

VI TELEFILTER

Filter specification

TFS 1080

1/5

Measurement condition

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

Characteristics

Remark:

The nominal frequency f_N is fixed at 1080,0MHz. The insertion loss a_e is defined as loss value determined at f_N . All specified data are met within the operating temperature range.

D a t a		typ. value		tolerance / limit	
Insertion loss		a_e	2,4 dB	max.	3,0 dB
Nominal frequency		f_N	-		1080,0 MHz
Passband 1		PB1	53,0 MHz	$f_N \pm$	15,0 MHz
Pass band ripple	p-p		0,4 dB	max.	1,0 dB
Passband 2		PB2	61,0 MHz	$f_N \pm$	20,0 MHz
Pass band ripple 2	p-p		1,0 dB	max.	3,0 dB
Absolute attenuation		a_{abs}			
1 MHz ...	919 MHz	50	dB	min.	40 dB
1240 MHz ...	2160 MHz	42	dB	min.	30 dB
2160 MHz ...	2398 MHz	38	dB	min.	30 dB
Group delay variation within PB1			8 ns	max.	15 ns
Return loss within PB1			18 dB	min.	10 dB
Input power level			-	max.	10 dBm
Operating temperature range		OTR	-	- 40 °C ... + 85 °C	
Storage temperature range			-	- 40 °C ... + 85 °C	
Temperature coefficient of frequency		TC_f^*	- 72 ppm/K		-

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

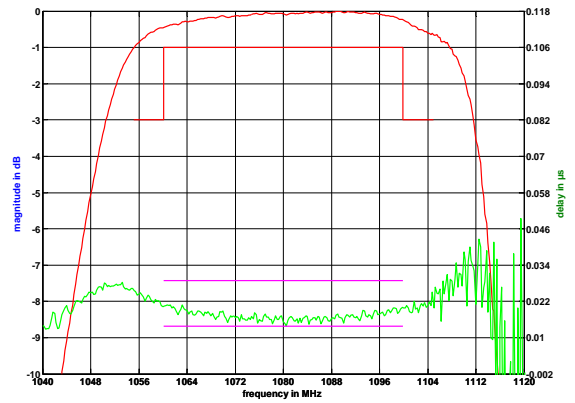
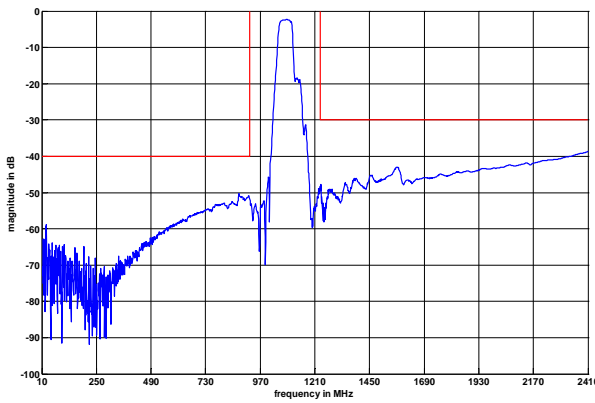
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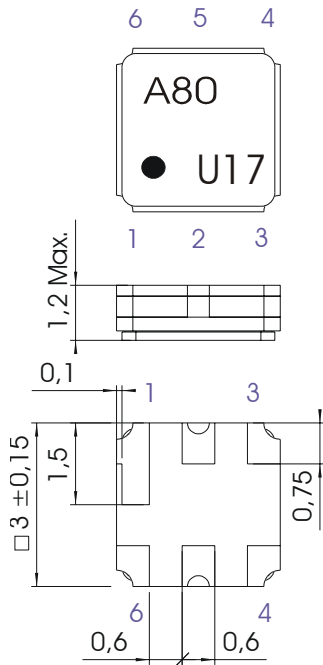
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Filter characteristic



Construction and pin connection

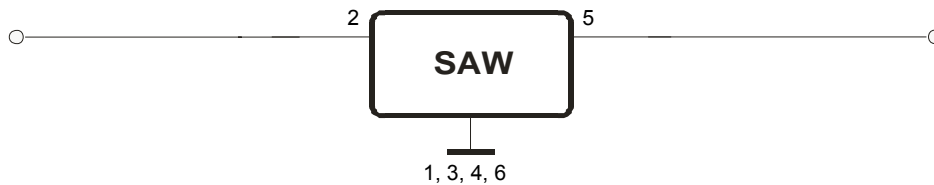
(All dimensions in mm)



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

Date code: Year + week
 U 2006
 V 2007
 W 2008
 ...

