

**VI TELEFILTER**

**Filter specification**

**TFS 672**

**1/5**

**Measurement condition**

Ambient temperature: 23 °C  
 Input power level: 0 dBm  
 Terminating impedance:  
     Input: 150 Ω || 0 pF  
     Output: 150 Ω || 0 pF

**Characteristics**

**Remark:**

The insertion loss  $a_e$  is defined as loss value determined at  $f_N$ . The nominal frequency  $f_N$  is fixed at 672,00 MHz without any tolerance or limit. The values of absolute attenuation  $a_{abs}$  are guaranteed for the whole operating temperature range. The frequency shift of the filter in the operating temperature range is included in the production tolerance scheme.

<b>D a t a</b>	<b>typ. value</b>		<b>tolerance / limit</b>	
<b>Insertion loss</b> (reference level)	$a_e$	2,5 dB	max.	4,5 dB
<b>Nominal frequency</b>	$f_N$	-	672,00	MHz
<b>Centre frequency</b>	$f_C$	672,00	MHz	-
<b>Bandwidth</b> 3 dB	BW	23	MHz	-
<b>Absolute attenuation</b>	$a_{abs}$			
@ 112 MHz		65	dB	min. 55 dB
224 MHz ... 448 MHz		64	dB	min. 60 dB
448 MHz ... 560 MHz		62	dB	min. 57 dB
784 MHz ... 896 MHz		62	dB	min. 57 dB
896 MHz ... 1232 MHz		58	dB	min. 52 dB
1232 MHz ... 3000 MHz		46	dB	min. 30 dB
<b>Input power level</b>		-	max.	10 dBm
<b>Operating temperature range</b>	OTR	-	- 40 °C ... + 85 °C	
<b>Storage temperature range</b>		-	- 55 °C ... + 125 °C	
<b>Temperature coefficient of frequency</b>	$TC_f$ *	-73	ppm/K	-

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

**Generated:**

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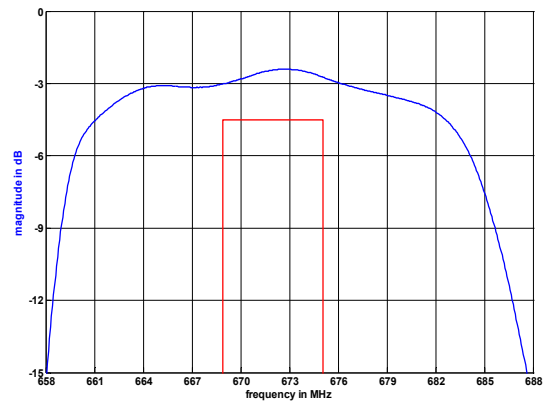
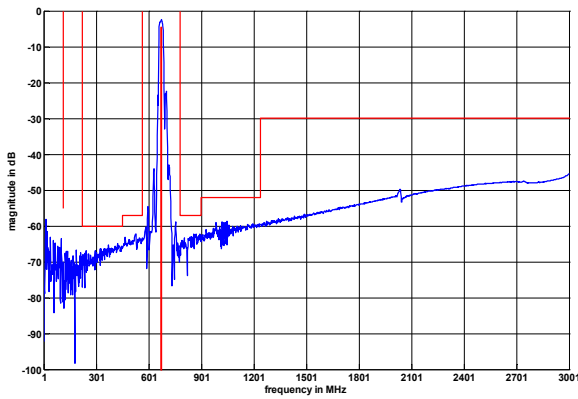
**Checked / Approved:**

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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](mailto:tft@telefilter.com)

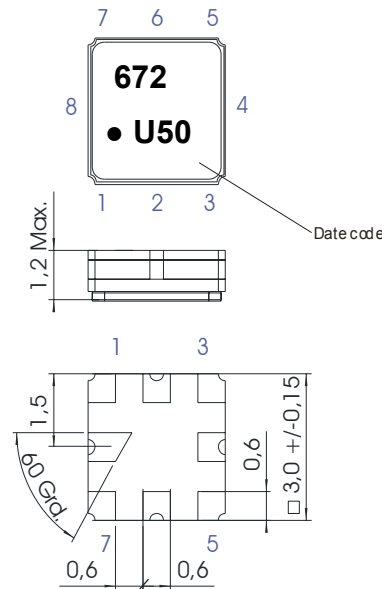
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**Filter characteristic**



**Construction and pin connection**

(All dimensions in mm)

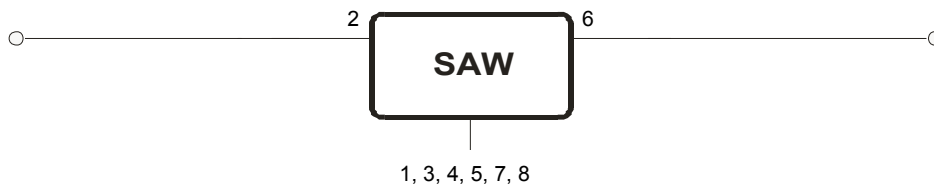


1	Ground
2	Input
3	Ground
4	Ground
5	Ground
6	Output
7	Ground
8	Ground

Date code: Year + week

U	2006
V	2007
W	2008
...	

