Measurement condition

Ambient temperature: 23 °C
Input power level: 0 dBm
Terminating impedance: *
Input: 114 Ω || 0 pF
Output: 114 Ω || 0 pF

Characteristics

Remark:
The reference level for the relative attenuation a_{rel} of the TFS 622A is the minimum attenuation in the pass band. The maximum attenuation in the pass band is defined as the insertion loss a_e. The nominal frequency f_N is fixed at 622,08 MHz without any tolerance or limit. 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	a_e	2,6	dB		4,5	dB
(reference level)		-			-	
Nominal Frequency	f_N	-			622,08	MHz
Centre Frequency	f_C	622,08	MHz		-	
Passband	PB					
3 dB		22	MHz	min.	14	MHz
Relative Attenuation	a_{rel}					
f_N - 7,0 MHz ... f_N + 7,0 MHz		0.8	dB	max.	3	dB
f_N ± 155,52 MHz		65	dB	min.	50	dB
Operating Temperature Range	OTR	-		- 30 °C ... + 80 °C		
Storage Temperature Range		-		- 40 °C ... + 85 °C		
Temperature Coefficient of Frequency	TC_f **	-72	ppm/K		-	
Input Power Level		-		max.	10	dBm

*) The terminating impedances depend on parasitics and q-values of matching elements and the board used, and are to be understood as reference values only. Should there be additional questions do not hesitate to ask for an application note or contact our design team.
**) $\Delta f(Hz) = TC_f(ppm/K) \times (T-T_0) \times f_{T0}(MHz)$.

Generated:

Checked / Approved:

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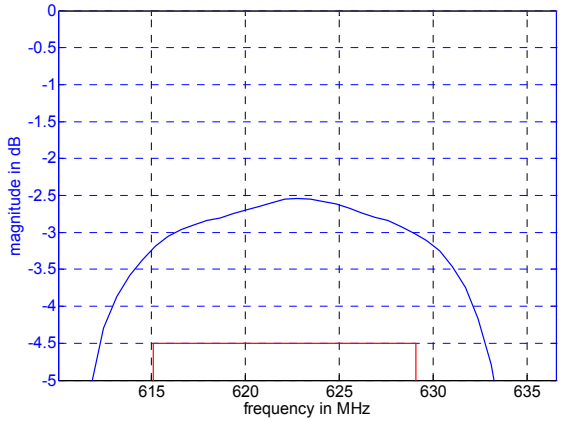
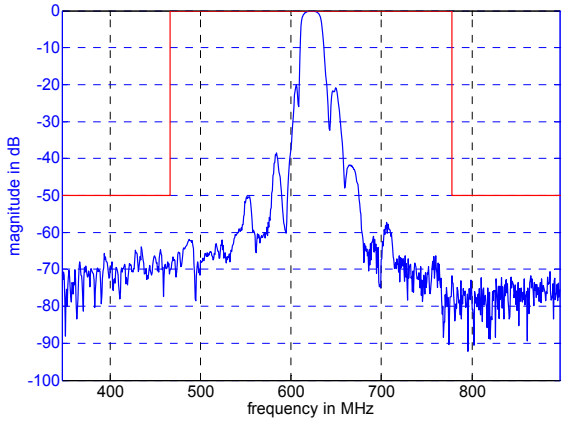
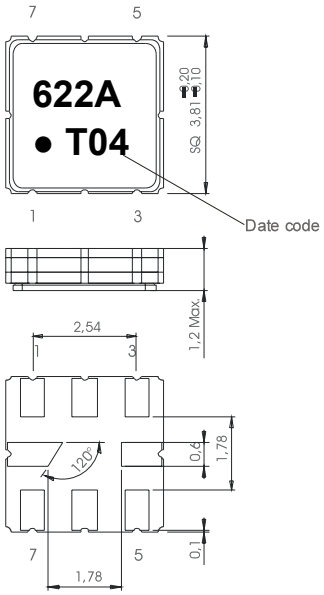
Filter characteristic





Construction and pin connection

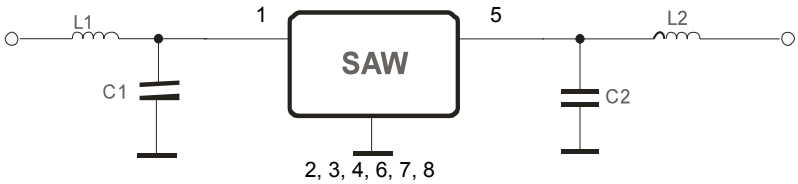
(All dimensions in mm)



