

VI TELEFILTER

Filter specification

TFS 868L

1/5

Measurement condition

Ambient temperature: 23 °C
 Input power level: 0 dBm
 Terminating impedance:
 Input: 50 Ω
 Output: 50 Ω

Characteristics

Remark:

The maximum of the pass band attenuation a_{max} is defined as the insertion loss a_e . The nominal frequency f_N is fixed at 868,3 MHz without tolerance. The given values for the absolute attenuation a_e have to be reached at the frequencies given below even if the centre frequency f_N 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_N .

D a t a		typ. value		tolerance / limit		
Insertion loss	$a_e = a_{max}$	2,1	dB	max.	2,4	dB
Nominal frequency	f_N	-			868,3	MHz
Passband	PB	-		f_N	± 0,25	MHz
Absolute attenuation	a_{abs}					
$f_N - 250$ kHz ... $f_N + 250$ kHz		2,1	dB	max.	2,4	dB
$f_N - 39,3$ MHz ... $f_N - 38,7$ MHz		47	dB	min.	40	dB
$f_N + 38,7$ MHz ... $f_N + 39,3$ MHz		47	dB	min.	45	dB
Operating temperature range	OTR	-			- 30 °C ... + 80 °C	
Storage temperature range		-			- 40 °C ... + 90 °C	
Temperature coefficient of frequency	TC_f *	- 35	ppm/K		-	

*) $\Delta f(\text{Hz}) = TC_f(\text{ppm/K}) \times (T - T_0) \times f_{T0}(\text{MHz})$.

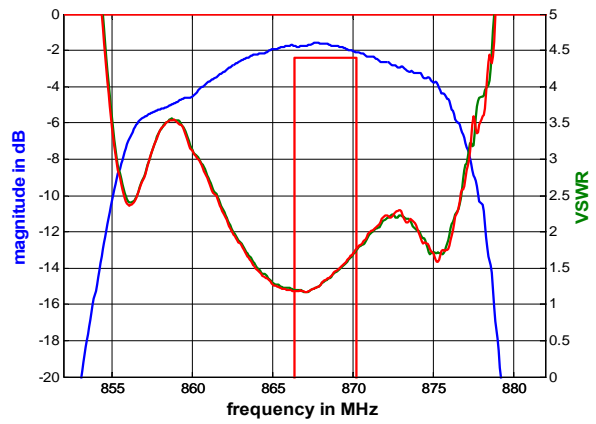
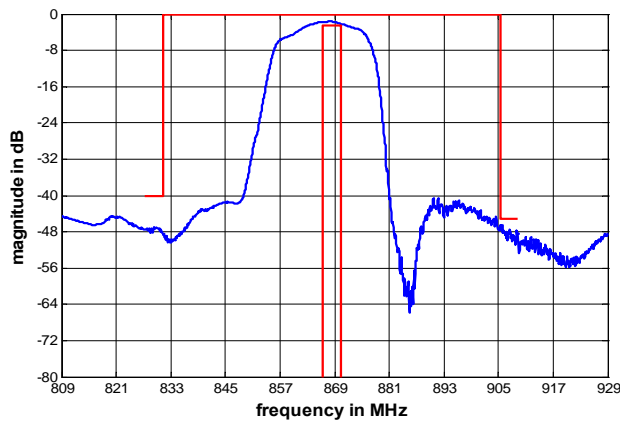
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Tele Filter GmbH
 Potsdamer Straße 18
 D 14 513 TELTOW / Germany
 Tel: (+49) 3328 4784-0 / Fax: (+49) 3328 4784-30
 E-Mail: tft@telefilter.com

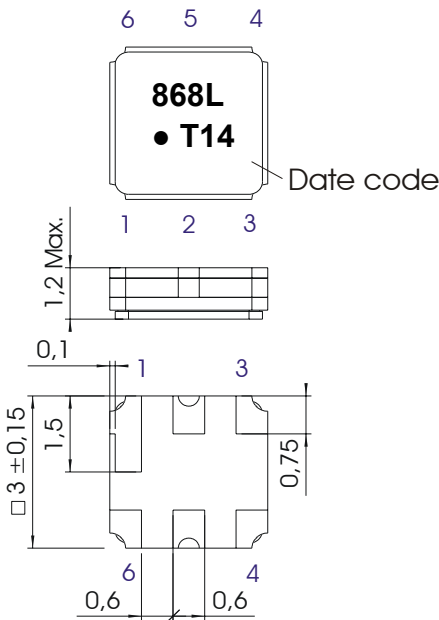
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Filter characteristic



Construction and pin connection

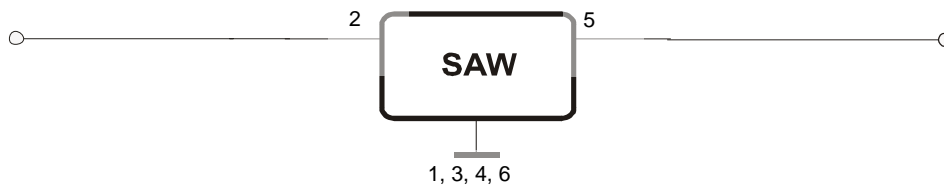
(All dimensions in mm)



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

Date code: Year + week
 T 2005
 U 2006
 V 2007
 ...

