

VI TELEFILTER**Filter specification****TFS 270 C****1/4****Measurement condition**

Ambient temperature:	23	°C
Input power level:	0	dBm
Terminating impedance input:	440 Ω -1,40 pF	
Terminating impedance output :	440 Ω -1,40 pF	
ext. coil pin 4:	120	nH

Construction

see page 2

Characteristics

Remark:

Reference level for the relative attenuation a_{rel} of the TFS 270C is the minimum of the pass band attenuation a_{min} . The minimum of the pass band attenuation a_{min} is defined as the insertion loss a_e . The nominal frequency f_N is fixed on 270,000 MHz without tolerance. The values of the pass band ripple and the relative attenuation a_{rel} are guaranteed in the whole operating temperature range. The frequency shift of the filter in the operating temperature range is included in the measurement tolerance scheme.

Preliminary Data		typ. value	tolerance / limit
Insertion loss (Reference level)	$a_e = a_{min}$	3 dB	max 5 dB
Nominal frequency	f_N	-	270,000 MHz
Pass band ripple $f_N - 70$ kHz ... $f_N + 70$ kHz $f_N - 90$ kHz ... $f_N + 90$ kHz		0,5 1,0	max 2 dB max 3 dB
Relative attenuation	a_{rel}		
270,0 MHz ± 400 kHz ... 270,0 MHz ± 600 kHz		30 dB	min 20 dB
270,0 MHz ± 600 kHz ... 270,0 MHz ± 30 MHz		50 dB	min 40 dB
Group delay distortion	GDD		
270,0 MHz ± 70 kHz		0,5 μs	max 2 μs
Operating temperature range		- 20 °C ... + 85 °C	
Storage temperature range		- 30 °C ... + 85 °C	
Temperature coefficient of frequency	TC_f	- 0,036 ppm/K ²	-
Frequency inversion temperature		+ 25 °C	-

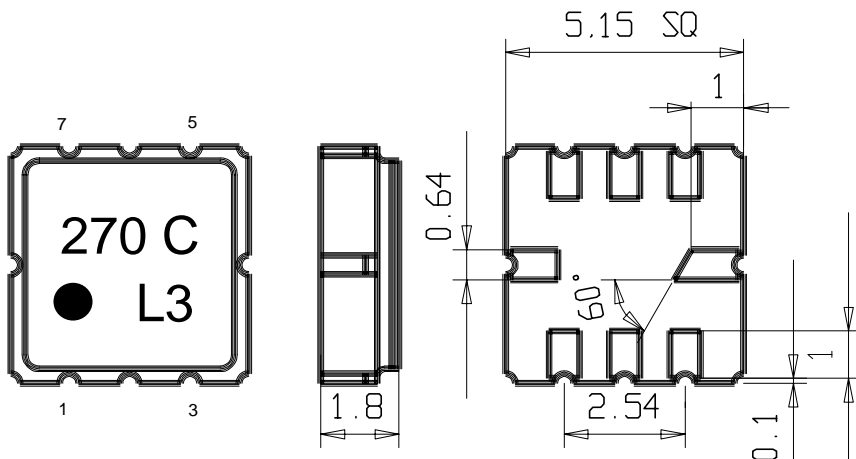
Generated:**Checked / approved:****Construction and pin configuration**

(All dimensions in mm)

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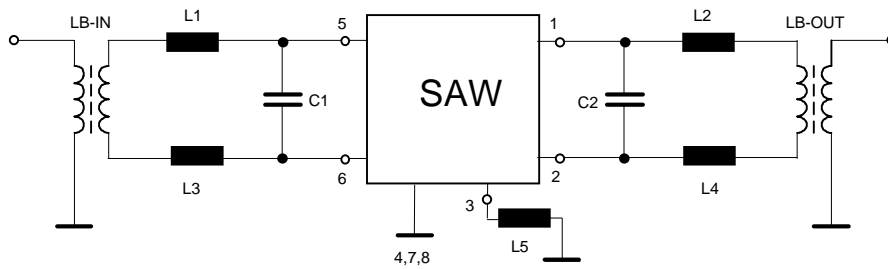
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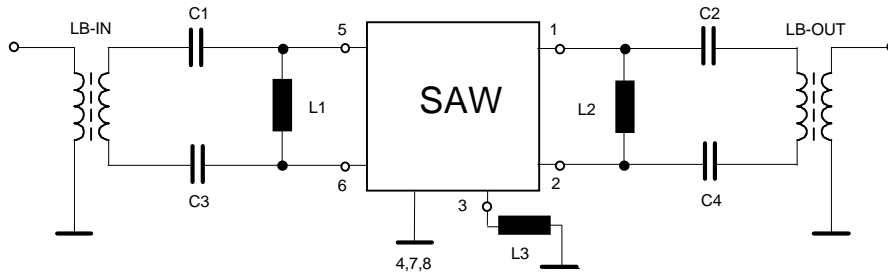


Pin 1	Sym. Output	Pin 5	Sym. Input
Pin 2	Sym. Output	Pin 6	Sym. Input
Pin 3	External Coil	Pin 7	Ground
Pin 4	Package Ground	Pin 8	Package ground

50 Ohm Test circuit 1



50 Ohm Test circuit 2



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Air reflow temperature conditions

1st and 2nd air reflow profile

Name:	pre-heating periods	main-heating periods	peak temperature
Temperature:	150 °C - 170 °C	over 200 °C	255 °C ± 5 °C
Time:	60 sec. - 90 sec.	20 sec. - 25 sec.	

Chip-mount air reflow profile

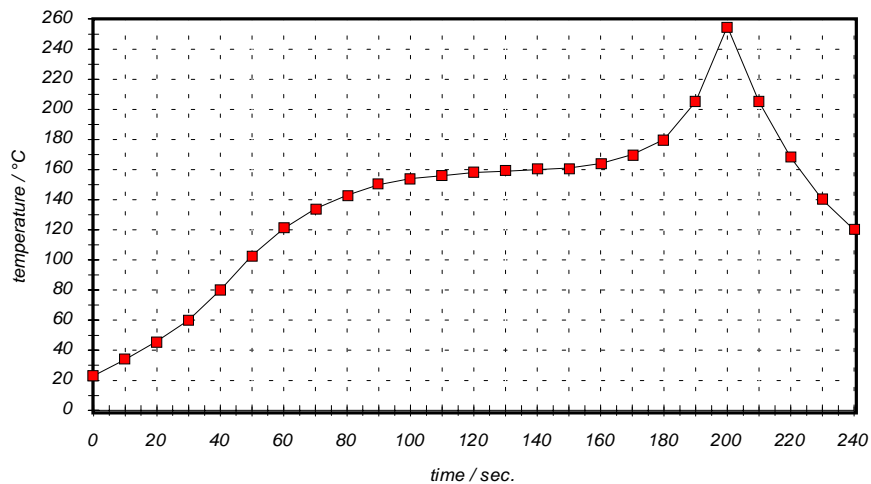


Table for temperature vs. time during the air reflow process

Tolerance of temperatures: ± 5 °C

time / sec.	temperature / °C	time / sec.	temperature / °C
0	23	140	160
10	34	150	161
20	46	160	164
30	60	170	170
40	80	180	180
50	103	190	205
60	121	195	230
70	134	200	255
80	143	205	230
90	150	210	205
100	154	215	180
110	156	220	165
120	158	230	140
130	159	240	120