Measurement condition

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

Characteristics

Remark:
The maximum attenuation in the pass band is defined as the insertion loss a_e. The nominal frequency f_N is fixed at 800 MHz without any tolerance or limit. The values of absolute attenuation a_{abs} are guaranteed over the whole operating temperature range. The frequency shift of the filter within the operating temperature range is included in the production tolerance scheme.

D a t a		**typ. value**		**tolerance / limit**		
Insertion loss	a_e	1.7	dB	max.	3.0	dB
Nominal frequency	f_N	-			800.0	MHz
Passband	PB	-		f_N ±	6.0	MHz
Passband ripple	PBR	0.5	dB	max.	1.0	dB
Absolute attenuation	a_{abs}					
0.3 MHz … 770.0 MHz		43	dB	min.	40	dB
820.0 MHz … 836.0 MHz		44	dB	min.	10	dB
881.0 MHz … 1200.0 MHz		48	dB	min.	40	dB
1200.0 MHz … 2000.0 MHz		33	dB	min.	20	dB
VSWR within PB		1.8 : 1		max.	2.2 : 1	
Input power level		-		max.	10	dBm
Operating temperature range	OTR	-		-40 °C ... +85 °C		
Storage temperature range		-		-55 °C ... +125 °C		
Temperature coefficient of frequency	TC_f *)	- 42	ppm/K	-		

*) $\Delta f = TC_f(T - T_A)f_N$

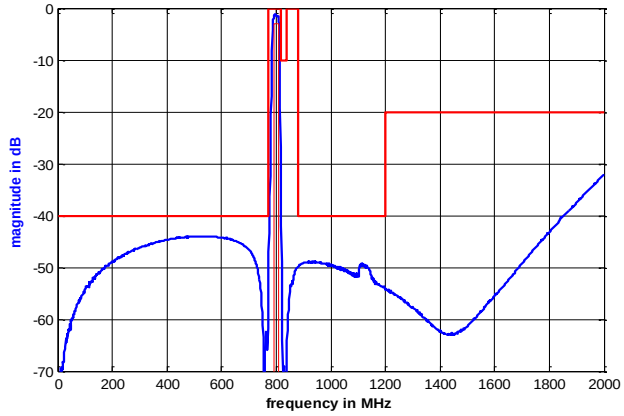
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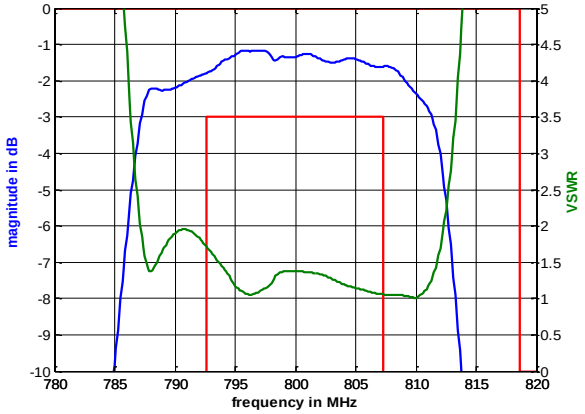
Checked / Approved:

Microchip Frequency Technology GmbH
Potsdamer Straße 18
D 14 513 TELTOW / Germany
Tel: (+49) 3328 4784-0 / Fax: (+49) 3328 4784-30

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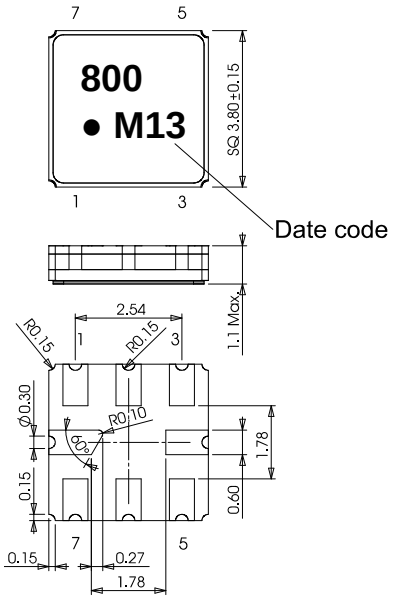
Filter characteristic





Construction and pin connection

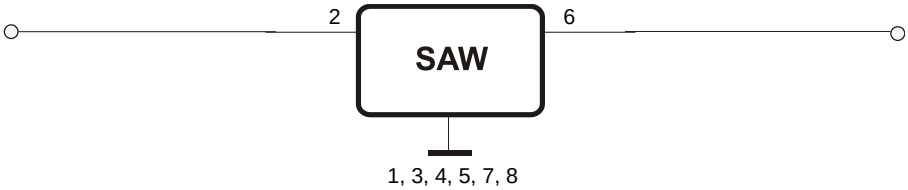
(All dimensions in mm)



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

Date code:	Year + week
M	2020
N	2021
P	2022
...	

