

VI TELEFILTER**Filter Specification****TFS 37****1/5****Measurement condition**

Ambient temperature: 25 °C
 Input power level: 0 dBm
 Terminating impedance: source: 50 Ω
 load: 2 kΩ || 3 pF

Characteristics

Remark:

Reference level for the relative attenuation a_{rel} of the TFS 37 is the insertion loss. The insertion loss a_e is defined as the insertion loss at the nominal frequency f_N .

D a t a		typ. value		limit		
Insertion Loss (Reference Level)	$a_e = a_{min}$	12,7	dB	13,5	± 1,5	dB
Nominal Frequency	f_N	-		37,4		MHz
Group delay ripple		50	ns	-		
Relative Attenuation	a_{rel}					
picture carrier	@ 38,90 MHz	6,4	dB	6	± 1	dB
	@ 33,90 MHz	7,0	dB	7,5	± 1,2	dB
color carrier	@ 34,47 MHz	1,3	dB	-		
sound carrier	@ 33,40 MHz	27	dB	min.	20	dB
	@ 32,90 MHz	54	dB	-		
	@ 32,40 MHz	63	dB	-		
adjacent picture carrier	@ 30,90 MHz	52	dB	min.	48	dB
	@ 31,90 MHz	52	dB	min.	48	dB
	@ 40,15 MHz	50	dB	min.	36	dB
adjacent sound carrier	@ 40,40 MHz	50	dB	min.	48	dB
	@ 41,40 MHz	48	dB	min.	46	dB
	@ 40,90 MHz	50	dB	min.	46	dB
lower side lobe	25,00 ... 31,90 MHz	55	dB	min.	45	dB
upper side lobe	41,90 ... 45,00 MHz	45	dB	min.	38	dB
Reflected wave signal suppression		49	dB	min.	42	dB
1,2 µs...6,0 µs after main pulse (test pulse 250 ns, carrier frequency 37,40 MHz)						
Feedthrough signal suppression		56	dB	min.	50	dB
1,2 µs...1,1 µs before main pulse (test pulse 250 ns, carrier frequency 37,40 MHz)						
Operating Temperature Range		-		-25 ...	65	° C
Storage Temperature Range		-		-40 ...	85	° C
Temperature Coefficient of frequency TC_f^*		- 0,072	ppm / K	-		

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

generated: _____

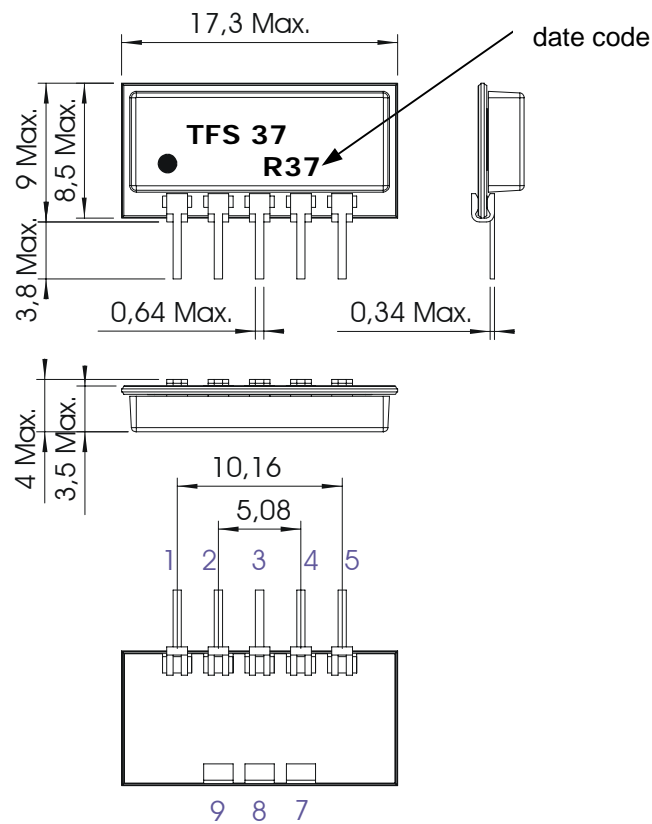
checked / approved: _____

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Construction and pin connection

(all dimensions in mm)



1	input
2	input - ground
3	chip carrier - ground
4	output
5	output
6	ground
7	ground
8	ground

date code:	year + week
N	2001
P	2002
R	2003
...	

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: DIN IEC 286 – 3, with exception of value for N and minimum bending radius;
tape type II, embossed carrier tape with top cover tape on the upper side;
- | | |
|---|------------|
| max. pieces of filters per reel: | 1700 |
| reel of empty components at start: | min 300 mm |
| reel of empty components at start including leader: | min 500 mm |
| trailer | min 300 mm |

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

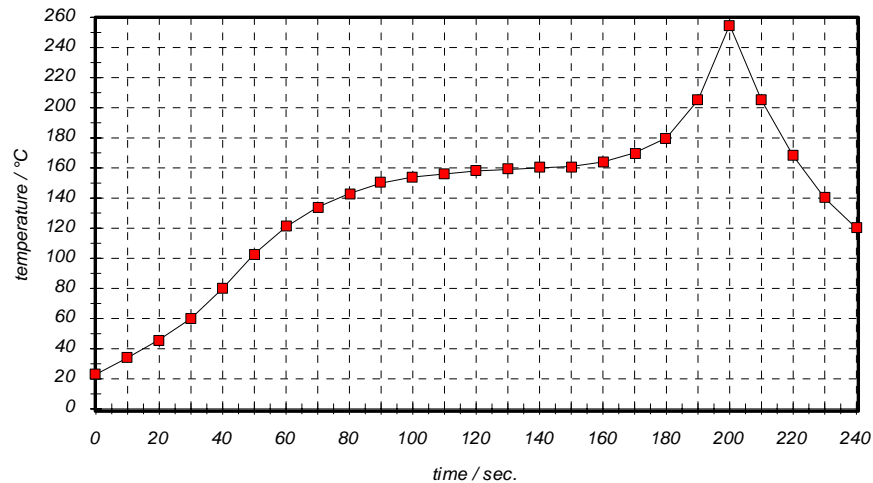


Table for temperature vs. Time during the air reflow process

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

VI TELEFILTER**Filter Specification****TFS 37****5/5****History**

Version	Reason of Changes	Name	Date
1.0	generate specification	Pfeiffer	25.06.2002
1.1	change package	Pfeiffer	29.11.2002
1.2	typical values added	Pfeiffer	10.09.2003