	2.40	mH
Leakage Inductance, L _l	100kHz, 250mV		0.30	1.00	μH
Interwinding Capacitance, C _{ww}	100kHz, 250mV		30	50	pF
Primary D.C. Resistance, R _{DC}	>0.1VDC		0.40	1.00	Ω
Volt-time Product, Et	Pins 1/2 or 2/3	30	35		Vμs

78253/55(M)C CHARACTERISTICS

Parameter	Conditions	Min.	Typ.	Max.	Units
Primary Inductance, L _p	100kHz, 250mV	0.60	0.83	1.10	mH
Secondary Inductance, L _s	100kHz, 250mV	1.10	1.40	1.70	mH
Leakage Inductance, L _l	100kHz, 250mV		0.35	1.00	μH
Interwinding Capacitance, C _{ww}	100kHz, 250mV		30	50	pF
Primary D.C. Resistance, R _{DC}	>0.1VDC		0.70	1.50	Ω
Volt-time Product, Et	Pins 1/2 or 2/3	40	50		Vμs

78253/35(M)VC CHARACTERISTICS

Parameter	Conditions	Min.	Typ.	Max.	Units
Primary Inductance, L _p	100kHz, 20mV	110	142	185	μH
Secondary Inductance, L _s	100kHz, 20mV	550	710	850	μH
Leakage Inductance, L _l	100kHz, 250mV		3.00	5.00	μH
Interwinding Capacitance, C _{ww}	100kHz, 250mV		4.20	8.00	pF
Primary D.C. Resistance, R _{DC}	>0.1VDC		0.30	0.50	Ω
Volt-time Product, Et	Pins 1/2 or 2/3	18	22		Vμs

78253/55(M)VC CHARACTERISTICS

Parameter	Conditions	Min.	Typ.	Max.	Units
Primary Inductance, L _p	100kHz, 20mV	190	240	310	μH
Secondary Inductance, L _s	100kHz, 20mV	350	444	540	μH
Leakage Inductance, L _l	100kHz, 250mV		5.20	8.00	μH
Interwinding Capacitance, C _{ww}	100kHz, 250mV		4.20	8.00	pF
Primary D.C. Resistance, R _{DC}	>0.1VDC		0.40	0.60	Ω
Volt-time Product, Et	Pins 1/2 or 2/3	25	28		Vμs

All specifications typical at T_A=25°C



For full details go to
www.murata-ps.com/rohs

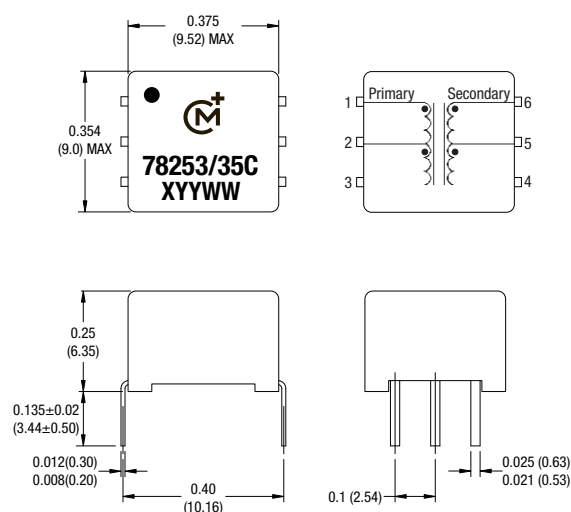
ABSOLUTE MAXIMUM RATINGS

Operating free air temperature range	-40°C to 85°C
Storage temperature range	-50°C to 125°C
Lead Temperature 1.5mm from case for 10 seconds	300°C
Peak current I_{PK}	400mA
Isolation voltage 78253/XX(M)C (flash tested for 1 second)	1500Vdc
Isolation voltage 78253/XX(M)VC (flash tested for 1 second)	4000Vdc

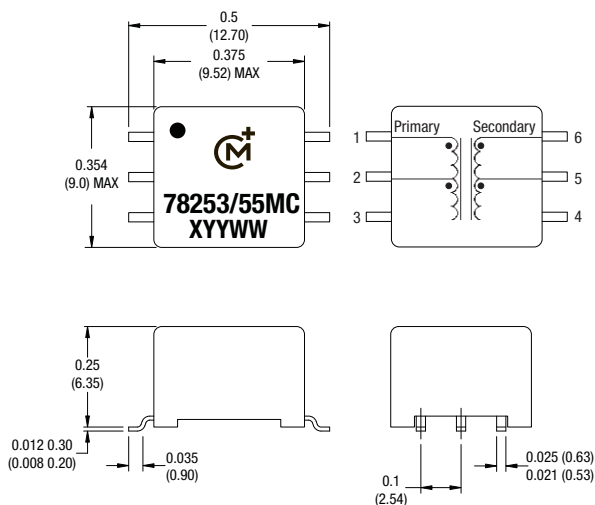
PACKAGE SPECIFICATIONS

MECHANICAL DIMENSIONS

6 Pin DIL



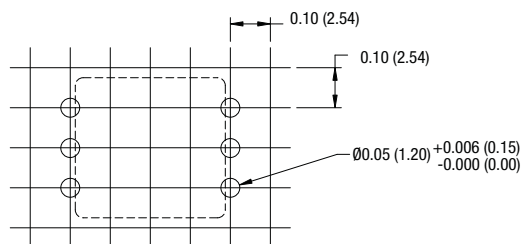
6 Pin SM



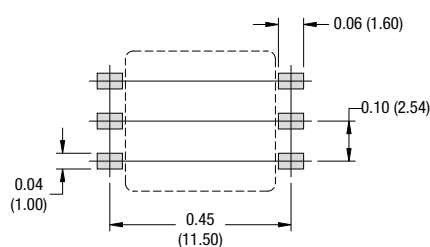
Unless otherwise stated all dimensions in inches (mm) ± 0.01 (0.25).
All pins on a 0.1 (2.54) pitch and within ± 0.01 (0.25) of true position.
Package weight 1.0g Typ.

RECOMMENDED FOOTPRINT DETAILS

6 Pin DIL



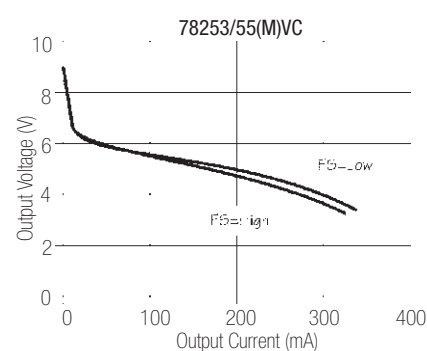
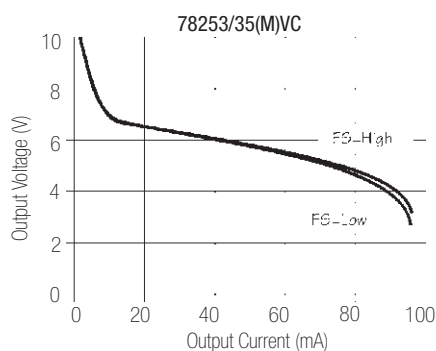
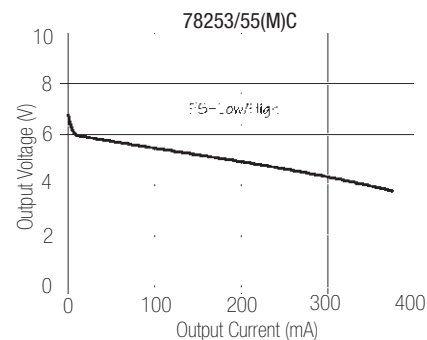
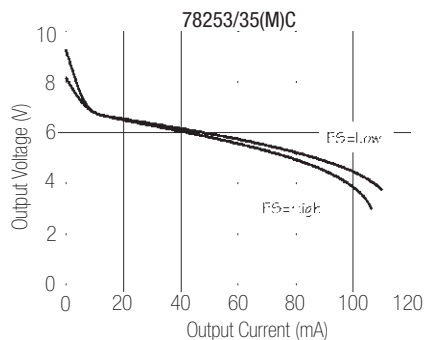
6 Pin SM



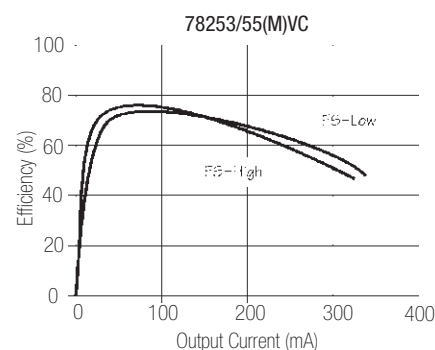
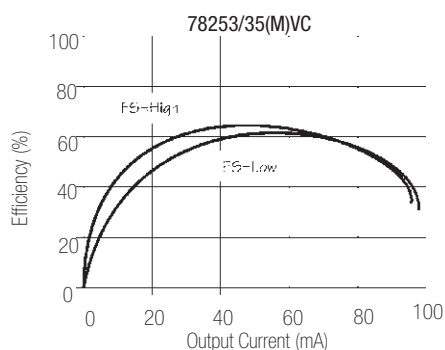
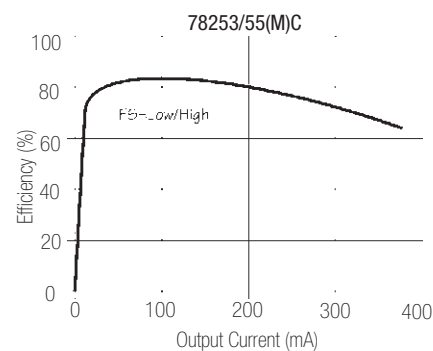
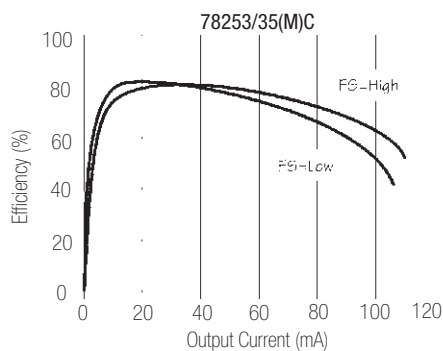
Unless otherwise stated all dimensions in inches (mm) ± 0.01 (0.25).
All pins on a 0.1 (2.54) pitch and within ± 0.01 (0.25) of true position.

