

VI TELEFILTER**Development specification****TFS1150 A****1/5****Measurement condition**

Ambient temperature:	23	°C
Input power level:	0	dBm
Terminating impedance:		
Input:	100	Ω
Output:	100	Ω

Characteristics

Remark:

The Reference level for the relative attenuation a_{rel} of the TFS1150A is the minimum attenuation in the pass band. The minimum attenuation in the pass band is defined as the insertion loss a_e . The nominal frequency f_N is fixed at 1150 MHz without tolerance or limit. The values of 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 production tolerance scheme.

D a t a			typ. value	tolerance / limit	
Insertion loss	a_e		-	max.	2,7 dB
Nominal frequency	f_N		-	1150	MHz
Passband			-	$f_N \pm$	5 MHz
Relative attenuation	a_{rel}				
$f_N - 5$ MHz ... $f_N + 5$ MHz			-	max.	1 dB
$f_N - 8$ MHz ... $f_N + 8$ MHz			-	max.	3 dB
Absolute attenuation	a_{abs}				
0 MHz ... 1100 MHz			-	min.	50 dB
1100 MHz ... 1120 MHz			-	min.	35 dB
1120 MHz ... 1130 MHz			-	min.	15 dB
1170 MHz ... 1180 MHz (0...+ 80°C)			-	min.	15 dB
1180 MHz ... 1190 MHz			-	min.	35 dB
1190 MHz ... 1900 MHz			-	min.	50 dB
Group delay	at f_N		-	100	ns
Group delay ripple within PB			-	35	ns
Operating temperature range	OTR		-	- 40 °C ... + 85 °C	
Storage temperature range			-	- 40 °C ... + 85 °C	
Temperature coefficient of frequency	TC_f **	T.B.D	ppm/K	-	

**) $\Delta f_C(\text{Hz}) = TC_f(\text{ppm/K}) \times (T - T_o) \times f_{CAT}(\text{MHz})$.

Generated:

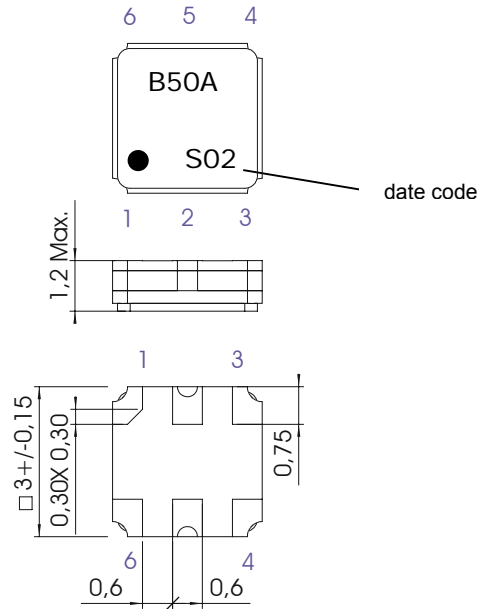
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Construction and pin configuration

(All dimensions in mm)



Date code: Year+week

S	2004
T	2005
U	2006
...	

Pin 1	Input
Pin 2	Input
Pin 3	Ground
Pin 4	Output
Pin 5	Output
Pin 6	Ground

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Stability characteristics

After the following tests the filter shall meet the whole specification:

1. Shock: 500g, 18 ms, half sine wave, 3 shocks each plane;
DIN IEC 68 T2 - 27
2. Vibration: 10 Hz to 500 Hz, 0,35 mm or 5g respectively, 1 octave per min, 10 cycles per plan, 3 plans;
DIN IEC 68 T2 - 6
3. Change of temperature: -55 °C to 125°C / 30 min. each / 10 cycles
DIN IEC 68 part 2 – 14 Test N
4. Resistance to solder heat (reflow): reflow possible: twice max.;
for temperature conditions, please refer to the attached "Air reflow temperature conditions" on page 4;

Packing

Tape & Reel: **T.B.D**

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

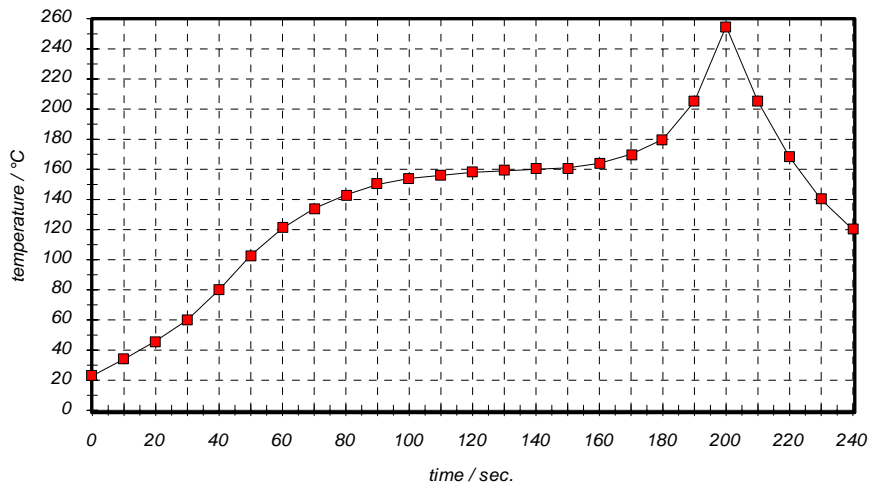


Table for temperature vs. time during the air reflow process

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

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History

Version	Reason of Changes	Name	Date
1.0	- Generation of development specification	Konietzko	19.09.2003
1.1	- Package drawing corrected. - Marking changed.	Wall	24.09.2003
1.2	- Change of $f_N \pm 8$ MHz specification, change of temperature range (1170 MHz – 1180 MHz)	Roizengaft	16.12.2003
1.3	- Change of package	Roizengaft	06.01.2004
1.4	- Change of passband from ± 8 to ± 5 MHz	Roizengaft	06.01.2004