50 Ohm 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)

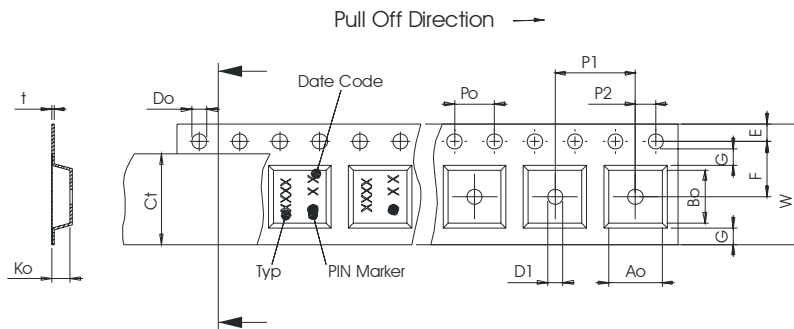
Packing

Tape & Reel: IEC 286 – 3, with 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:	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

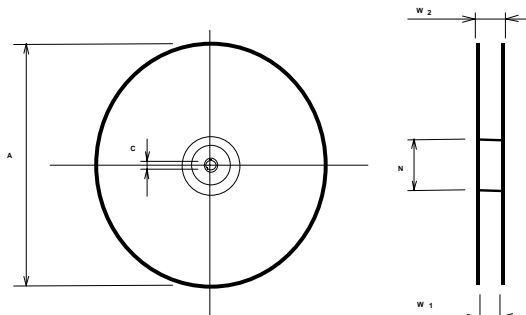
Tape (all dimensions in mm)

- 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.

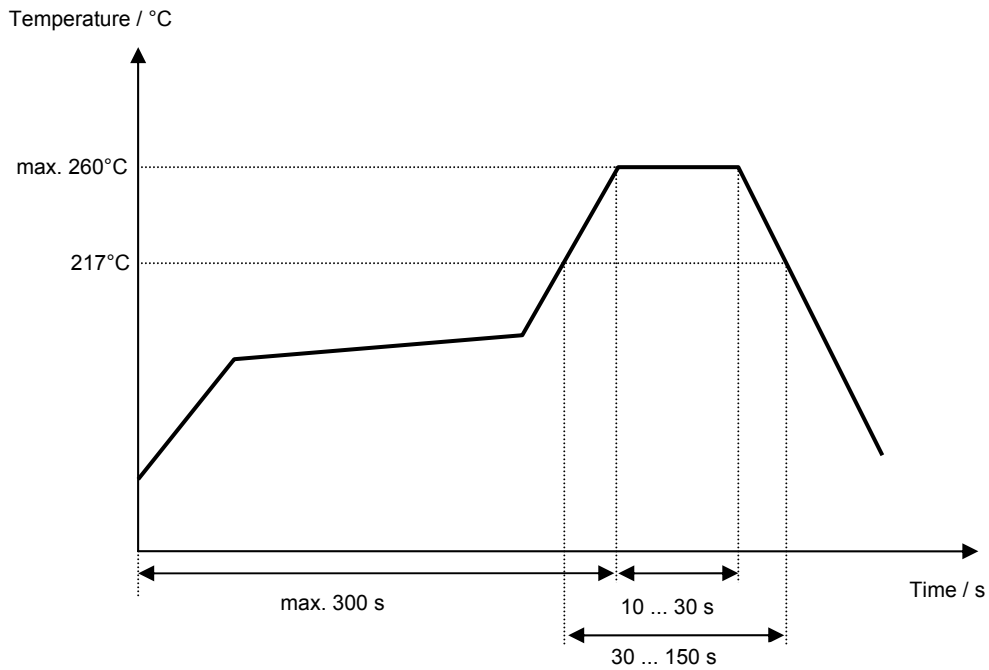
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Air reflow temperature conditions

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 1080****5/5****History**

Version	Reason of Changes	Name	Date
1.0	- generation of development specification	Strehl	19.01.2006
1.1	- add typ. value and filter characteristic	Strehl	27.04.2006

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