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 passband is defined as the insertion loss a_e. The nominal frequency f_N is fixed at 1575.42 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	2.3	dB	max.	4.0	dB
Nominal frequency				f_N	-			1575.42	MHz
Passband				PB	-			f_N ± 10.23	MHz
Passband variation				PBV	0.6	dB	max.	2.5	dB
Absolute attenuation				a_{abs}					
0.3	MHz	…	1470.0	MHz	42	dB	min.	40	dB
1470.0	MHz	…	1530.0	MHz	40	dB	min.	38	dB
1530.0	MHz	…	1536.0	MHz	44	dB	min.	30	dB
1615.0	MHz	…	3000.0	MHz	34	dB	min.	30	dB
Return loss within PB				RL	12	dB	min.	10	dB
Group delay ripple within PB				GDR	8	ns	max.	25	ns
Phase ripple within PB				PHR *)	5	°p-p	max.	25	°p-p
Input power level					-		max.	17	dBm
Operating temperature range				OTR	-			- 55 °C ... + 85 °C	
Storage temperature range					-			- 55 °C ... + 125 °C	
Temperature coefficient of frequency				TC_f **)	-42	ppm/K		-	

*) $after\ first\ order\ detrend$

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

Generated:

Checked / Approved:

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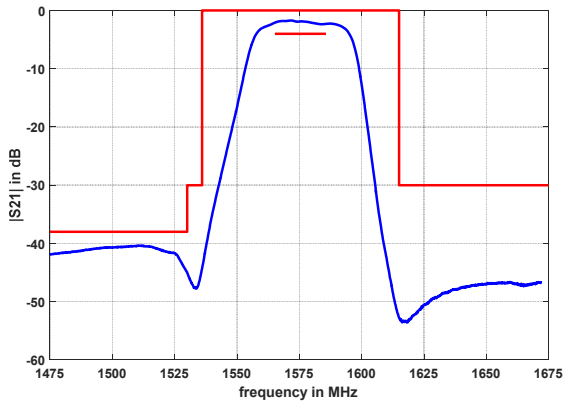
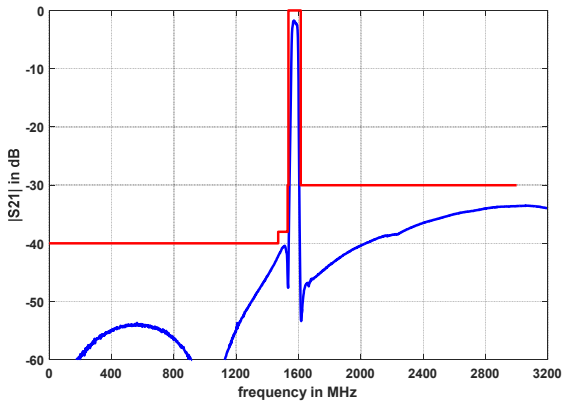
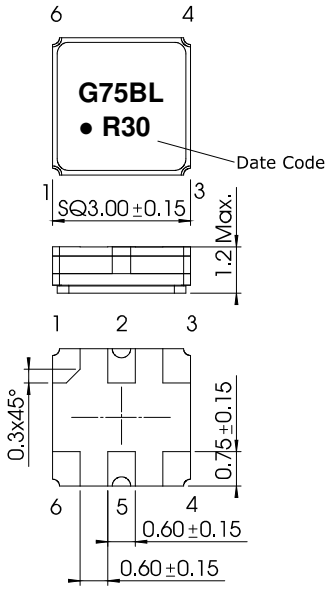
Filter characteristic





Construction and pin connection

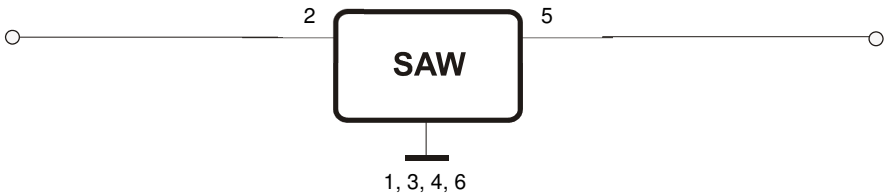
(All dimensions in mm)



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

Date code:	Year + week
R	2023
S	2024
T	2025
...	

