

VI TELEFILTER**Filter Specification****TFS 468 B - 1/4****1. Measurement condition**

Ambient temperature T_A : 23 °C
 Input power level: 0 dBm.
 Terminating impedances at f_c :
 for input: 150 Ω | 0 pF
 for output: 150 Ω | 0 pF

2. Characteristics

Remark:

Reference level for the relative attenuation a_{rel} of the **TFS 468 B** 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 centre frequency f_o is the arithmetic mean value of the upper and lower frequencies at the **3dB** filter attenuation level relative to the insertion loss a_e . The nominal frequency f_N is fixed on **468,00 MHz** without tolerance. The given values for the relative attenuation a_{rel} and for the group delay ripple have to be reached at the frequencies given below also if the centre frequency f_o is shifted due to the temperature coefficient of frequency TC_f in the operating temperature range and due to a production tolerance for the centre frequency f_o .

Data		typ. value	tolerance/ limit
Insertion loss	(Reference level) $a_e = a_{min}$	3,5 dB	max.4,5 dB
Nominal frequency	f_N		468,0 MHz
Centre frequency	f_o	468,0 MHz	
3 dB - bandwidth	BW	9,5 MHz	min. 4,0 MHz
Relative attenuation	a_{rel}		
	$f_N - 42,8$ MHz	65 dB	min. 55 dB
Temperature coefficient of the frequency	TC_f	- 32 ppm/K	
Operating temperature range		- 10 °C ... + 55 °C	
Frequency deviation of f_c over temperature		$\Delta f_c(\text{Hz}) = TC_f(\text{ppm/K}) \times (T - T_A) \times f_{CAT}(\text{MHz})$	

Generated: _____ Dunzow W.P.

Checked/Approved: _____ Dr. Bert Wall

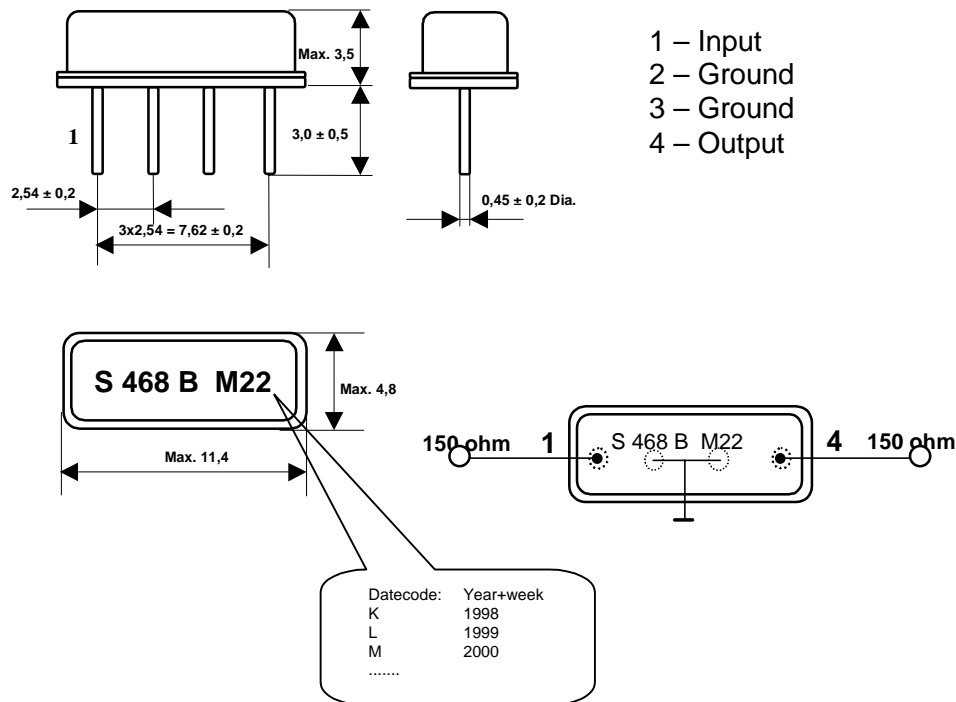
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Construction and Pin Configuration

(All Dimensions in mm)

**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, 0,035 mm or 5g respectively, 1 octave per min, 10 cycles per plan, 3 plans;
DIN IEC 68 T2 - 6
3. Damp heat: 90 % to 95 % rel. humidity, 55 °C, 10 days;
(steady state) DIN IEC 68 - 2 - 30
4. Resistance to solder heat (reflow): max. 2 times reflow process;
for temperature conditions refer to the attached "Air reflow temperature conditions" on sheet 4;

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VI TELEFILTER**Filter Specification****TFS 468 B - 3/4****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.	

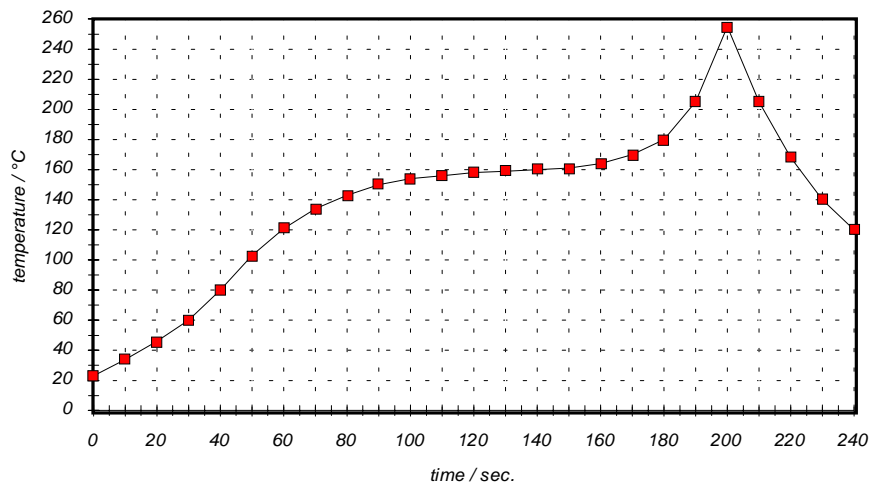
Chip-mount air reflow profile

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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VI TELEFILTER**Filter Specification****TFS 468 B - 4/4**

History

Version	Reason of Changes	Name	Date
2.2	Correct error in Construction : Pin length from 6 mm to 3 mm. Add Datecode .	Dunzow W.	08.06.2000

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