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

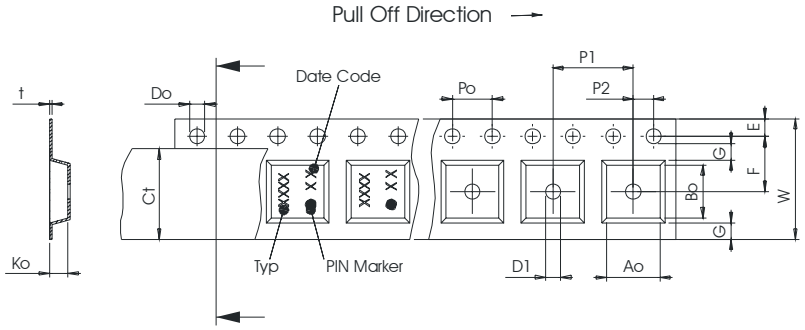
Packing

Tape & Reel: IEC 286 – 3, with exeption 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:	3000
reel of empty components at start:	min. 300 mm
reel of empty components at start including leader:	min. 500 mm
trailer:	min. 300 mm

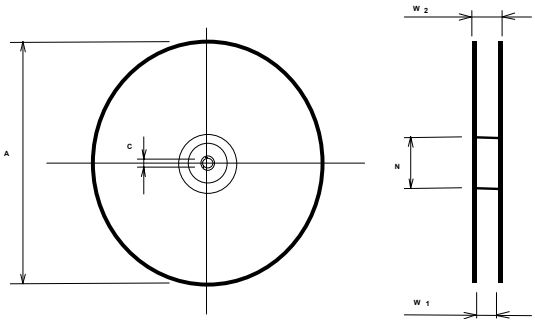
Tape (all dimensions in mm)

W	:	12,00	± 0,3
Po	:	4,00	± 0,1
Do	:	1,50	+0,1/-0
E	:	1,75	± 0,1
F	:	5,50	± 0,05
G(min)	:	0,75	
P2	:	2,00	± 0,05
P1	:	8,00	± 0,1
D1(min)	:	1,50	
Ao	:	4,30	± 0,1
Bo	:	4,30	± 0,1
Ct	:	9,5	± 0,1



Reel (all dimensions in mm)

A	:	330	
W1	:	12,4	+2/-0
W2(max)	:	18,4	
N(min)	:	50	
C	:	13,0	+0,5/-0,2



The minimum bending radius is 45 mm.

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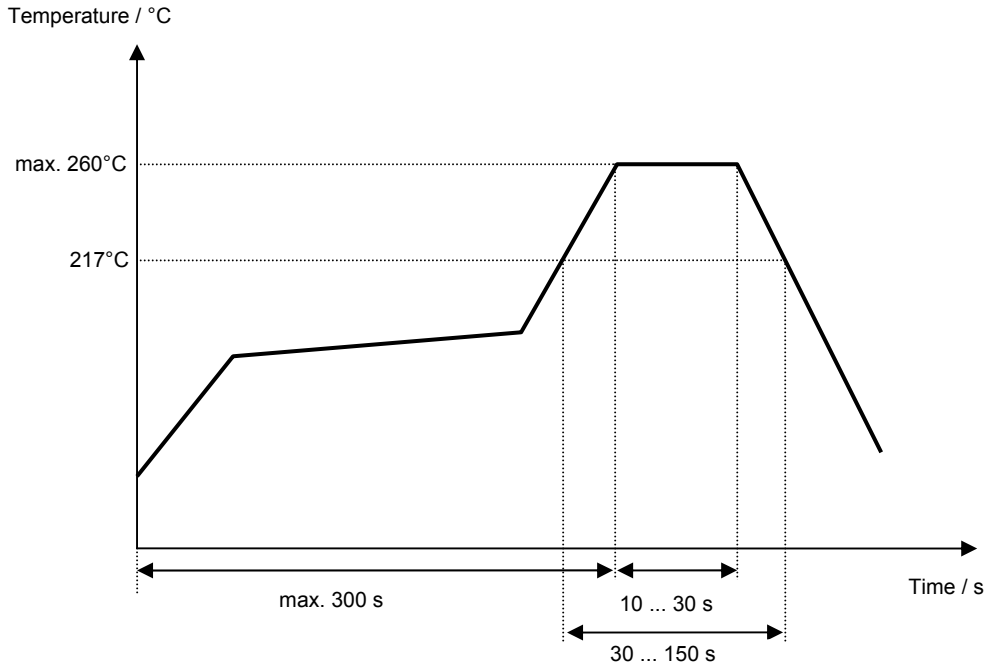
Air reflow temperature conditions

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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History

Version	Reason of Changes	Name	Date
1.0	- Generation of development specification according to customer specification.	Dr. Sabah	17.06.2003
1.1	- Filter specification, add oft typical values	Dr. Sabah	23.09.2003
1.2	- Updating TK; do some formatting	Martens	12.10.2004
1.3	- Added filter characteristics	Martens	19.01.2005

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