TYPICAL CHARACTERISTICS (VOLTAGE CURVES)

VOLTAGE CURVES

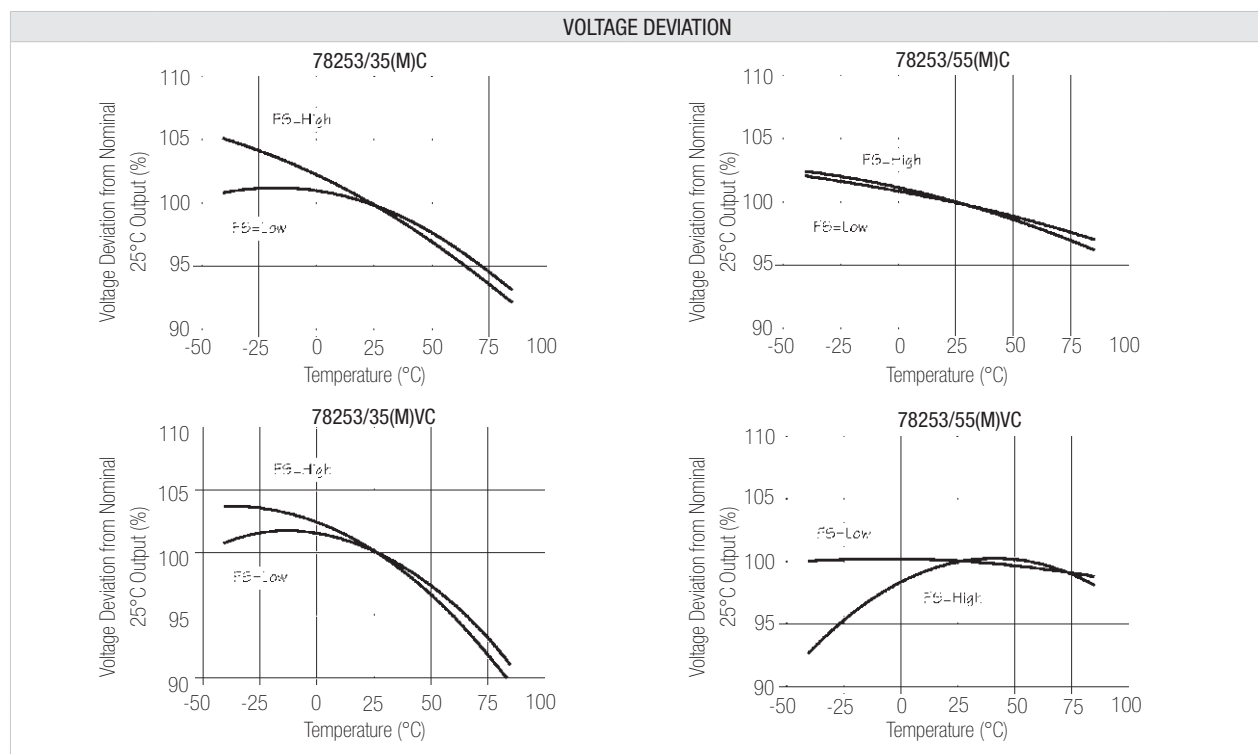


EFFICIENCY CURVES



All curves are derived from testing with the Maxim MAX235 IC using the circuit shown in application note MPAN-03 (download at <http://www.murata-ps.com/data/apnotes/mpan-03.pdf>).

TYPICAL CHARACTERISTICS (VOLTAGE CURVES) continued



TECHNICAL NOTES

ISOLATION VOLTAGE

'Hi Pot Test', 'Flash Tested', 'Withstand Voltage', 'Proof Voltage', 'Dielectric Withstand Voltage' & 'Isolation Test Voltage' are all terms that relate to the same thing, a test voltage, applied for a specified time, across a component designed to provide electrical isolation, to verify the integrity of that isolation.

All products in this series are 100% production tested at their stated isolation voltage.

A question commonly asked is, "What is the continuous voltage that can be applied across the part in normal operation?"

For a part holding no specific agency approvals both input and output should normally be maintained within SELV limits i.e. less than 42.4V peak, or 60VDC. The isolation test voltage represents a measure of immunity to transient voltages and the part should never be used as an element of a safety isolation system. The part could be expected to function correctly with several hundred volts offset applied continuously across the isolation barrier; but then the circuitry on both sides of the barrier must be regarded as operating at an unsafe voltage and further isolation/insulation systems must form a barrier between these circuits and any user-accessible circuitry according to safety standard requirements.

REPEATED HIGH-VOLTAGE ISOLATION TESTING

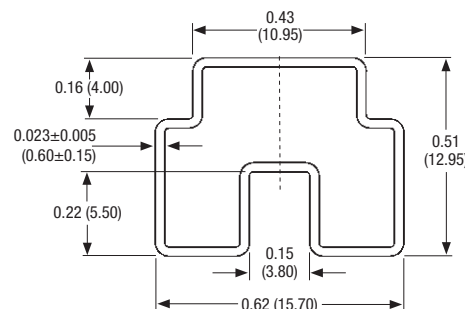
It is well known that repeated high-voltage isolation testing of a barrier component can actually degrade isolation capability, to a lesser or greater degree depending on materials, construction and environment. This series has toroidal isolation transformers, with no additional insulation between primary and secondary windings of enameled wire. While parts can be expected to withstand several times the stated test voltage, the isolation capability does depend on the wire insulation. Any material, including this enamel (typically polyurethane) is susceptible to eventual chemical degradation when subject to very high applied voltages thus implying that the number of tests should be strictly limited. We therefore strongly advise against repeated high voltage isolation testing, but if it is absolutely required, that the voltage be reduced by 20% from specified test voltage.

This consideration equally applies to agency recognized parts rated for better than functional isolation where the wire enamel insulation is always supplemented by a further insulation system of physical spacing or barriers.

SOLDERING INFORMATION¹

Pin finish	Bright tin
Peak wave solder temperature	300°C for 10 seconds
Peak reflow temperature	220°C

TUBE OUTLINE DIMENSIONS



Tube length: 18.3±0.08 (465±2). Tube quantity: 50.
Tube material: Antistatic coated clear pvc.

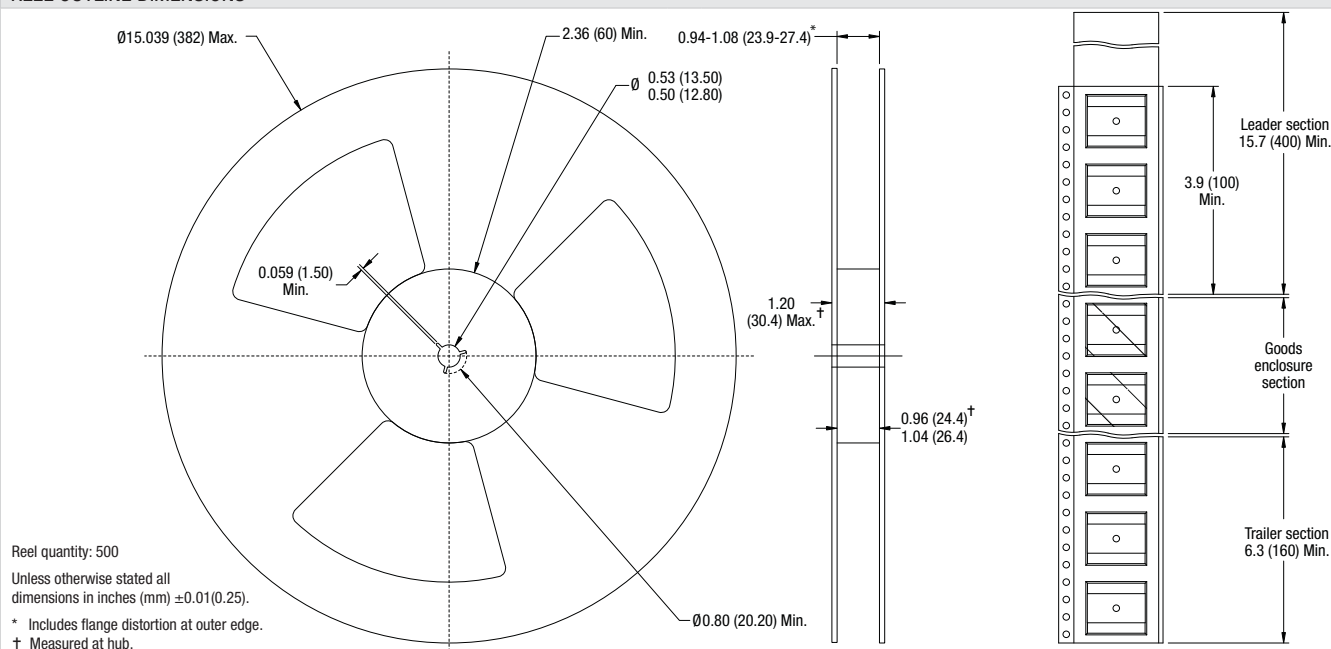
Unless otherwise stated all dimensions in inches(mm) ±0.01 (0.25).

All specifications typical at $T_A=25^\circ\text{C}$

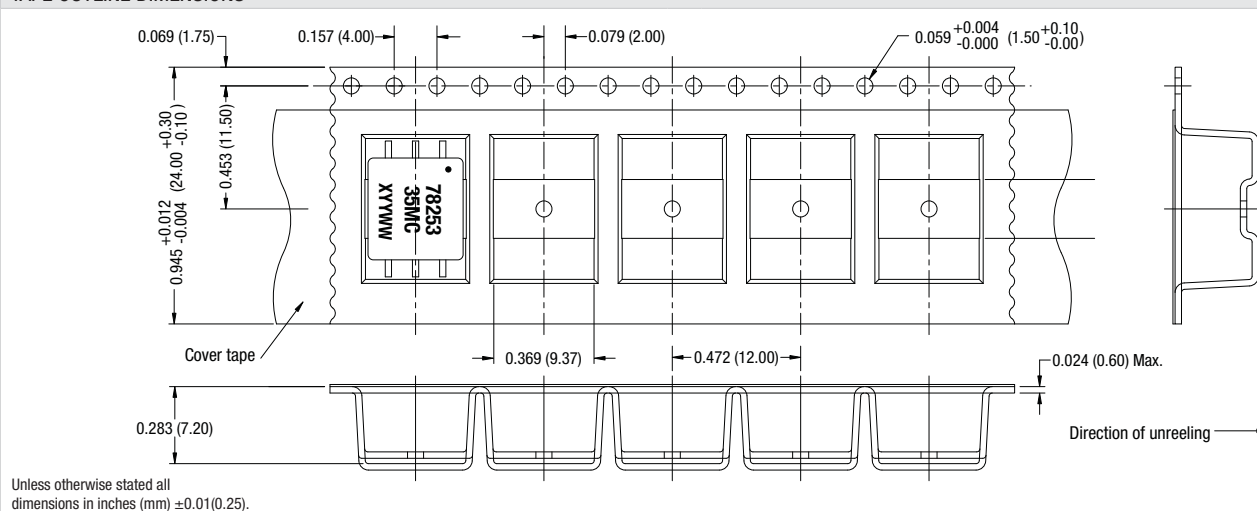
¹ For further information, please visit www.murata-ps.com/rohs

TAPE & REEL SPECIFICATIONS

REEL OUTLINE DIMENSIONS



TAPE OUTLINE DIMENSIONS



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FEATURES

- RoHS compliant
- Maxim MAX250/MAX253 compatible
- BS EN 60950 approved
- Isolation to 6kV_{DC}
- Toroidal construction
- Industry-standard pinout
- UL 94 V-0 package materials
- Fully encapsulated
- Compatible with RoHS soldering systems
- Backward compatible with Sn/Pb soldering systems

DESCRIPTION

The 76250ENC converter transformer is specifically designed for use with Maxim chipsets to provide isolated RS232 interfaces. A carefully controlled turns ratio ensures consistent performance whilst a toroidal construction minimises EMI.

