

Component values:							
LMC555	RA: 18K39 (5%), 0.25W	RB: 22K (5%), 0.25W	Cosc 220pF (5%) polystyrene	Control pin: 100nF polyester		PDIP	F = 90.1 kHz
TL431AC	Rs: 2K2 (5%), 0.25W, 1K5 (10%?), 0.25W				Bypassing : 1uF polyester, 10nF ceramic (X7R)	Through -hole	Vref
LT1810					Bypassing : 1uF, 100nF polyester, 100nF ceramic	SOIC on ccb with SIL pins	EA and Comp
NSS4030 1MDR2G and NSS4030 0MDR2G	Base resistor: 330R (5%), 0.25W	Caps from collector to collector: 10nF polyester, 100pF ceramic (X7R)				SOIC	Q1 gate drive
ZVN4206 AV	Gate in resistor: 150R (1%), 0.25W	Gate grounding resistor: 470R (5%), 0.25W	Capacitor from Drain to Source: 10nF polyester			TO-92	Q1
SS15						DO- 214AC (SMA) on ccb with SIL pins	d1
WE- PDHV	680uH (20%)	2.25R	Fres: 2MHz	Ir: 0.55A	Isat: 0.61A	SMD on ccb with SIL pins	L1, L2
10uF polyester (10%), 100nF ceramic						Through -hole	Cin
100nF ceramic, 1uF ceramic X7R, 10uF ceramic X7R * 2						Through -hole	Cs

10uF ceramic X7R * 2, 1uF ceramic, X7R, 100nF ceramic						Through-hole	Cout
1K (5%), 0.25W * 2						Through-hole	EA voltage divider
1R (%?), 0.25W	10pF ceramic					Through-hole	EA divider comp.

## DC measurements:

	Stated output voltage	Actual output voltage	Measured frequency (DMM)	Oscilloscope waveform	Oscilloscope div	Vmax	Vmin	Vpk 2 pk	I (DMM)
SMPS PSU and Vellemann Oscilloscope	5V	5.15V	210kHz		4V/0.1mS	5.05V	4.77V	0.27V	56mA
LMC555			90.1kHz at start up	square wave	2V/0.1mS	4.97V	1.63V	3.33V	-11.3mA
Comp fOSC in			90.1kHz	square wave	2V/0.1mS	4.97V	1.63V	3.33V	-11.3mA
BJT gate drive			90.1kHz	square wave, slow fall, slight slope	2V/0.1mS	4.90V	0.0V/0.0V	4.90V	9.2uA
Q1 gate (before Rgate)			90.1kHz	square wave, slow fall, slight slope	2V/0.1mS	4.36V	-0.06V	4.36V	550uA
Q1 gate (after Rgate)			90.1kHz	square wave, slow fall, slight slope	2V/0.1mS	4.36V	-0.06V	4.36V	-17mA
Q1 drain			90.1kHz	sloping square wave, like v.slow rise and slow fall	4V/0.1mS	9.14V	0.13V	9.0V	11mA
d1 (anode)			90.1kHz	sloping square wave, like slow rise and slow fall	4V/0.1mS	4.09V	-5.05V	9.14V	5.9mA
d1 (cathode)			360kHz	None	4V/0.1mS	3.95V	3.68V	0.13V	5.9mA

<b>L1</b>			90.1kHz	sloping square wave, like slower rise and fall	4V/0.1mS	9.14V	0.13V	9.0V	10.9mA
<b>L2</b>			90.1kHz	sloping square wave, like slower rise and fall	4V/0.1mS	4.09V	-5.05V	9.14V	
<b>Vin</b>			260kHz or 146kHz	None	4V/0.1mS	5.05V	4.91V	0.13V	10mA
<b>Vout</b>		Load: LED + 540R	323kHz or 90kHz	Slightly ripply	4V/0.1mS	3.82V	3.68V	0.13V	5mA
<b>V EA divider</b>			2 – 12Hz	None	4V/0.1mS	1.91V	1.77V	0.13V	
<b>Vref</b>			90.5kHz	None	4V/0.1mS	2.55V	2.32V	0.27V	
<b>EA Vout</b>			114kHz	None	4V/0.1mS	4.91V	4.5V	0.40V	
<b>Comp Vout</b>			90.1kHz	square wave, slow fall, slight slope	4V/0.1mS	4.91V	0.00V	4.91V	