

VI TELEFILTER

Filter specification

TFS 622C

1/5

Measurement condition

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

Characteristics

Remark:

The reference level for the relative attenuation a_{rel} of the TFS 622C is the attenuation at nominal frequency. This value is defined as the insertion loss a_e . The nominal frequency f_N is fixed at 622,08 MHz without any tolerance. The values of relative attenuation a_{rel} 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.

D a t a		typ. value		tolerance / limit	
Insertion Loss (reference level)	a_e	2,25	dB	4,0	dB
Nominal Frequency	f_N	-		622,08	MHz
Centre Frequency	f_c	622,08	MHz		
Bandwidth 3 dB	BW	11	MHz	-	
Relative Attenuation	a_{rel}				
$f_N - 77,76$ MHz ... $f_N - 77,76$ MHz		67	dB	min. 60	dB
$f_N + 77,76$ MHz ... $f_N + 177,92$ MHz		64	dB	min. 60	dB
$f_N + 177,92$ MHz ... 1000,00 MHz		55	dB	min. 48	dB
Input power level				max. 10	dBm
Operating Temperature Range	OTR	-		- 25 °C ... + 85 °C	
Storage Temperature Range		-		- 45 °C ... + 95 °C	
Temperature Coefficient of Frequency	TC_f *	-36	ppm/K		

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

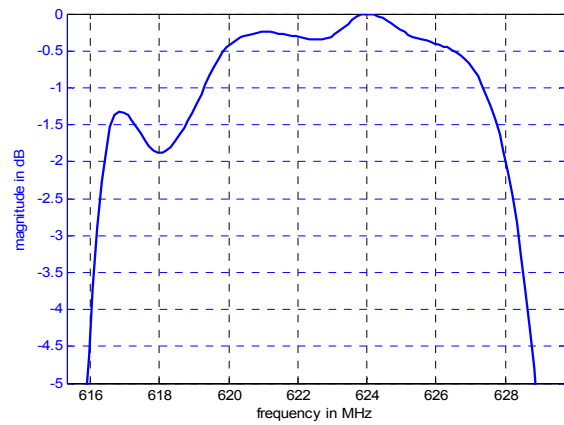
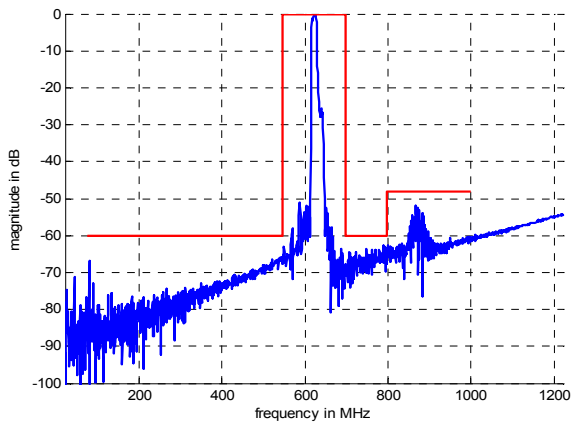
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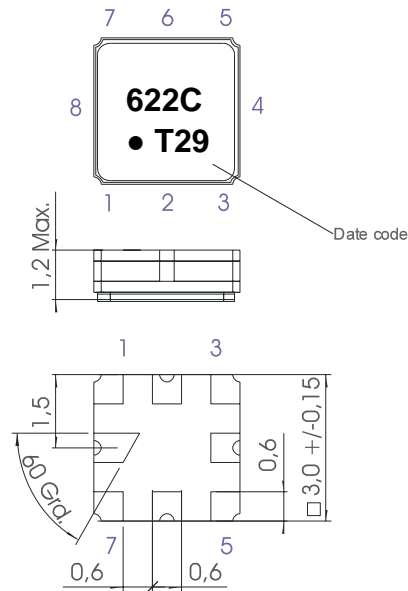
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Filter characteristic



Construction and pin connection

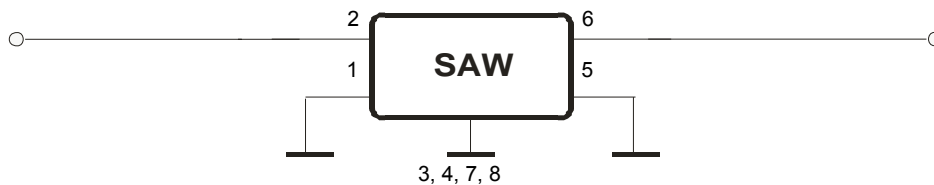
(All dimensions in mm)