The 76253/XXENC converter transformers are specifically designed for use with the MAX253 chip set to provide isolated power supplies. The 5V version can supply 1W and the 3.3V version can supply 500mW. A centre tapped secondary winding allows for full bridge, half bridge or voltage doubling.

The devices are fully approved to BS EN 60950 for use in telecoms applications.

SELECTION GUIDE

Order Code	Input Voltage	Output Voltage	Max. Output Current	Isolation Voltage	Turns Ratio
	V	V	mA	V _{DC}	
76250ENC	-	-	-	6000	1CT:1
76253/35ENC	3.3	5.0	100	6000	1:√5
76253/55ENC	5.0	5.0	200	6000	1:1.33

76250ENC CHARACTERISTICS

Parameter	Conditions	Min.	Typ.	Max.	Units
Primary Inductance, L _p (1&5)	10kHz, 100mV	1.0	2.0	2.5	mH
Leakage Inductance, L _L (1&5) ²	100kHz, 100mV		35	40	μH
Interwinding Capacitance, C _{ww} (1&2)	100kHz, 100mV		1.5	3.0	pF
D.C. Resistance, R _{DC} (1&5)	<0.1V _{DC}		1.0	2.0	Ω
Volt-time Product, E _T (1&5)		50			Vμs

76253/35ENC CHARACTERISTICS

Parameter	Conditions	Min.	Typ.	Max.	Units
Primary Inductance, L _p (1&5)	100kHz, 250mV	140	200		μH
Secondary Inductance, L _s (2&6)	100kHz, 250mV	350	460	600	μH
Leakage Inductance, L _L (1&5) ²	100kHz, 250mV		5.0	7.0	μH
Interwinding Capacitance, C _{ww} (1&2)	100kHz, 250mV		2.7	3.5	pF
D.C. Resistance, R _{DC} (1&5)	<0.1V _{DC}		0.4	0.8	Ω
Volt-time Product, E _T (1&5)		25	35		Vμs

76253/55ENC CHARACTERISTICS

Parameter	Conditions	Min.	Typ.	Max.	Units
Primary Inductance, L _p (1&5)	100kHz, 250mV	175	250		μH
Secondary Inductance, L _s (2&6)	100kHz, 250mV	280	362	445	μH
Leakage Inductance, L _L (1&5) ²	100kHz, 250mV		7.0	10.0	μH
Interwinding Capacitance, C _{ww} (1&2)	100kHz, 250mV		2.7	3.5	pF
D.C. Resistance, R _{DC} (1&5)	<0.1V _{DC}		0.5	0.9	Ω
Volt-time Product, E _T (1&5)		30	40		Vμs

ABSOLUTE MAXIMUM RATINGS

Operating free air temperature range 76250EN	0°C to 70°C
Operating free air temperature range 76253/XXEN	-40°C to 85°C
Storage temperature range	-50°C to 125°C
Lead temperature 1.5mm from case for 10 seconds	300°C
Peak current, I _{PK} 76250EN	300mA
Peak current, I _{PK} 76253/XXEN	400mA
Isolation voltage (flash tested for 1 second)	6000V _{DC}

SOLDERING INFORMATION³

Peak wave solder temperature	300°C for 10 seconds
Pin finish	Matte tin

All specifications typical at T_A=25°C

1 Refer to mechanical dimensions for pin locations shown in brackets.

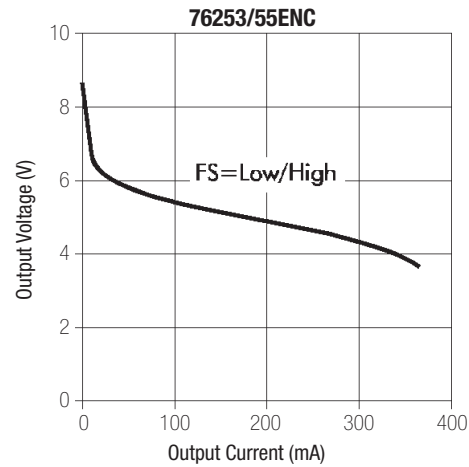
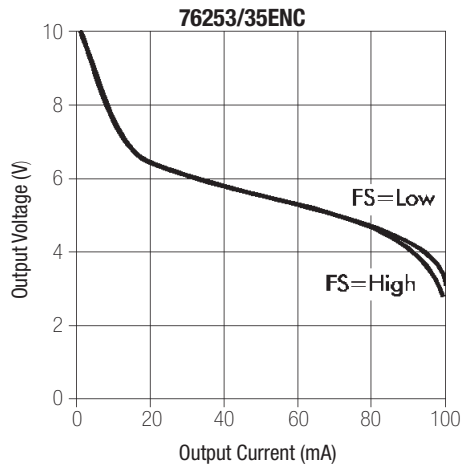
2 With pins 2 & 6 short circuited.

3 For further information, please visit www.murata-ps.com/rohs

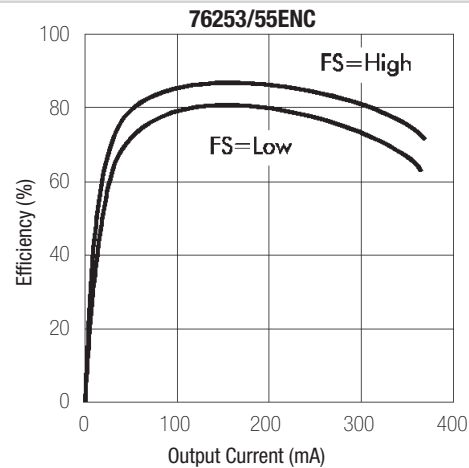
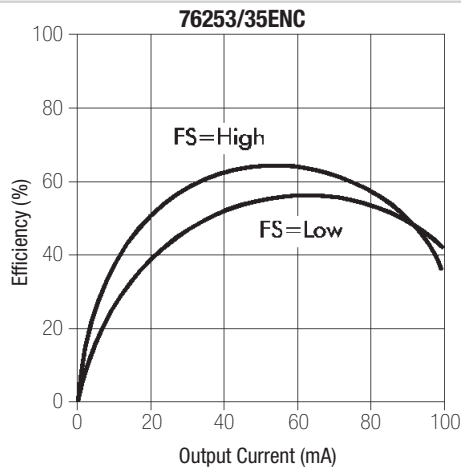


TYPICAL CHARACTERISTICS (VOLTAGE CURVES)

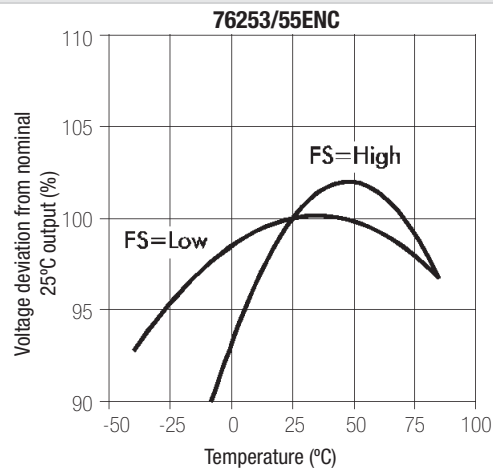
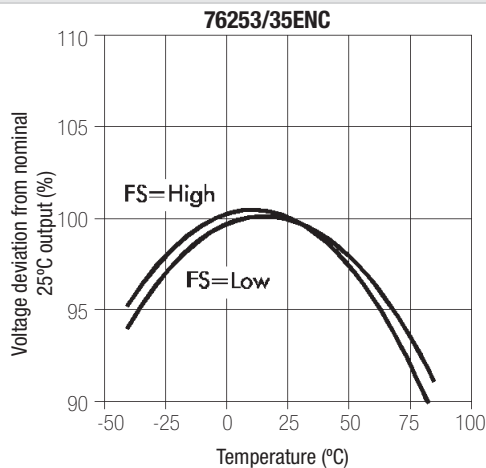
VOLTAGE CURVES



EFFICIENCY CURVES



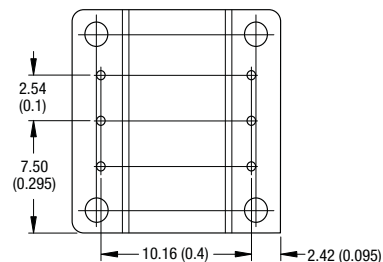
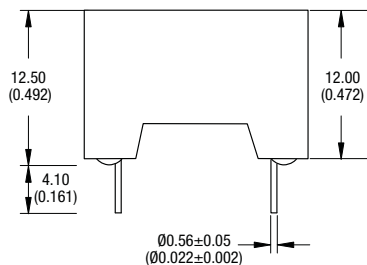
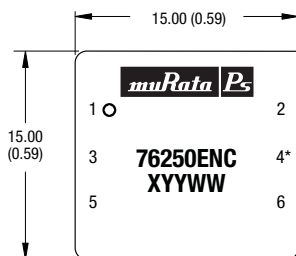
VOLTAGE DEVIATION



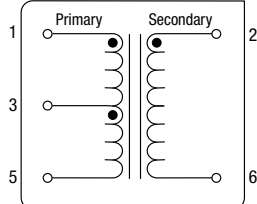
All curves are derived from testing with the Maxim MAX235 IC using the circuit shown in application note MPAN-03 (download at <http://www.murata-ps.com/data/apnotes/mpan-03.pdf>).

