

VI TELEFILTER**Filter Specification****TFS 80 D - 1/3****1. Measurement condition :**

Ambient temperature T_A : 23 °C
 Input power level: 0 dBm.
 Terminating impedances in f_C :
 for input: 50 Ω | 0 pF
 for output: 50 Ω | 0 pF,

2. Characteristics

Remark:

Reference level for the relative attenuation a_{rel} of the **TFS 80 D** 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 reference frequency f_C is the arithmetic mean value of the upper and lower frequencies at the 3 dB filter attenuation level relative to the insertion loss a_e .

Data	typ. value				tolerance / limit	
Insertion loss (Reference level)	a _e		15	dB	max. 16	dB
Centre frequency	f _C at ambient temperature (f _{CAT})		80,07	MHz	80,07 ± 0,02	MHz
Pass band (-3 dB)					f _C - 90 kHz ... f _C + 90 kHz	
Bandwidth at ambient temperature:						
3 dB - band width			184	kHz	min. 180	kHz
Relative attenuation a _{rel}						
f _C		f _C ± 90 kHz		-	-	max. 3 dB
f _C + 200 kHz		f _C + 400 kHz		-	-	min. 19 dB
f _C - 400 kHz		f _C - 200 kHz		-	-	min. 14 dB
f _C ± 400 kHz		f _C ± 500 kHz		40	dB	min. 35 dB
f _C ± 0,5 MHz		f _C ± 1,0 MHz		52...65	dB	min. 50 dB
f _C ± 1,0 MHz		f _C ± 35 MHz		62...70	dB	min. 60 dB
Average group delay in pass band:			4,12	µs	-	
Group delay ripple:						
f _C – 100 kHzf _C			300	ns	max. 600	ns
f _C ... f _C + 100 kHz			600	ns	max. 650	ns
Deviation from linear phase (p-p)		f _C ... f _C ± 100 kHz		5,2 °		
Crosstalk attenuation compared to main signal			55...60	dB		
Triple transit attenuation compared to main signal			33...34	dB		
Frequency inversion temperature (T _o)			20	°C		
Temperature coefficient of frequency (T _{Cf})			-0,075	ppm/K ²	-	
Frequency deviation of f _C over temperature T : *)			Δf _C (Hz) = T _{Cf} (ppm/K) x (T - T _o) ² x f _{To} (MHz)			
Operating temperature range			- 25 °C ... + 75 °C			
Storage temperature range			- 30 °C ... + 85 °C			
Input power level		-		max. + 10 dBm		

*) f_{T_o} is reference frequency f_C at frequency inversion temperature (T_o)

Generated:

