1. Measurement condition

Ambient temperature T_A: 23 °C
Input power level: 0 dBm.

Terminating impedances in f_C: for input: 77,40 Ω | - 3,218 pF.
for output: 77,40 Ω | - 3,218 pF.

2. Characteristics

Remark:
Reference level for the relative attenuation a_{rel} of the **TFS 100B** 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. The temperature coefficient of frequency Tc_f is valid both for the reference frequency f_C and the frequency response of the filter in the operating temperature range**. The frequency shift of the filter band width in the operating temperature range (OTR) is included in the production tolerance scheme.**

Data		**typ. value**		**tolerance / limit**	
Insertion loss (Reference level) a_e		23,5	dB	max. 25	dB
Centre frequency f_C at ambient temperature (f_{CAT})		99,90	MHz	99,90 ±0,10	MHz
Pass band (PB) at ambient temperature :				f_C - 4,8 MHz ... f_C + 4,8 MHz	
Amplitude ripple (p-p): f_C ... f_C ± 4,9 MHz		0,8...1,1	dB	max. 1,30	dB
Bandwidth :		**at T_A**		**in OTR**	
1,3 dB - band width		9,92	MHz	min. 9,80	MHz
3 dB - band width		10,11	MHz	min. 10,00	MHz
33 dB - band width		10,73	MHz	max. 10,80	MHz
40 dB - band width		10,77	MHz	max. 11,20	MHz
45 dB - band width		11,03	MHz	max. 12,00	MHz
Relative attenuation	**a_{rel} :**				
f_C	f_C ± 4,9 MHz		-	max.1,3	dB
f_C ± 4,9 MHz	f_C ± 5,0 MHz		-	max. 3	dB
f_C ± 5,4 MHz	f_C ± 5,6 MHz		-	min. 33	dB
f_C ± 5,6 MHz	f_C ± 6,0 MHz	46...50	-	min. 43	dB
f_C ± 6,0 MHz	f_C ± 19,1 MHz	50...60	dB	min. 48	dB
f_C ± 19,1 MHz	f_C ± 95 MHz	55...70	dB	min. 50	dB
Group delay (mean value in PB):		3,29	µs	max. 3,4	µs
Group delay ripple in PB (p-p):		130...150	ns	max. 170	ns
Deviation from linear phase in PB:		8,2 ° (p-p)...1,5 °(r.m.s.)			
Triple transit attenuation compared to main signal:		50	dB		
Crosstalk:		70...75	dB		
Temperature coefficient of frequency (Tc_f)		-88		-94	ppm/K
Frequency deviation of f_C over temperature		$\Delta f_C(Hz) = Tc_f(ppm/K) \times (T - T_A) \times f_{CTA}$ (MHz)			
Operating temperature range (OTR) :		- 25 °C ... + 80 °C			
Storage temperature range (STR) :		- 40 °C ... + 85 °C			

Generated: **Wadim P. Dunzow**

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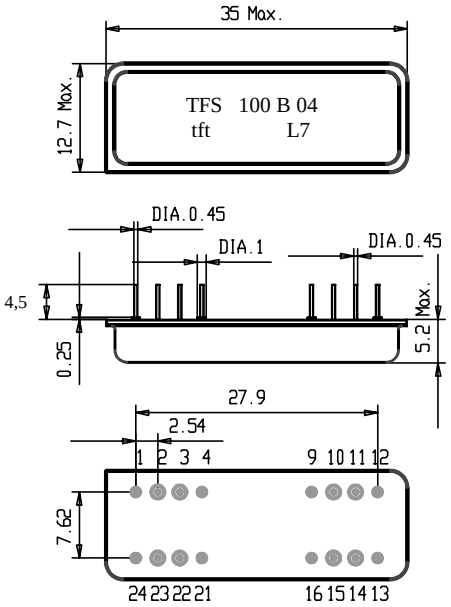
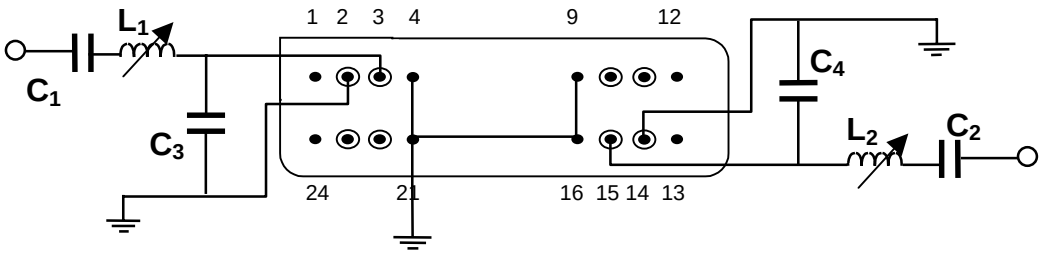
3 Construction and pin connection

(All dimensions in mm)



1 Package Ground	13 Package Ground
2 Input RF Return	14 Output RF Return
3 Input	15 Output
4 Package Ground	16 Package Ground
9 Package Ground	21 Package Ground
10 Ground	22 Not Connected Ground
11 Not Connected Ground	23 Not Connected Ground
12 Package Ground	24 Package Ground

4. 50 Ω - Matching network :



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5. Soldering temperature conditions :

1st and 2nd soldering temperature 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.	

Soldering temperature profile

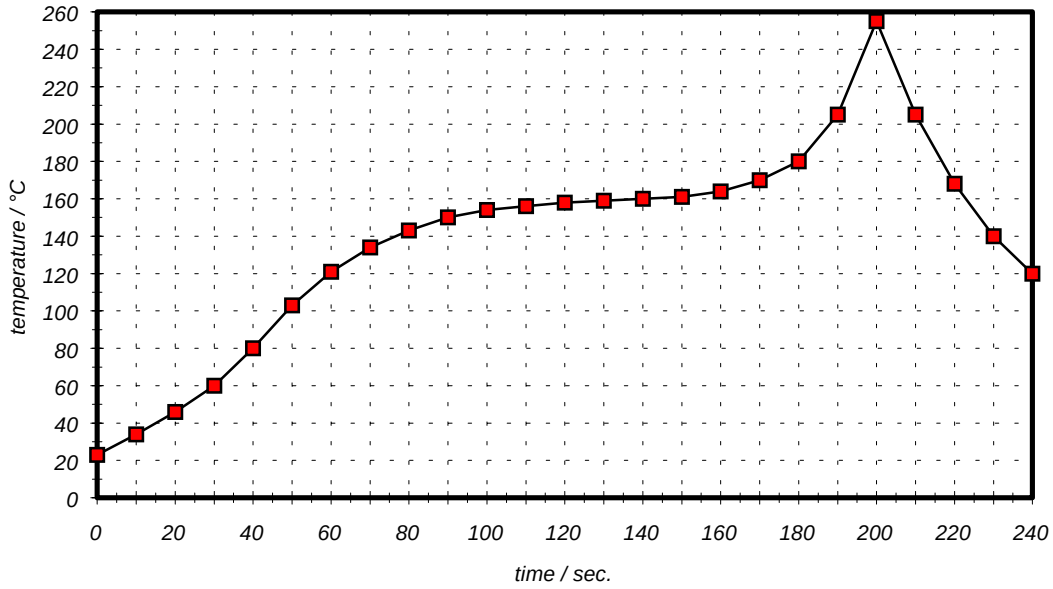

Table for temperature vs. time during the soldering process

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

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