50 Ω Test circuit



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Stability characteristics

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

1. Shock: 500g, 1 ms, half sine wave, 3 shocks each plane;
DIN IEC 68 T2 - 27
2. Vibration: 10 Hz to 500 Hz, 0,35 mm or 5 g 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 refer to the attached "Air reflow temperature conditions" on page 4;

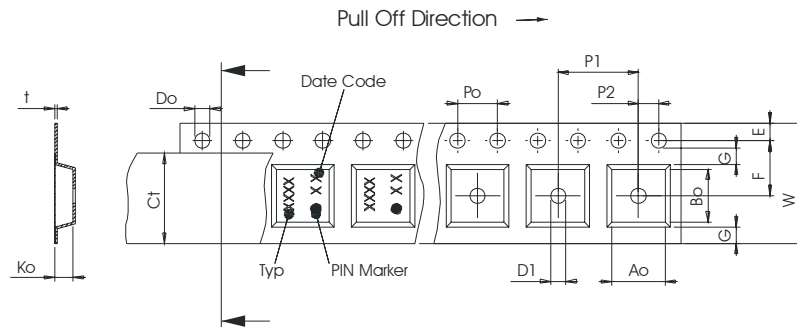
Packing

Tape & Reel: 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 peer reel:	9000
reel of empty components at start:	min. 300 mm
reel of empty components at start including leader:	min. 500 mm
trailer:	min. 300 mm

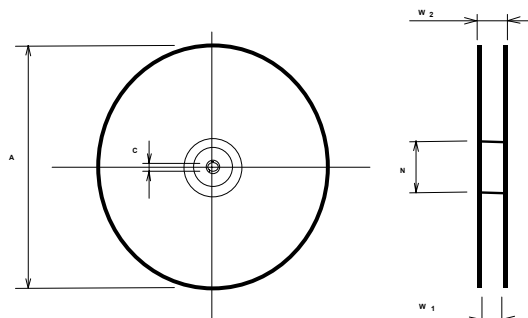
Tape (all dimensions in mm)

- W : 8,00 ± 0,3
- Po : 4,00 ± 0,1
- Do : 1,50 +0,1/-0
- E : 1,75 ± 0,1
- F : 3,50 ± 0,05
- G(min) : 0,75
- P2 : 2,00 ± 0,05
- P1 : 4,00 ± 0,1
- D1(min) : 1,50
- Ao : 3,25 ± 0,1
- Bo : 3,25 ± 0,1
- Ct : 5,5 ± 0,1



Reel (all dimensions in mm)

- A : 330
- W1 : 8,4 +1,5/-0
- W2(max) : 14,4
- N(min) : 50
- C : 13,0 +0,5/-0,2



The minimum bending radius is 45 mm.

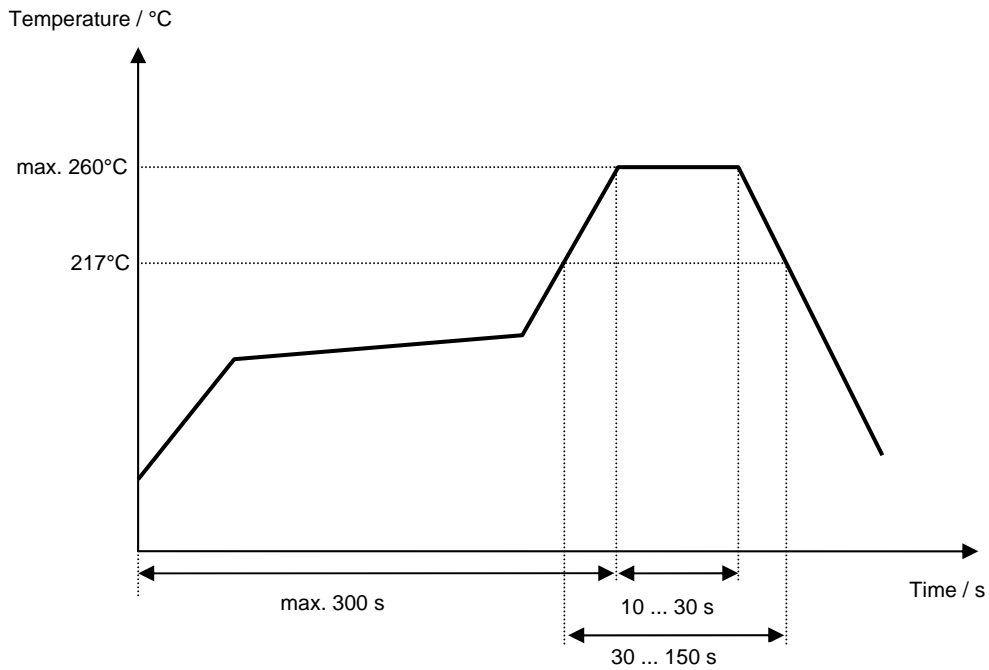
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Air reflow temperature conditions

Conditions	Exposure
Average ramp-up rate (30°C to 217°C)	less than 3°C/second
> 100°C	between 300 and 600 seconds
> 150°C	between 240 and 500 seconds
> 217°C	between 30 and 150 seconds
Peak temperature	max. 260°C
Time within 5°C of actual peak temperature	between 10 and 30 seconds
Cool-down rate (Peak to 50°C)	less than 6°C/second
Time from 30°C to Peak temperature	no greater than 300 seconds

Chip-mount air reflow profile



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VI TELEFILTER**Filter specification****TFS 868L****5/5****History**

Version	Reason of Changes	Name	Date
1.0	- Generation of development specification	Martens	15.11.2004
1.1	- Add typical values and filter characteristic; Generation of filter specification	Noack	30.03.2005

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