Measurement condition

Ambient temperature T_A:	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} is the minimum attenuation in the passband. The maximum attenuation in the passband is defined as the insertion loss a_e. The nominal frequency f_N is fixed at 1080 MHz without any tolerance or limit. The values for relative attenuation a_{rel} are guaranteed within the operating temperature range OTR.

D a t a		**typ. value**		**tolerance / limit**		
Insertion loss	a_e	4.2	dB	max.	5.0	dB
Nominal frequency	f_N				1080.0	MHz
Passband	PB			f_N	± 2.5	MHz
Passband variation		0.5	dB	max.	1.5	dB
Relative attenuation	a_{rel}					
10.0 MHz … 1059.0 MHz		46	dB	min.	30	dB
1059.0 MHz … 1067.5 MHz		46	dB	min.	13	dB
1067.5 MHz … 1072.0 MHz		34	dB	min.	8	dB
1088.0 MHz … 1092.5 MHz		14	dB	min.	8	dB
1092.5 MHz … 1101.0 MHz		36	dB	min.	13	dB
1101.0 MHz … 2500.0 MHz		38	dB	min.	30	dB
VSWR within PB		1.5 : 1		max.	2 : 1	
Input power level	*)	-		max.	10	dBm
	**)	-		max.	23	dBm
	***)	-		max.	23	dBm
Operating temperature range	OTR				23 °C	
Operable temperature range					- 40 °C ... + 90 °C	
Storage temperature range					- 55 °C ... + 125 °C	
Temperature coefficient of frequency	TC_f	****)	-38	ppm/K		

*) within PB
**) out of band: < 1063 MHz
***) out of band: > 1097 MHz
****) $\Delta f = TC_f(T - T_A)f_N$

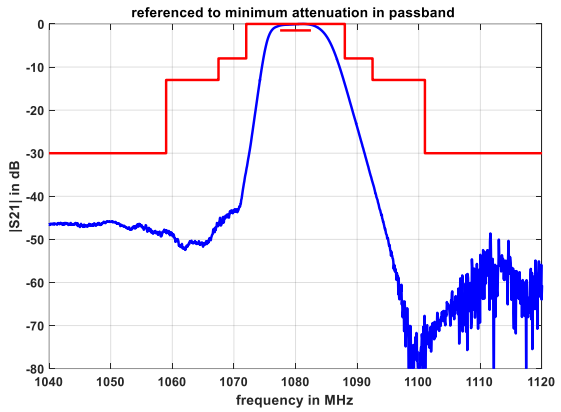
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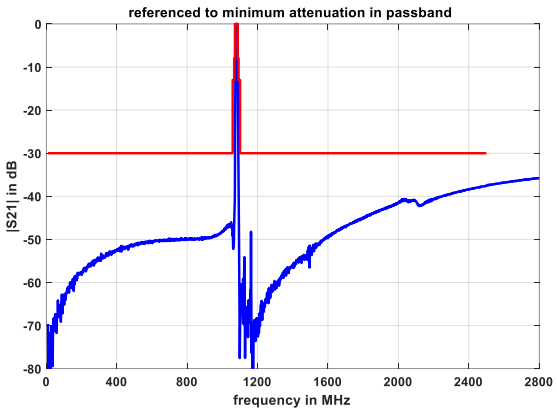
Checked / Approved:

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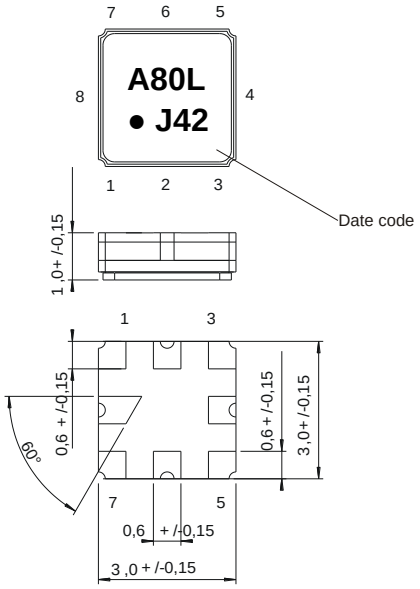
Filter characteristic





Construction and pin connection

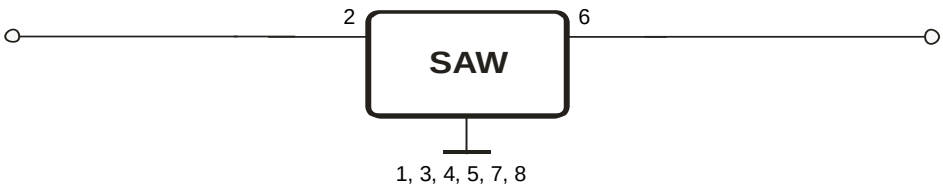
(All dimensions in mm)



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

Date code:	Year + week
J	2017
K	2018
L	2019
...	