PACKAGE SPECIFICATIONS

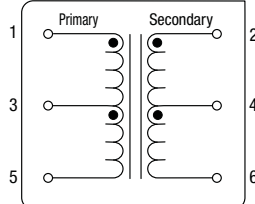
MECHANICAL DIMENSIONS



Pin Connections 76250EN (Top View)



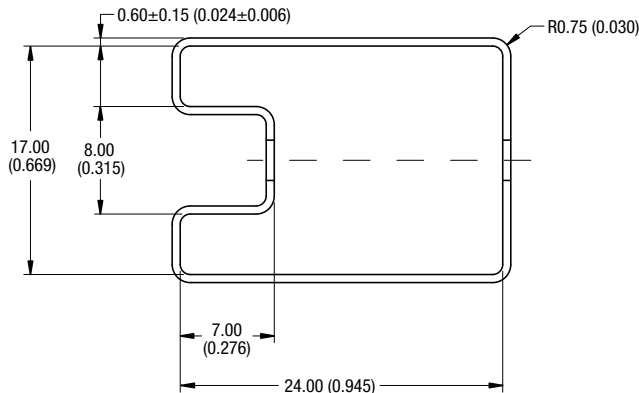
Pin Connections 76253/XXEN (Top View)



* 76250EN Pin not fitted.

Unless otherwise stated all dimensions in mm (inches) ± 0.25 mm (± 0.01).
All pins on a 2.54mm (0.1") pitch and within ± 0.25 mm (0.01") of true position.

TUBE DIMENSIONS

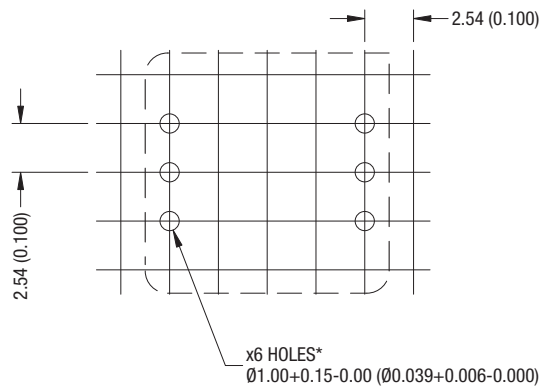


Tube length: 480 \pm 2.00mm (18.90 \pm 0.079"). Tube quantity: 30

Tube material: Antistatic coated clear pvc.

Unless otherwise stated all dimensions in mm (inches) -0.00 +0.50 (-0.00 +0.020).

RECOMMENDED FOOTPRINT DETAILS



Holes may be omitted for variants with fewer than 6 pins.

Unless otherwise stated all dimensions in mm (inches) ± 0.25 (0.01).

All pins on a 2.54 (0.1) pitch and within ± 0.25 (0.01) of true position.

TECHNICAL NOTES

ISOLATION VOLTAGE

'Hi Pot Test', 'Flash Tested', 'Withstand Voltage', 'Proof Voltage', 'Dielectric Withstand Voltage' & 'Isolation Test Voltage' are all terms that relate to the same thing, a test voltage, applied for a specified time, across a component designed to provide electrical isolation, to verify the integrity of that isolation.

All products in this series are 100% production tested at their stated isolation voltage.

This series is recognised by the British Standards Institution to a working voltage of 300Vrms for Reinforced Insulation systems.

REPEATED HIGH-VOLTAGE ISOLATION TESTING

It is well known that repeated high-voltage isolation testing of a barrier component can actually degrade isolation capability, to a lesser or greater degree depending on materials, construction and environment. We therefore strongly advise against repeated high voltage isolation testing, but if it is absolutely required, that the voltage be reduced by 20% from the specified test voltage.



FEATURES

- RoHS compliant
- Analog Devices ADM2485 compatible
- 2.5kVrms isolation
- Industry-standard pinout
- UL 94 V-0 package materials
- Low profile
- Toroidal construction
- Fully encapsulated
- Industrial temperature range
- Surface mount versions available soon
- Recommended by Analog Devices, Inc.
- Backward compatible with Sn/Pb soldering systems

DESCRIPTION

The 782485 series of converter transformers are specifically designed for use with Analog Devices chipsets to provide isolated RS-485 and RS-422 interfaces. Carefully controlled turns ratios ensure consistent performance whilst a toroidal construction minimises EMI.



For full details go to
www.murata-ps.com/rohs

SELECTION GUIDE

Order Code	Nominal Input Voltage	Nominal Output Voltage	Max. Output Current	Isolation Voltage	Turns Ratio	Package Style
	V	V	mA	V _{RMS}		
782485/35C	3.3	6.0	200	2500	1CT:2.2CT	DIL
782485/55C	5.0	6.0	200	2500	1CT:1.5CT	DIL

CHARACTERISTICS 782485/35C

Parameter	Conditions	782485/35C		782485/55C		Units
		Typ.	Max.	Typ.	Max.	
Primary Inductance, L _p	100kHz, 10mV	234		513		μH
Leakage Inductance, L _l	100kHz, 10mV	168		192		nH
Interwinding Capacitance, C _{ww}	100kHz, 10mV	24	50	37	50	pF
Primary DC Resistance, R _{dc}	<0.1VDC	273	500	383	600	mΩ
Volt-time Product, Et ¹	5kHz, 5V	12		19		Vμs

ABSOLUTE MAXIMUM RATINGS

Operating free air temperature range	-40°C to 85°C
Storage temperature range	-50°C to 125°C
Isolation voltage (flash tested for 1 second)	2.5kVrms

SOLDERING INFORMATION²

Peak wave solder temperature	300°C for 10 seconds
Pin finish	Matte tin

Specifications typical at T_A = 25°C

1 Where pulse applied across pins 1 and 2.

2 For further information, please visit www.murata-ps.com/rohs

TECHNICAL NOTES

ISOLATION VOLTAGE

'Hi Pot Test', 'Flash Tested', 'Withstand Voltage', 'Proof Voltage', 'Dielectric Withstand Voltage' & 'Isolation Test Voltage' are all terms that relate to the same thing, a test voltage, applied for a specified time, across a component designed to provide electrical isolation, to verify the integrity of that isolation.

All products in this series are 100% production tested at their stated isolation voltage.

A question commonly asked is, "What is the continuous voltage that can be applied across the part in normal operation?"

For a part holding no specific agency approvals both input and output should normally be maintained within SELV limits i.e. less than 42.4V peak, or 60VDC. The isolation test voltage represents a measure of immunity to transient voltages and the part should never be used as an element of a safety isolation system. The part could be expected to function correctly with several hundred volts offset applied continuously across the isolation barrier; but then the circuitry on both sides of the barrier must be regarded as operating at an unsafe voltage and further isolation/insulation systems must form a barrier between these circuits and any user-accessible circuitry according to safety standard requirements.

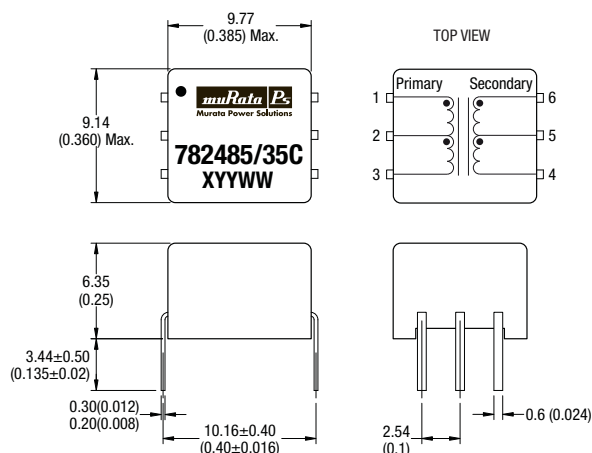
REPEATED HIGH-VOLTAGE ISOLATION TESTING

It is well known that repeated high-voltage isolation testing of a barrier component can actually degrade isolation capability, to a lesser or greater degree depending on materials, construction and environment. This series has toroidal isolation transformers, with no additional insulation between primary and secondary windings of enameled wire. While parts can be expected to withstand several times the stated test voltage, the isolation capability does depend on the wire insulation. Any material, including this enamel (typically polyurethane) is susceptible to eventual chemical degradation when subject to very high applied voltages thus implying that the number of tests should be strictly limited. We therefore strongly advise against repeated high voltage isolation testing, but if it is absolutely required, that the voltage be reduced by 20% from specified test voltage.

This consideration equally applies to agency recognized parts rated for better than functional isolation where the wire enamel insulation is always supplemented by a further insulation system of physical spacing or barriers.

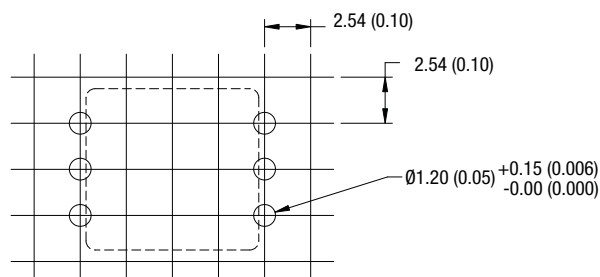
PACKAGE SPECIFICATIONS

MECHANICAL DIMENSIONS



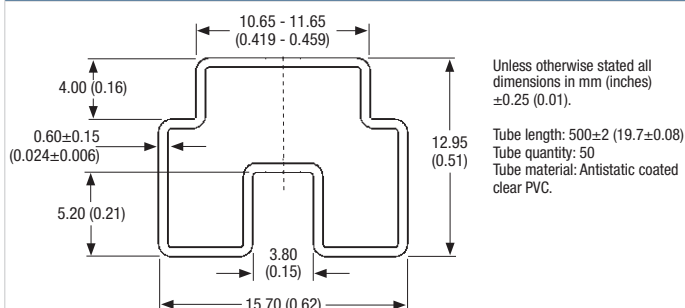
Unless otherwise stated all dimensions in mm (inches) ± 0.25 (0.01).
All pins on a 2.54 (0.1) pitch and within ± 0.25 (0.01) of true position.
Package Weight 1.0g TYP.

RECOMMENDED FOOTPRINT DETAILS



Unless otherwise stated all dimensions in mm (inches) ± 0.25 (0.01).
All pins on a 2.54(0.1) pitch and within ± 0.25 (0.01) of true position.

TUBE OUTLINE DIMENSIONS



Murata Power Solutions, Inc.

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FEATURES

- RoHS compliant
- Compatible with leading chip sets
- 2kVrms isolation
- Industry-standard pinout
- Surface mount option
- UL 94 V-0 package materials
- Low profile
- Suitable for both 75 & 110Ω circuits
- Toroidal construction
- Compliant with AES/EBU standards
- Fully encapsulated

DESCRIPTION

The Digital Audio Range of transformers is designed to improve the balance of transmitter and receiver circuitry in hi-fi equipment, video games and other applications requiring high-performance digital audio transmission. Compliant with AES/EBU recommendations for the digital audio interface, offering optimised shunt capacitance between primary and secondary windings. Capable of operating over the audio data rate frequency range, providing isolation from 50-60Hz noise.



