

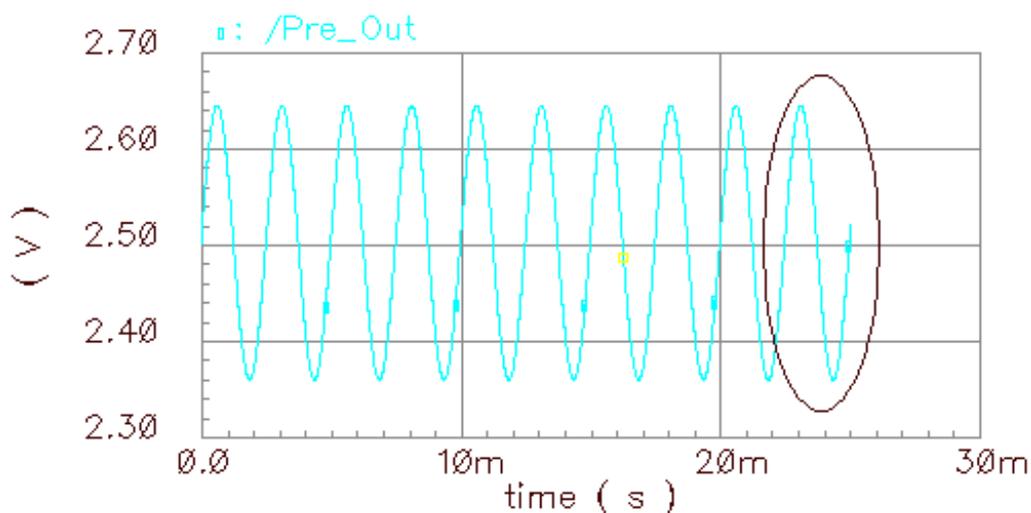
This documentation is about the method of obtaining THD using Cadence waveform calculator.

It uses the discrete Fourier transform for computation and takes the same arguments.

OK	Cancel	Defaults	Apply	Help
From	<input type="text"/>	To	<input type="text"/>	Number of Samples <input type="text" value="64"/>
	Fundamental (Hz)	<input type="text"/>	Enter 0 to choose the largest signal	

This is the default window for THD calculation.

Example:



Example waveform that will be analyzed. The fundamental frequency of this waveform is equal to 400 Hz.

Steps:

1. Click the output that will be analyzed (Vt)
2. Click Special functions button then click thd.
3. Specify the range and the number of samples. The waveform that will be analyzed is the 10<sup>th</sup> cycle of the output waveform.

Note: Set the simulation time step to be 1/100<sup>th</sup> of a cycle, and simulate ten cycles. Measure the tenth cycle by specifying the beginning of the cycle as the "From" time and the end as the "To" time.

OK	Cancel	Defaults	Apply	Help
From	<input type="text" value="22.5m"/>	To	<input type="text" value="25m"/>	Number of Samples <input type="text" value="64"/>
	Fundamental (Hz)	<input type="text" value="400"/>	Enter 0 to choose the largest signal	

This will be appearance of the thd window.

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```
thd(VT("/Pre_Out"), 22.5m, 25m, 64, 400)[]
```

Evaluate Buffer  Display Stack   standard  RF

browser	vt	it	lastx	x<>y	dwn	up	sto	rcl	Special Functions <input type="checkbox"/>			
wave	vf	if	clear		clst	app	sin	asin	mag	ln	exp	abs
family	vs	is	enter		undo	eex	cos	acos	phase	log10	10**x	int
erplot	vdc	idc	-	7	8	9	tan	atan	real	dB10	y**x	1/x
plot	op	opt	+	4	5	6	sinh	asinh	imag	dB20	x**2	sqrt
printvs	vn	var	*	1	2	3	cosh	acosh	f1	f2	f3	f4
print	mp		/	0	.	+/-	tanh	atanh				

Finally, this will also be the appearance of the waveform calculator.  
 4. Click print in the waveform calculator.

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```
thd(VT("/Pre_Out") 0.0225 0.025 64 400) = 9.108m
```

This will now be the window that contains the thd data reading.