50 Ω Test circuit



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Stability characteristics, reliability

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

1. Shock: 500 g, 1 ms, half sine wave, 3 shocks each plane;
   DIN IEC 60068 T2 - 27

2. Vibration: 10 Hz to 2000 Hz, 0.35 mm or 5 g respectively, 1 octave per min, 10 cycles per plane, 3 planes; DIN IEC 60068 T2 - 6

3. Change of temperature: -55 °C to 125 °C / 15 min. each / 100 cycles
   DIN IEC 60068 part 2 – 14 Test N

4. Resistance to solder heat (reflow): reflow possible: three times max.;
   for temperature conditions refer to the attached "Air reflow temperature conditions" on page 4;

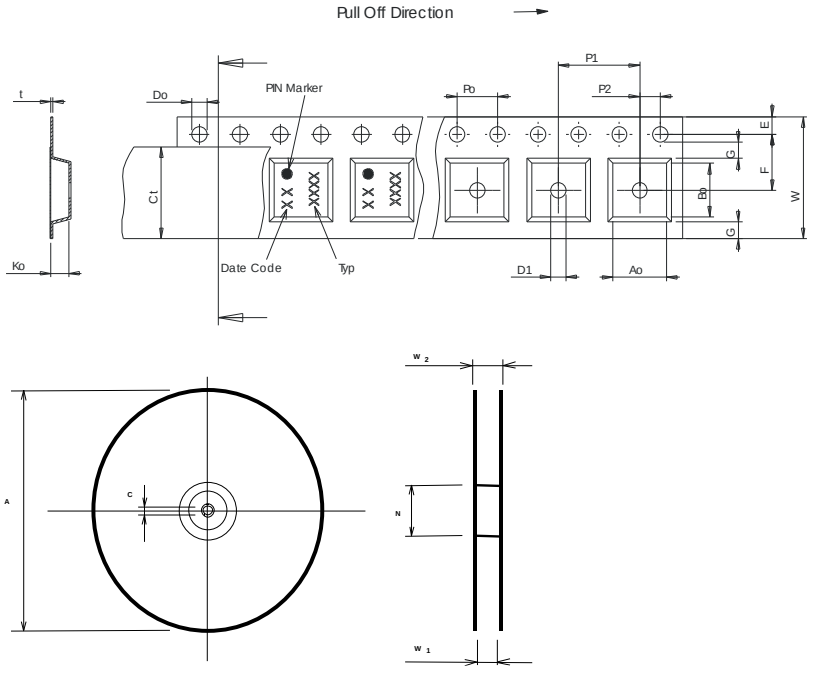
5. SAW devices are Electrostatic Discharge (ESD) sensitive devices.

This filter is RoHS compliant (2011/65/EU)

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;

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	:	5.30	±0.1
Ko	:	1.50	±0.1
t	:	0.25	±0.05

Reel (all dimensions in mm)

A	:	330	or 180
W1	:	8.40	+1.5/-0
W2(max)	:	14.40	
N(min)	:	60.00	
C	:	13.0	±0.2

The minimum bending radius is 45 mm.

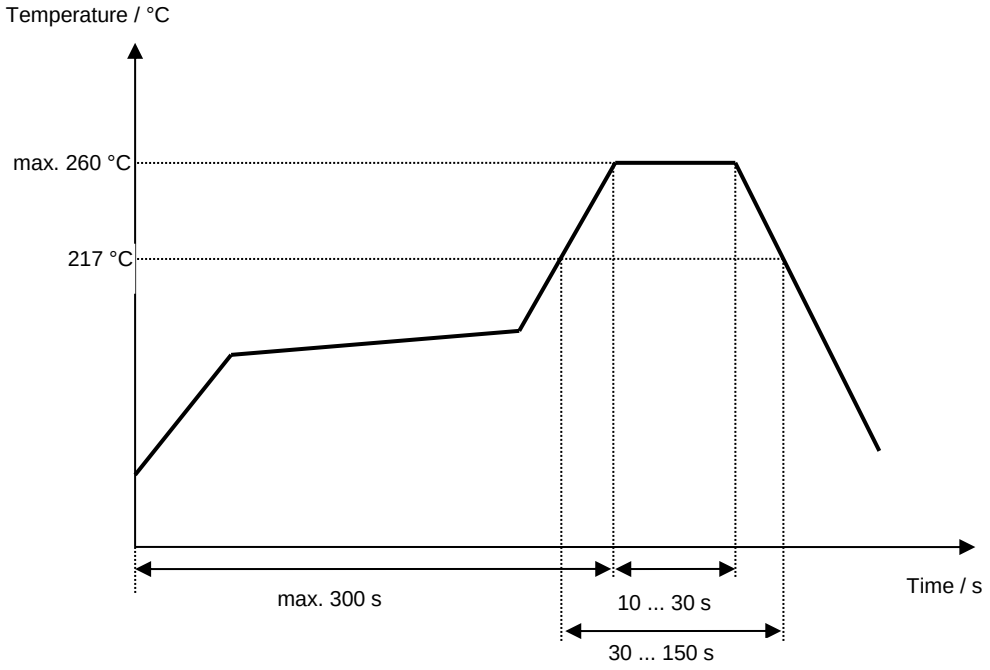
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Air reflow temperature conditions

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	A. Molke	15.08.2017
1.1	- Change from development spec to filter spec - Typical values added - Filter characteristic added	A. Molke	17.10.2017

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