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

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

50 Ohm 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, 1,5 mm or 20 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;

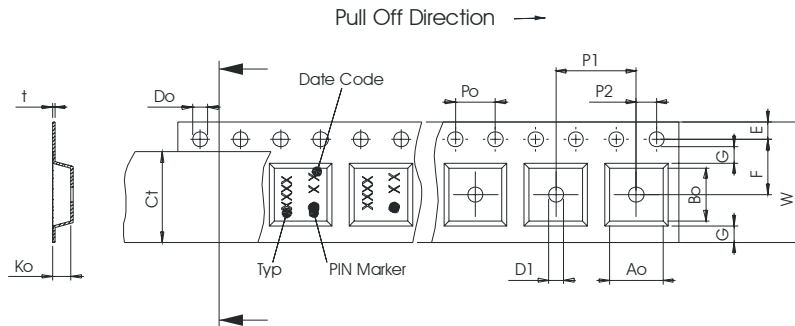
Packing

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

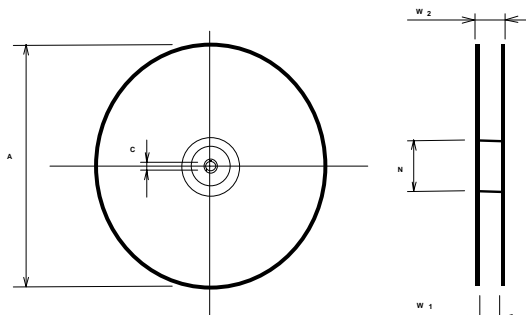
Tape (all dimensions in mm)

- 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.

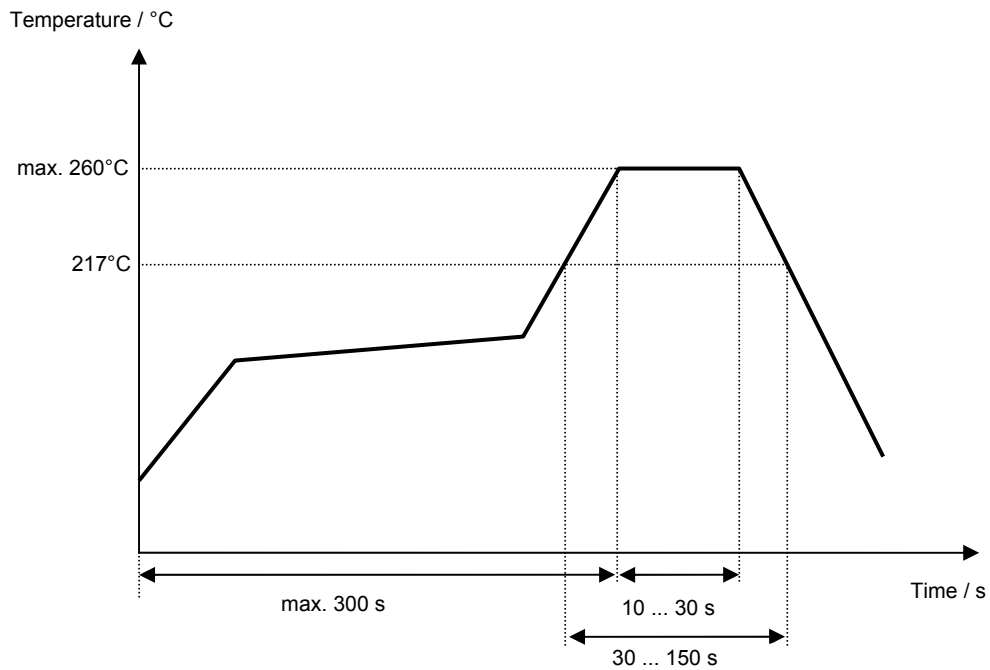
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Air reflow temperature conditions

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 622C****5/5****History**

Version	Reason of Changes	Name	Date
1.0	- Generation of development specification	Strehl	03.06.2005
1.1	- Change storage temperature range Change vibration	Strehl	07.06.2005
1.2	- Added typical value and filter characteristic - change of stop band rejection from 800MHz to 1 GHz < 48dB - Generation of filter specification	Sabah	11.07.2005
1.3	- Change definition of insertion loss	Wall	17.08.2005

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