For full details go to
www.murata-ps.com/rohs

SELECTION GUIDE

Order Code	Turns Ratio	Primary Inductance (10kHz, 50mV)	Max. Leakage Inductance (100kHz, 10mV)	Min. Volt-time Product, Et	Min. Return Loss (100kHz-3MHz)	Typ. Common Mode Rejection (100kHz, 110Ω)	Isolation (Flash tested for 1 second)
		mH	μH	Vμs	dB	dB	Vrms
DA101C	1:1	1.00 - 1.59	0.22	15	46.80	52.10	2000
DA102C	1:1	2.00 - 3.00	0.39	20	40.40	49.70	
DA103C	1:1	4.00 - 5.96	0.91	28	36.30	46.40	

ORDER CODE DETAILS

Order Code	Package Type	Packaging Type	Quantity
DAXXXC	6 Pin DIL	Tube	50
DAXXXMC	6 Pin SM	Tube	50
DAXXXMC-R	6 Pin SM	Tape & Reel	500

ABSOLUTE MAXIMUM RATINGS

Operating free air temperature range	0°C to 70°C
Storage temperature range	-40°C to 125°C

All specifications typical at $T_A = 25^\circ\text{C}$

TECHNICAL NOTES

ISOLATION VOLTAGE

'Hi Pot Test', 'Flash Tested', 'Withstand Voltage', 'Proof Voltage', 'Dielectric Withstand Voltage' & 'Isolation Test Voltage' are all terms that relate to the same thing, a test voltage, applied for a specified time, across a component designed to provide electrical isolation, to verify the integrity of that isolation.

All products in this series are 100% production tested at their stated isolation voltage.

A question commonly asked is, "What is the continuous voltage that can be applied across the part in normal operation?"

For a part holding no specific agency approvals both input and output should normally be maintained within SELV limits i.e. less than 42.4V peak, or 60VDC. The isolation test voltage represents a measure of immunity to transient voltages and the part should never be used as an element of a safety isolation system. The part could be expected to function correctly with several hundred volts offset applied continuously across the isolation barrier; but then the circuitry on both sides of the barrier must be regarded as operating at an unsafe voltage and further isolation/insulation systems must form a barrier between these circuits and any user-accessible circuitry according to safety standard requirements.

REPEATED HIGH-VOLTAGE ISOLATION TESTING

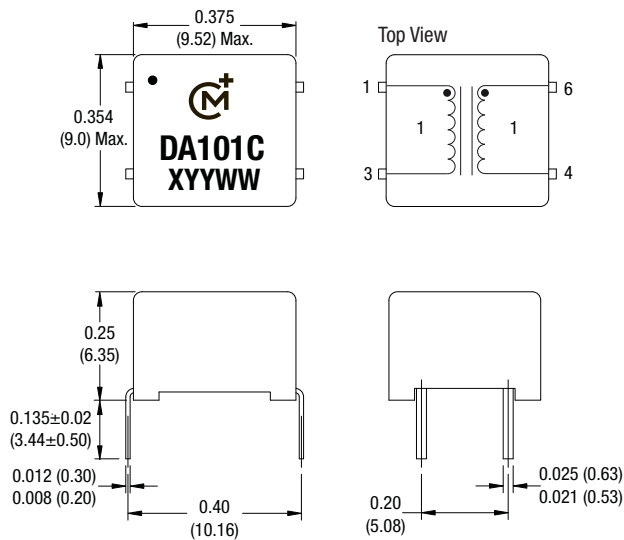
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This consideration equally applies to agency recognized parts rated for better than functional isolation where the wire enamel insulation is always supplemented by a further insulation system of physical spacing or barriers.

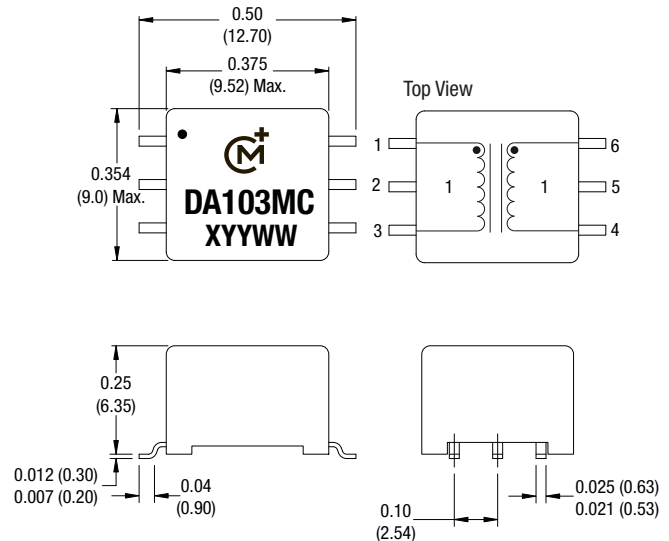
PACKAGE SPECIFICATIONS

MECHANICAL DIMENSIONS

6 Pin DIL



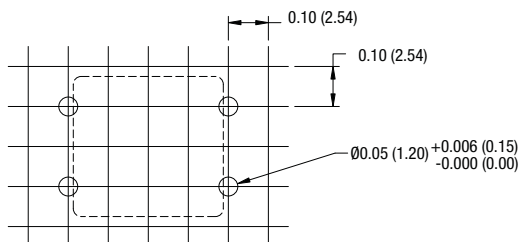
6 Pin SM



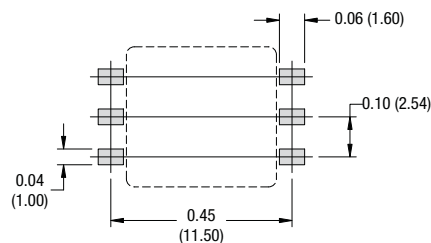
Unless otherwise stated all dimensions in inches (mm) ± 0.01 (0.25).
All pins on a 0.1 (2.54) pitch and within ± 0.01 (0.25) of true position.
Package Weight 0.93g Typ.

RECOMMENDED FOOTPRINT DETAILS

6 Pin DIL



6 Pin SM



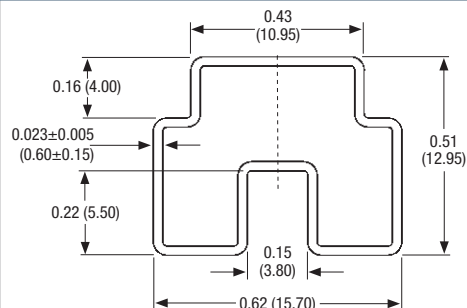
Unless otherwise stated all dimensions in inches (mm) ± 0.01 (0.25). All pins on a 0.1 (2.54) pitch and within ± 0.01 (0.25) of true position.

SOLDERING INFORMATION¹

Pin finish	Bright tin
Peak wave solder temperature	300°C for 10 seconds
Peak reflow temperature	220°C

¹ For further information, please visit www.murata-ps.com/rohs

TUBE OUTLINE DIMENSIONS



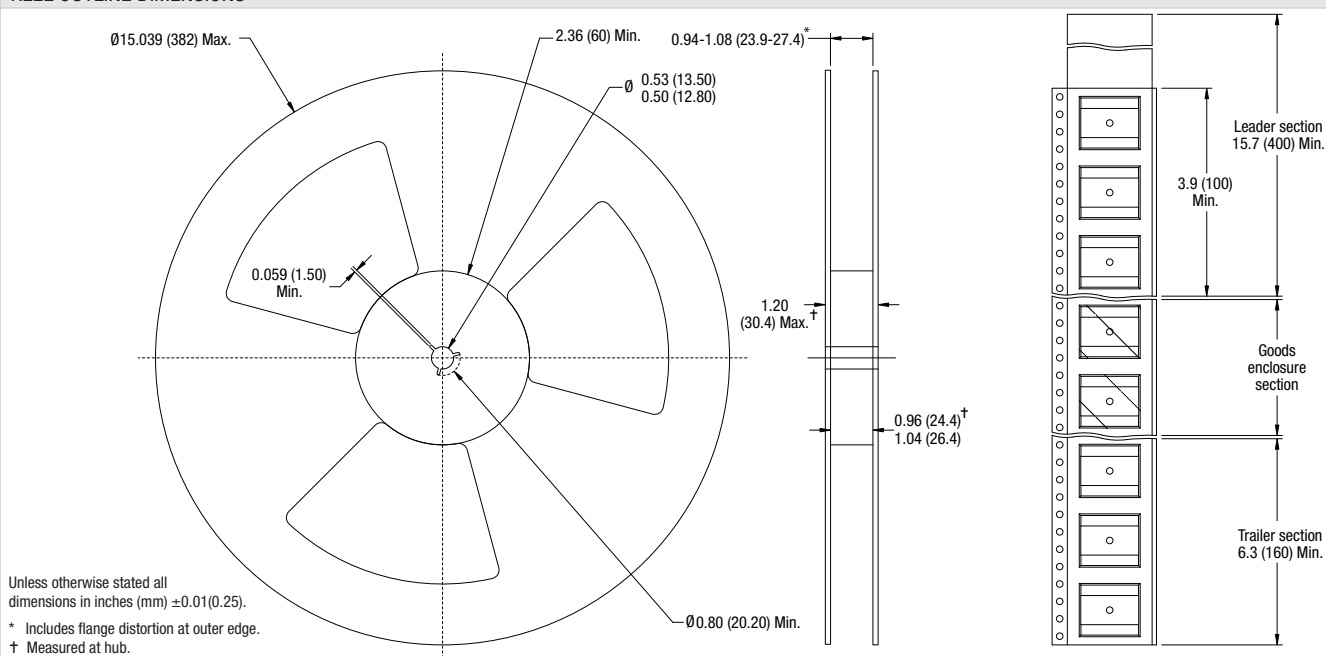
Unless otherwise stated all dimensions in inches (mm) ± 0.01 (0.25).

Tube length: 18.3 \pm 0.08 (465 \pm 2).