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;

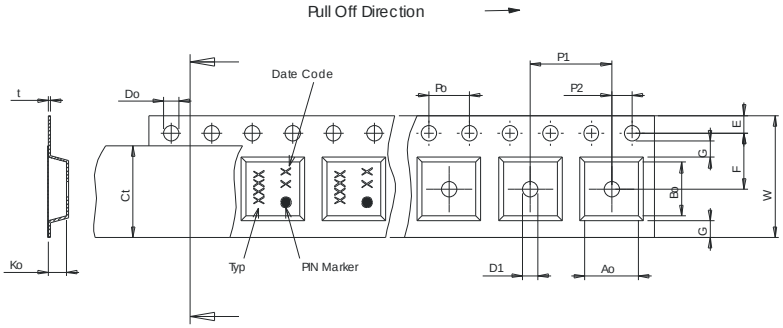
5. SAW devices are Electrostatic Discharge (ESD) sensitive devices.

This filter is RoHS compliant (2011/65/EU+2015/863/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

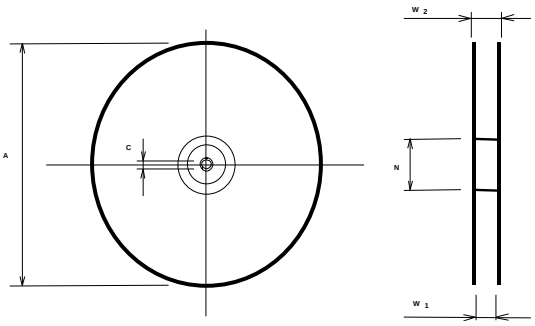


Tape (all dimensions in mm)

W	:	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	:	9.2	±0.1
Ko	:	1.80	±0.1
t	:	0.30	±0.05

Reel (all dimensions in mm)

A	:	330	or 180
W1	:	12.4	+2/-0
W2(max)	:	18.40	
N(min)	:	50.00	
C	:	13.0	+0.5/-0.2



The minimum bending radius is 45 mm.

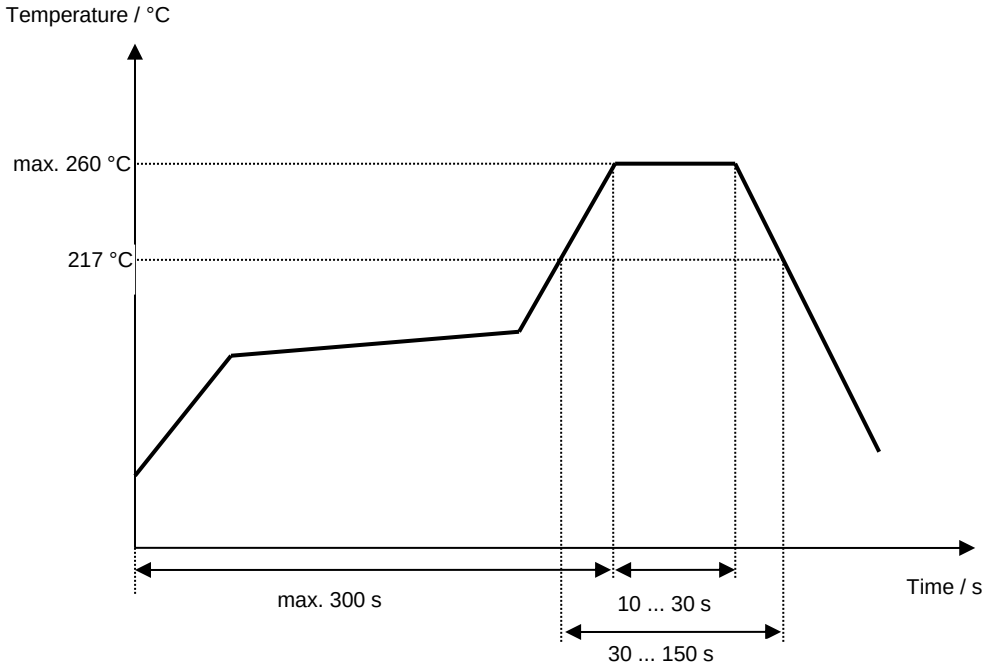
Microchip Frequency Technology GmbH
Potsdamer Straße 18
D 14 513 TELTOW / Germany
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Air reflow temperature conditions

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	Springfeldt	15.04.2004
1.1	- Generation of filter specification - Add typical value - Add filter characteristic	Noack	13.10.2004
1.2	- Change operating temperature range and stability characteristics	Strehl	15.05.2006
1.3	- Change operating temperature range	Strehl	03.04.2008
2.0	- Updated operating temperature range - Updated storage temperature range - Updated construction	P. Jaster	26.03.2020

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