**150 Ω Test circuit**



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**Stability characteristics, reliability**

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

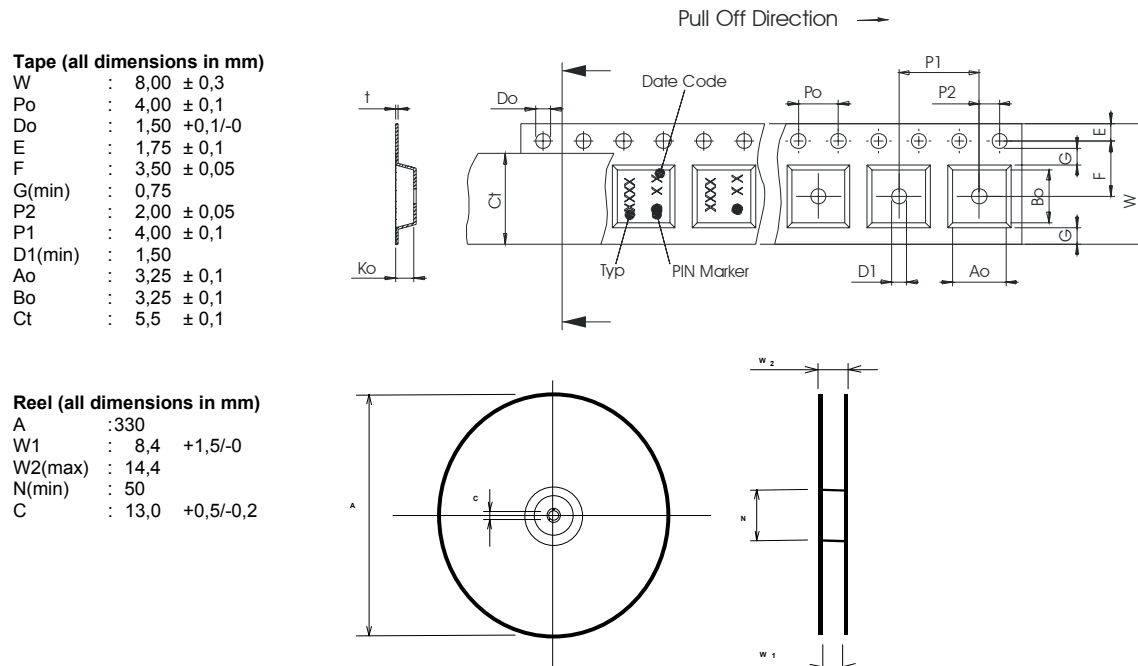
1. Shock: 500g, 1 ms, half sine wave, 3 shocks each plane;  
DIN IEC 68 T2 - 27
2. Vibration: 10 Hz to 500 Hz, 0,35 mm or 5 g respectively, 1 octave per min, 10 cycles per plan, 3 plans;  
DIN IEC 68 T2 - 6
3. Change of temperature: -55 °C to 125°C / 30 min. each / 10 cycles  
DIN IEC 68 part 2 – 14 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;

This filter is RoHS compliant (2002/95/EG, 2005/618/EG)

**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 per 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



The minimum bending radius is 45 mm.

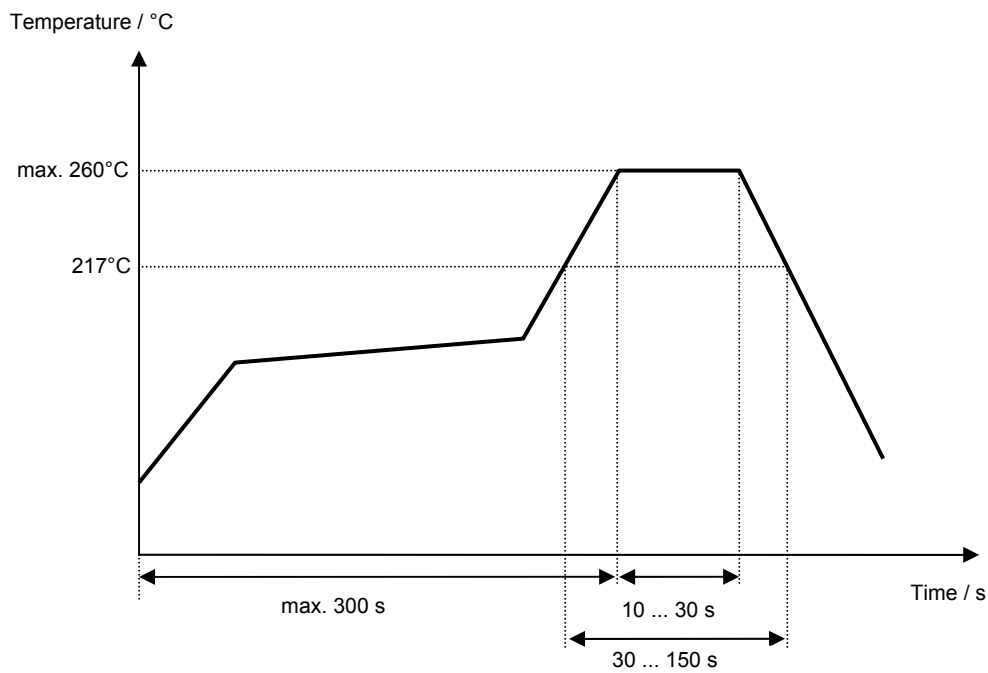
**Tele Filter GmbH**  
**Potsdamer Straße 18**  
**D 14 513 TELTOW / Germany**  
**Tel: (+49) 3328 4784-0 / Fax: (+49) 3328 4784-30**  
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**Air reflow temperature conditions**

<b>Conditions</b>	<b>Exposure</b>
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 672****5/5****History**

<b>Version</b>	<b>Reason of Changes</b>	<b>Name</b>	<b>Date</b>
1.0	- Generation of development specification	Strehl	13.11.2006
1.1	- Generation of filter specification - Added typical values - Changed absolute attenuation tolerance scheme - Added filter characteristic	Martens	13.12.2006
1.2	- Changed remark	Martens	15.12.2006

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