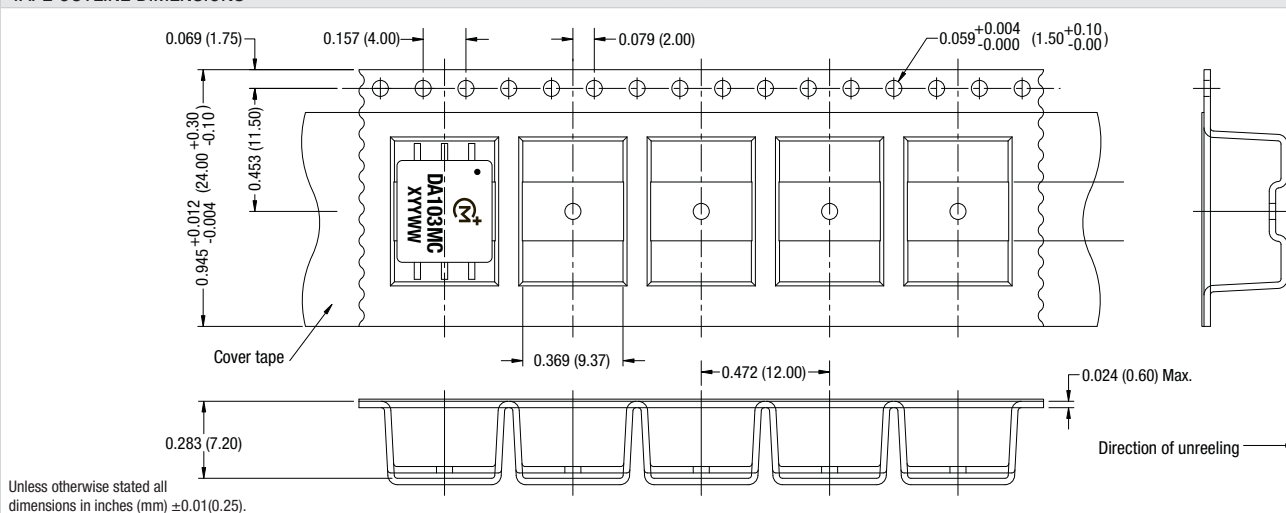
Tube material: Antistatic coated clear pvc.

TAPE & REEL SPECIFICATIONS

REEL OUTLINE DIMENSIONS



TAPE OUTLINE DIMENSIONS



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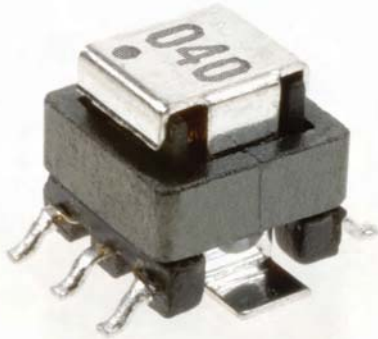
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FEATURES

- RoHS compliant
- Primary current rating 10A
- 20 to 200 turn variants
- Primary to secondary isolation 500Vrms
- 50kHz-500kHz frequency range
- Surface mount
- Industry-standard footprint
- UL94 V-0 package materials
- J-STD-020C reflow

PRODUCT OVERVIEW

The 5300 series of current sense transformers are designed to monitor AC currents. The transformers can be used for high frequency current sensing in applications such as switched-mode power supplies, motor control, and electronic lighting ballasts.

SELECTION GUIDE

Order Code	Turns Ratio	Min. Secondary Inductance mH	Max. DC Resistance		Isolation Voltage ¹ Vrms	Terminating Resistance to produce 1V _{OUT} /1A _{IN} Ω
			Primary (8-7) mΩ	Secondary (1-3) Ω		
53020C	1:20	0.08	7.0	0.55	500	20
53030C	1:30	0.18	7.0	0.85	500	30
53040C	1:40	0.32	7.0	1.10	500	40
53050C	1:50	0.50	7.0	1.75	500	50
53060C	1:60	0.72	7.0	2.20	500	60
53070C	1:70	0.98	7.0	4.50	500	70
53100C	1:100	2.00	7.0	5.60	500	100
53125C	1:125	3.00	7.0	7.50	500	125
53150C	1:150	4.50	7.0	17.50	500	150
53200C	1:200	8.00	7.0	34.00	500	200

ABSOLUTE MAXIMUM RATINGS

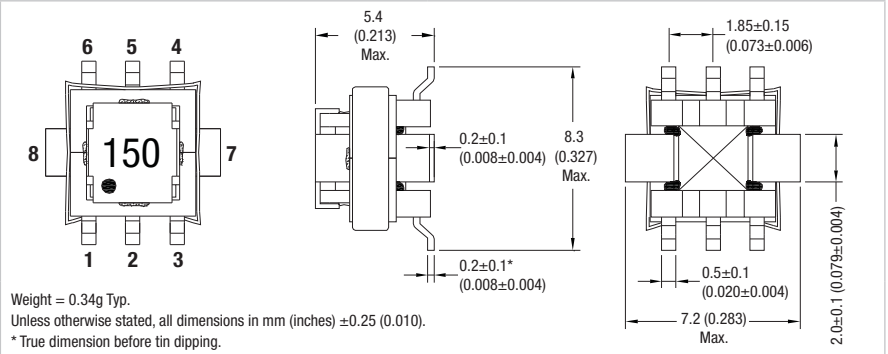
Operating free air temperature range	-40°C to 125°C
Storage temperature range	-40°C to 155°C

SOLDERING INFORMATION²

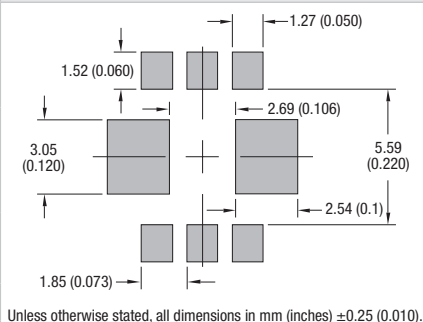
Peak reflow solder temperature	250°C
Pin finish	Tin
Moisture sensitivity level	1

PACKAGE SPECIFICATIONS

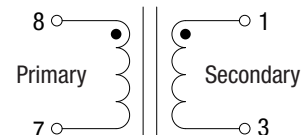
Mechanical Dimensions



Recommended Footprint Details



Schematic



Specifications typical at T_A = 25°C

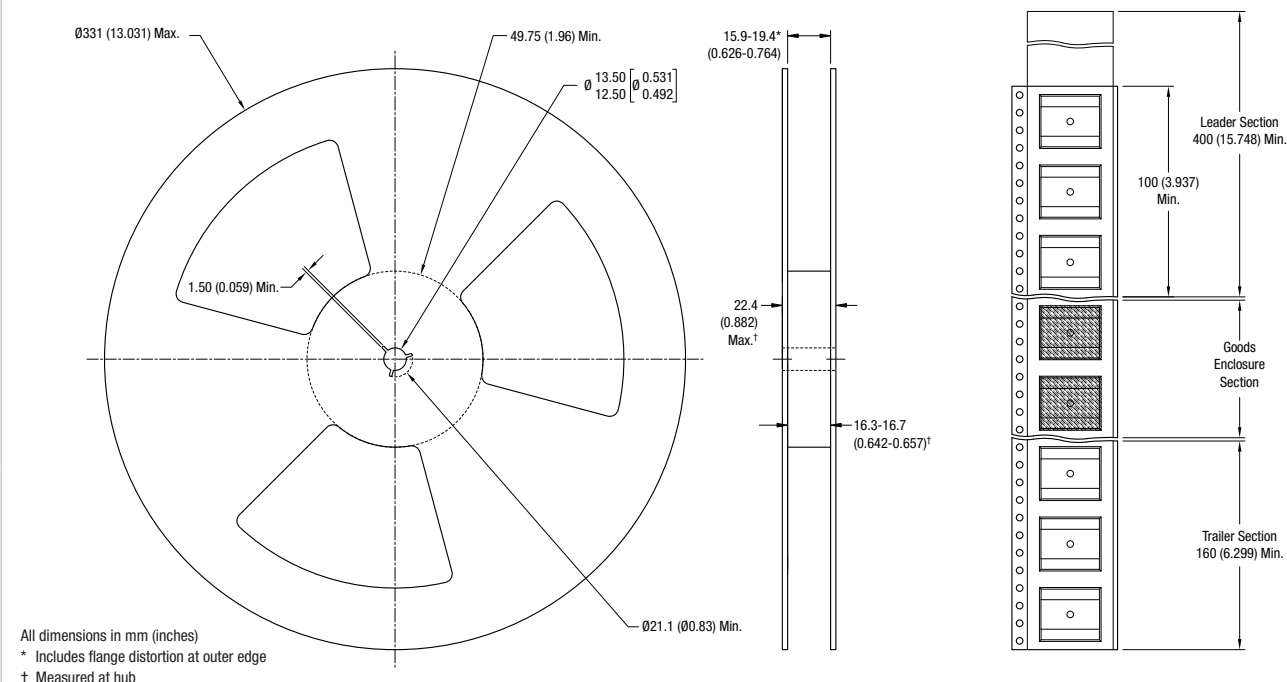
1 Flash tested for 1 second.

2 For further information, please visit www.murata-ps.com/rohs

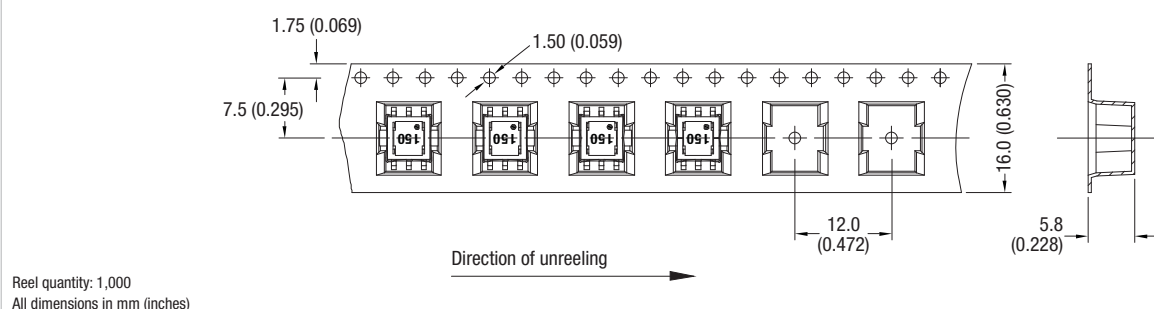


PACKAGE SPECIFICATIONS

Reel Dimensions



Tape Outline Dimensions



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FEATURES

- RoHS compliant
- Primary current rating 15A³
- 50, 100 and 200 turn variants
- Frequency range 50kHz to 500kHz
- Surface mount
- Compact package
- UL94 V-0 package materials
- J-STD-020C reflow

PRODUCT OVERVIEW

The 5400 series of current sense transformers are designed to monitor AC currents. The transformers can be used for high frequency current sensing in applications such as switched-mode power supplies, motor control, and electronic lighting ballasts.