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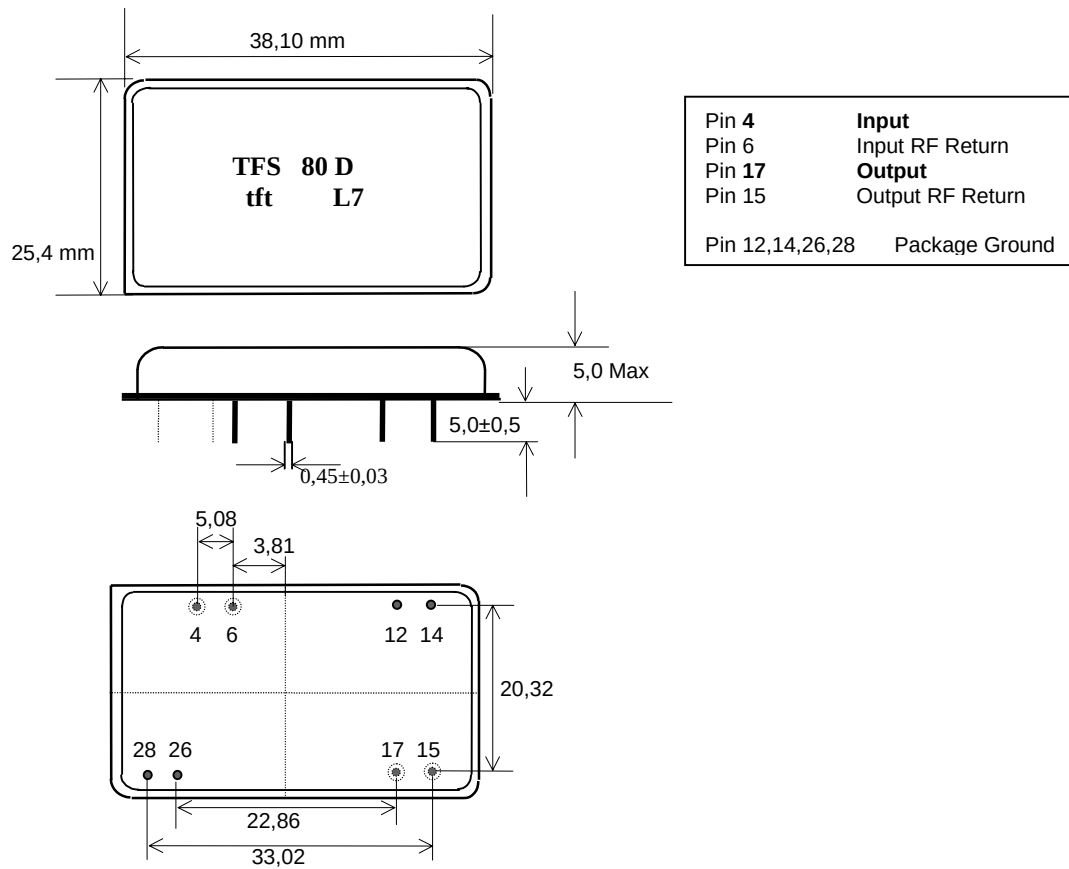
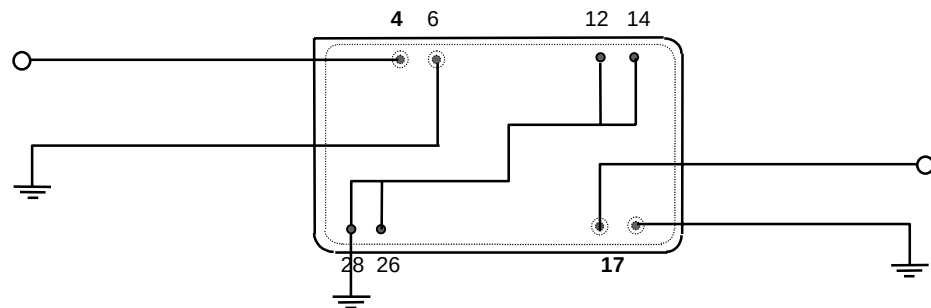
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3. Package:**4. 50 Ω matching network:**

5. 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.	

Air reflow profile

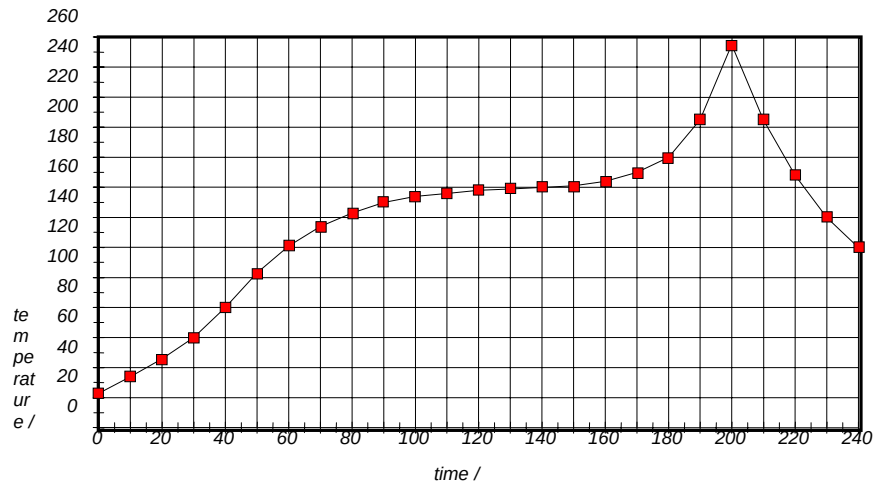


Table for temperature vs. time during the air reflow process

Tolerance of temperatures: ± 5 °C

time / sec.	temperature / °C	time / sec.	temperature / °C
0	23	80	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	80
130	159	240	120