SELECTION GUIDE

Order Code	Turns Ratio	Min. Secondary Inductance (0.1V @ 10kHz)	Max. DC Resistance		Isolation Voltage ¹ (Pri-Sec)	Terminating Resistance to produce 1V _{OUT} /1A _{IN}
		mH	Primary (1-6, 2-5) mΩ	Secondary (3-4) Ω		
54050C	1:1:50	3.8	7.0	0.5	1.2	50
54100C	1:1:100	14.8	7.0	3.2	1.2	100
54200C	1:1:200	60.0	7.0	6.6	1.2	200

ABSOLUTE MAXIMUM RATINGS

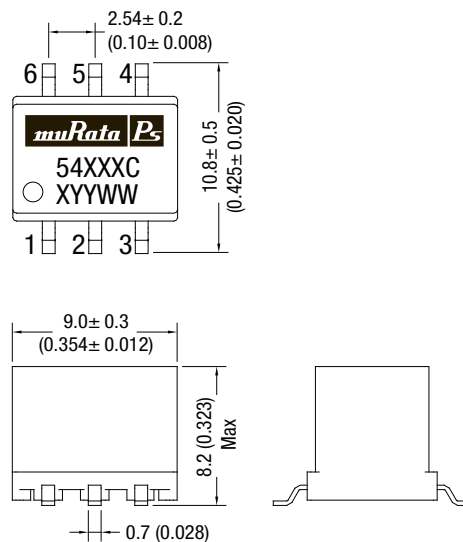
Operating free air temperature range	-40°C to 125°C
Storage temperature range	-40°C to 150°C

SOLDERING INFORMATION²

Peak reflow solder temperature	245°C
Pin finish	Tin
Moisture sensitivity level	1

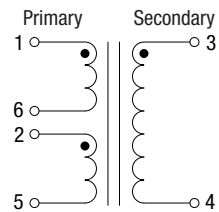
PACKAGE SPECIFICATIONS

Mechanical Dimensions

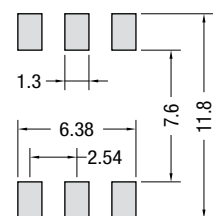


Unless otherwise stated, all dimensions in mm (inches) ±0.25 (0.010).
Package weight 1.0g Typ.

Schematic



Recommended Footprint Details



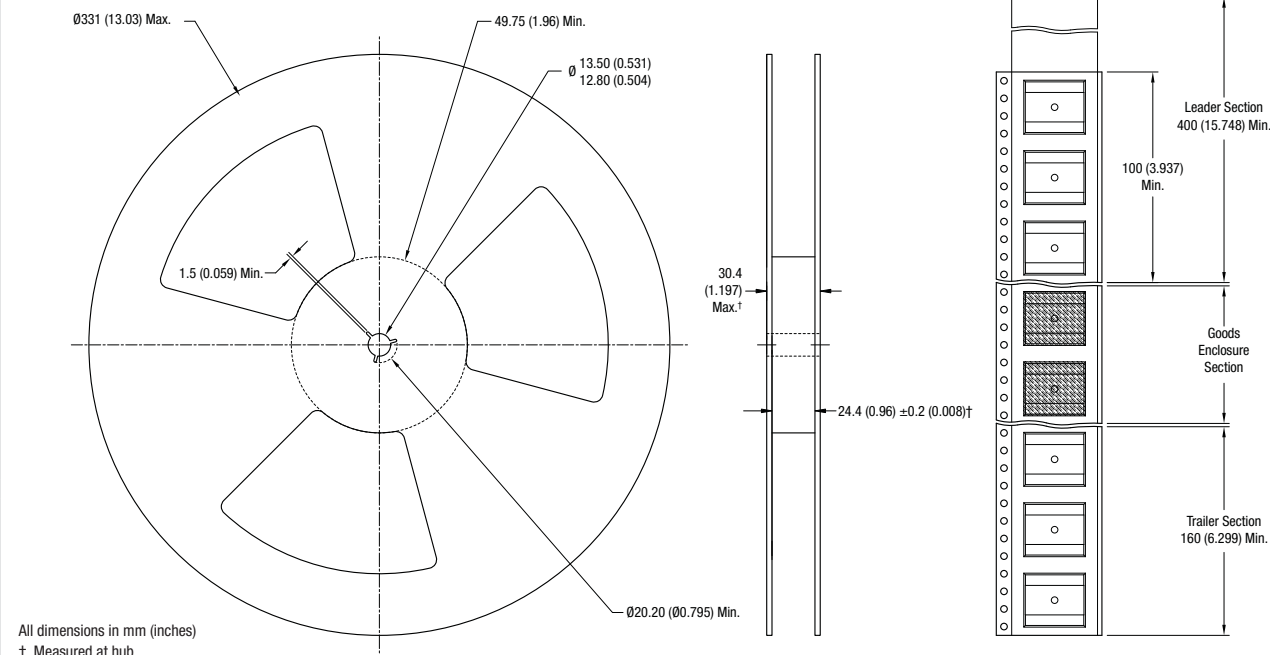
All specifications typical at T_A=25°C

1. Flash tested for 1 second.
2. For further information, please visit www.murata-ps.com/rohs
3. Primary windings connected in parallel.

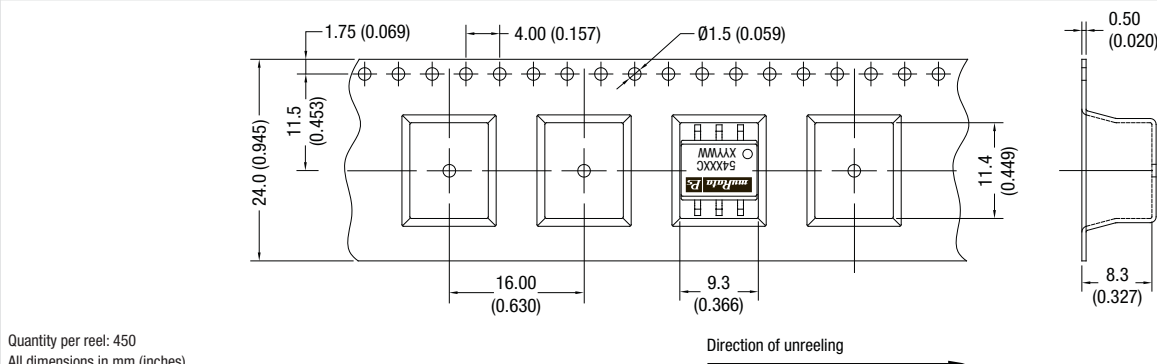


PACKAGE SPECIFICATIONS

Mechanical Dimensions



Tape Outline Dimensions



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Guangzhou, Tel: +86 208 221 8066, email: guangzhou@murata-ps.com



FEATURES

- RoHS compliant
- Primary current rating 15A⁴
- 50, 100, & 200 turn variants
- Primary to secondary isolation 1000Vrms
- 50kHz-500kHz frequency range
- Surface mount
- Industry-standard footprint
- UL94 V-0 package materials
- Tube or tape & reel packaging available
- J-STD-020C reflow

PRODUCT OVERVIEW

The 5500 series of current sense transformers are designed to monitor AC currents. The transformers can be used for high frequency current sensing in applications such as switched-mode power supplies, motor control, and electronic lighting ballasts.

SELECTION GUIDE

Order Code ¹	Turns Ratio	Min. Secondary Inductance mH	Max. DC Resistance		Isolation Voltage ² (Pri-Sec) Vrms	Terminating Resistance to produce 1V _{OUT} /1A _{IN} ±0.1% Ω
			Primary (1,3-2,4) mΩ	Secondary (5-6) mΩ		
55050C	1:1:50	3.8	2.3	350	1000	50
55100C	1:1:100	14.8	2.3	850	1000	100
55200C	1:1:200	60.0	2.3	3600	1000	200

ABSOLUTE MAXIMUM RATINGS

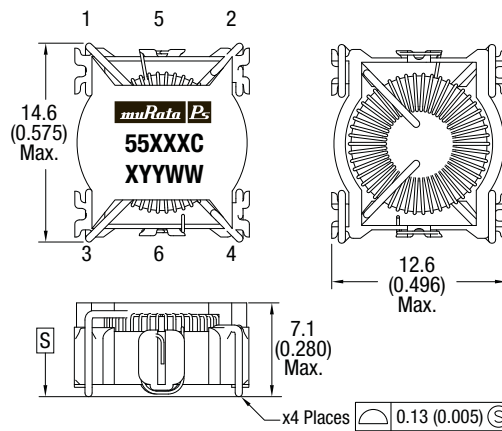
Operating free air temperature range	-40°C to 125°C
Storage temperature range	-40°C to 140°C

SOLDERING INFORMATION³

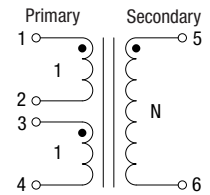
Peak reflow solder temperature	245°C
Pin finish	Reflowed tin

PACKAGE SPECIFICATIONS

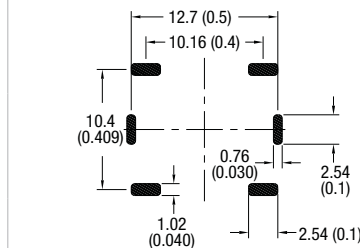
Mechanical Dimensions



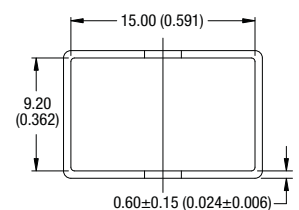
Schematic



Recommended Footprint Details



Tube Outline Dimensions



Tube length: 475±2.0 (18.701±0.079)
Tube quantity: 35 Tube material: Antistatic coated clear PVC

Unless otherwise stated, all dimensions in mm (inches) ±0.25 (0.010).

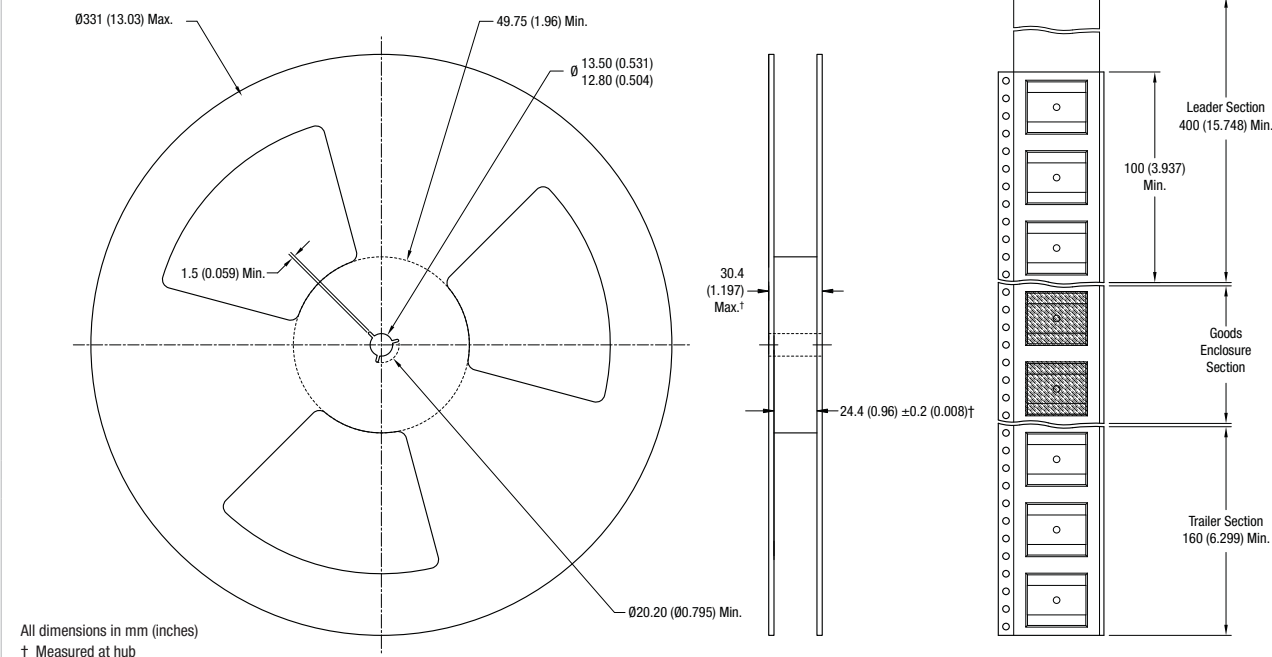
Specifications typical at T_A = 25°C

1. If components are required in tape and reel format suffix order code with -R, e.g. 55050C-R.
2. Flash tested for 1 second.
3. For further information, please visit www.murata-ps.com/rohs
4. Primary windings connected in parallel.

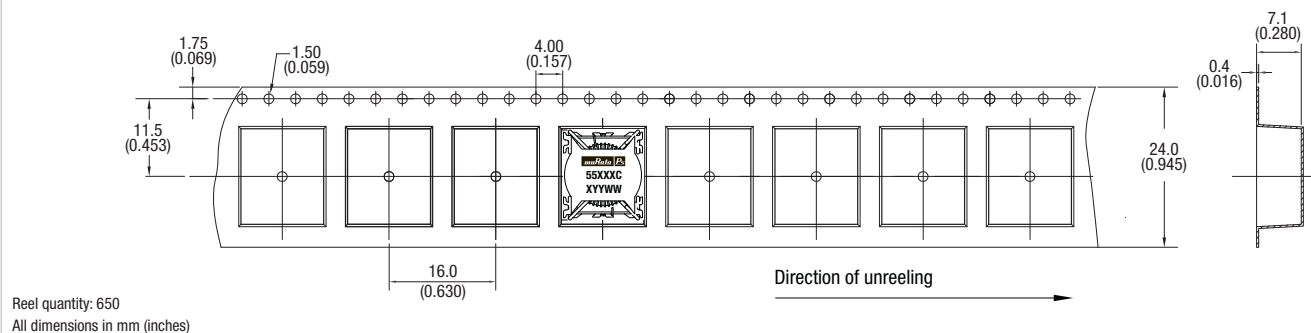


PACKAGE SPECIFICATIONS

Reel Dimensions



Tape Outline Dimensions



Murata Power Solutions, Inc.

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Tel: (508) 339-3000 (800) 233-2765 Fax: (508) 339-6356

www.murata-ps.com email: sales@murata-ps.com ISO 9001 REGISTERED

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FEATURES

- RoHS compliant
- 50, 100, 200 & 300 Turn variants
- Primary current rating 10A
- 20kHz-200kHz frequency range
- Centre tapped variants available

DESCRIPTION

The 5600 series of current sense transformers are designed to monitor AC currents. They can be used for high frequency current sensing, for example in switched-mode power supplies, motor control and electronic lighting ballasts.

5600 Series

10A Current Sensing Transformers

SELECTION GUIDE

Order Code	Number of Turns	Inductance Range	DC Resistance	Terminating Resistance to Produce 1V _{OUT} /1A _{IN}
	±1Turn	Pins 1&3	Pins 1&3, Ω	Ω
56050C	50	5.00 - 9.30mH @1V, 50kHz	0.133 - 0.199	50
56100C	100	20.0 - 37.0mH @1V, 50kHz	0.93 - 1.40	100
56200C	200	80.0 - 150mH @1V, 10kHz	1.87 - 2.81	200
56300C	300	180 - 335mH @1V, 10kHz	5.73 - 8.59	300
56T100C	100CT	20.0 - 37.0mH @1V, 50kHz	0.93 - 1.40	100
56T200C	200CT	80.0 - 150mH @1V, 10kHz	1.87 - 2.81	200
56T300C	300CT	180 - 335mH @1V, 10kHz	5.73 - 8.59	300

ABSOLUTE MAXIMUM RATINGS

Operating free air temperature range	-40°C to 85°C
Storage temperature range	-40°C to 125°C

SOLDERING INFORMATION¹

Peak wave solder temperature	300°C for 10 seconds
Pin finish	Tin

TECHNICAL NOTES

ISOLATION VOLTAGE

All 5600 current sense transformers are tested at 500Vdc for a minimum of 1 second during our standard test procedure.

In addition, as part of our qualification process carried out prior to product launch, the 5600 series demonstrated no isolation breakdown at 10kVdc or 6kVac with a bare conductor as the primary winding. Whilst this does not imply these parts are designed for environments where such high voltages may be present, it does demonstrate the level of isolation voltage these products are able to withstand. Full mains safety isolation can be achieved with appropriately insulated wire on the primary winding.

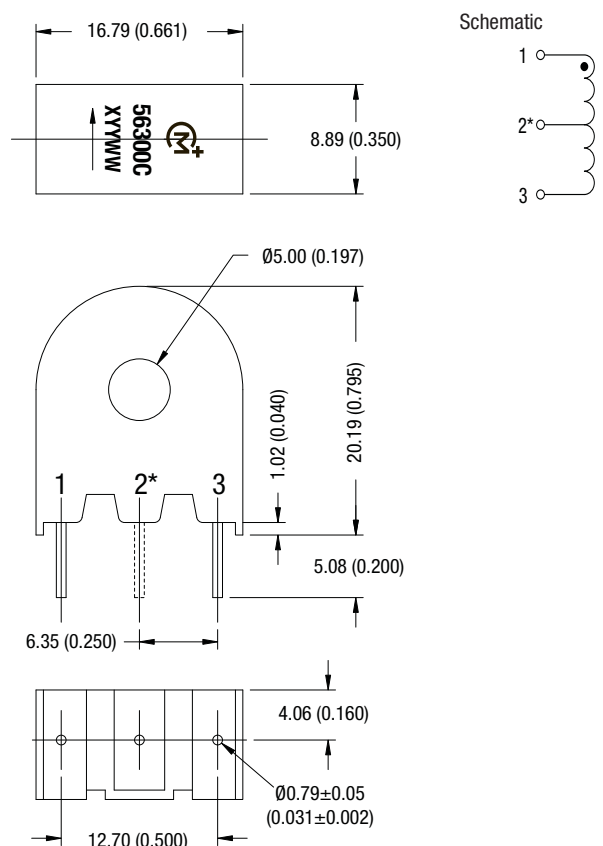
Specifications typical at T_A = 25°C

¹ For further information, please visit www.murata-ps.com/rohs



PACKAGE SPECIFICATIONS

MECHANICAL DIMENSIONS



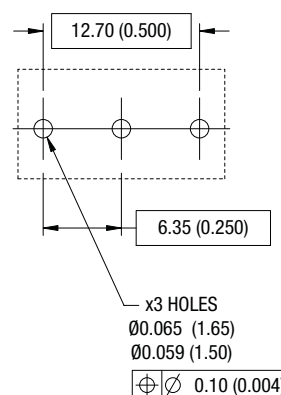
Package weight: 5.7Typ.

*Pin 2 is fitted on 56TXXX variants only.

Arrow designates winding direction referenced to inner core surface.

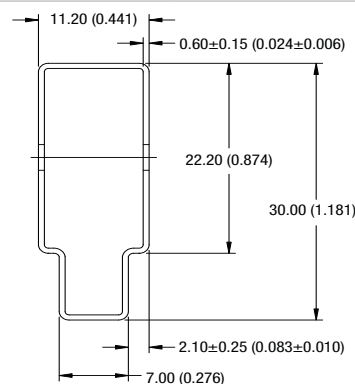
Unless otherwise stated, all dimensions in mm (inches) ± 0.25 (0.010).

RECOMMENDED FOOTPRINT DETAILS



Unless otherwise stated, all dimensions in mm (inches) ± 0.25 (0.010).

TUBE OUTLINE DIMENSIONS



Tube length: 475 \pm 2 [18.701 \pm 0.079]

Unless otherwise stated, all dimensions in mm (inches) ± 0.25 (0.010).

Tube quantity: 25

Tube material: Antistatic coated clear PVC

Other products from Murata Power Solutions

DC/DC Converters

■ Isolated DC/DC Converters

Single, dual, triple and quad output from 0.25 to 340 Watts

■ Point-of-Load Converters

From 0.75 to 5V outputs (including user-selectable versions) at current levels from 0.5 to 50A

■ Processor & Memory Support

Support for 64 & 32-bit processors and DDR1 & DDR2 memory

Digital Panel Meters

■ General Purpose Voltmeters

12-pin, dual-in-line package offering component-like “plug-in” convenience for pc-board mounting and a built-in bezel for easy panel mounting.

■ 2-Wire Meters

Power your measuring instrument with the signal you’re measuring! Measure the voltage at a standard USA-style wall outlet simply by “plugging in” an AC line monitor.

■ Process Monitors

4/20mA and 0-10V process control monitors

■ AC & DC Ammeters

Directly measure AC currents from 0-2A to 0-100A

AC/DC Power Supplies

■ Front End Modules for DPAs

AC to 12VDC or 48VDC ultra compact front end supplies for distributed power architectures with active power factor correction

■ Open Frame

High-efficiency 200-400W single, dual, and triple output solutions in 1U chassis

■ CompactPCI

High-efficiency 3U and 6U solutions from 150W to 500W including space-saving 4HP models

■ CATV / Telco

Ultra-reliable, ruggedized power supplies for harsh CATV and Telecommunications

■ High-Rel

Our Celab division has over 30 years’ experience designing and producing custom power supplies.

■ Custom Solutions

Custom product solutions from 7W to 5kW

Data Acquisition Products

■ Electronic Imaging

Resolution from 8 to 18-bits and sampling rates 20MSPS, low-cost commercial and High-Rel versions

■ A/D Converters

■ Sampling A/D Converters

Ideal for high-end applications such as medical or life-science imaging, analytical instrumentation, and military pulse and spread-spectrum applications

■ Digital-to-Analog Converters

Settling times to 20 nanoseconds, update rates to 100MHz

■ Sample/Hold Amplifiers

Accuracies from 0.01% to 0.0008% (12 to 16 bit equivalent resolution)

■ Single-Package Data Acquisition

Multi-channel with differential or single-ended options

■ Multiplexers

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² Life Support Device means any device, system or ancillary equipment intended for implant into the body or used in relation to supporting or sustaining life.