50 Ω Test circuit



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Stability characteristics, reliability

1. Shock:	1500 g, 0.5 ms, half sine wave, 5 Shocks each of the orientations acc. to MIL-STD-883, Method 2002, Cond. B
2. Vibration:	10 Hz to 2000 Hz, 20 g acc. to MIL-STD-883, Method 2007, Cond. A
3. Temperature cycling	100 cycles, -55 °C to 125 °C / 15 min. dwell time acc. to MIL-STD-883, Method 1010, Cond. B
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

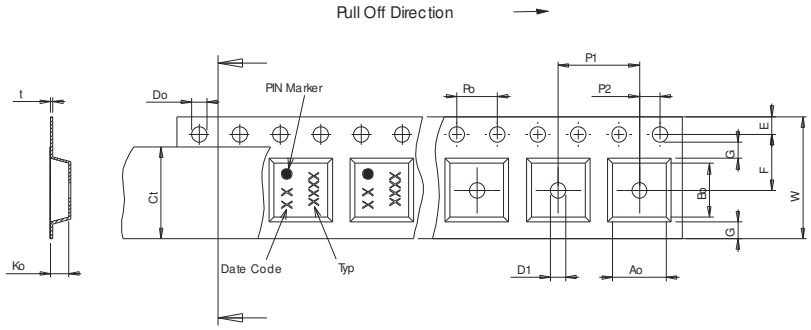
5. SAW devices are Electrostatic Discharge (ESD) sensitive devices.

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

Packing

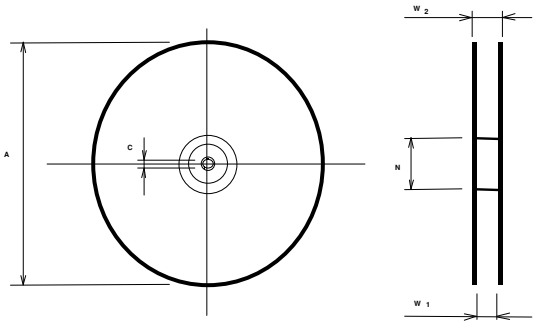
Tape & Reel: IEC 286 – 3, with exception of value for N and minimum bending radius;
tape type II, embossed carrier tape with top cover tape on the upper side;

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	:	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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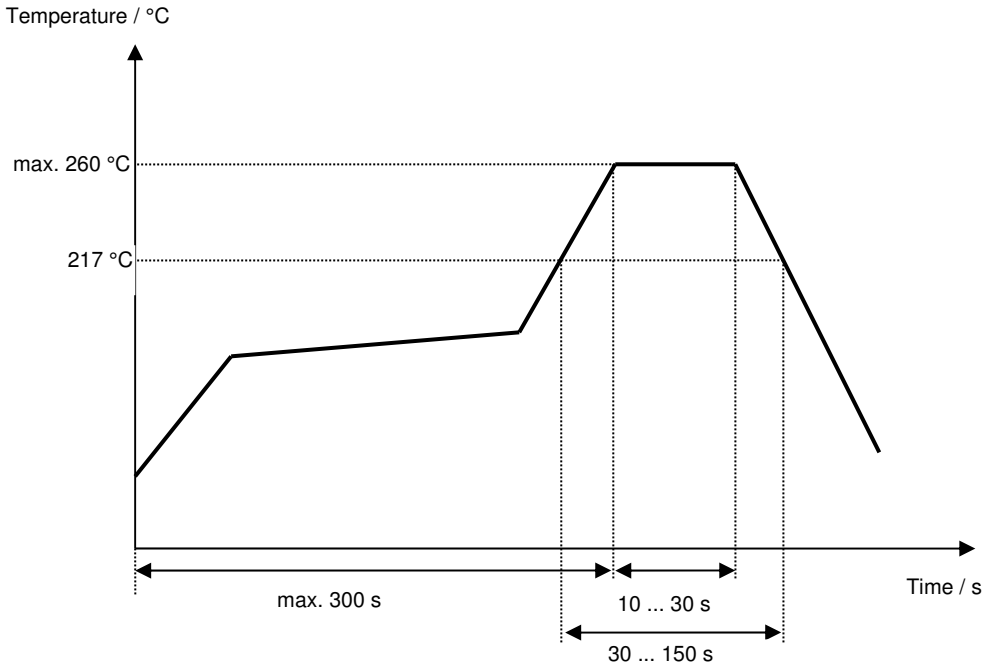
Air reflow temperature conditions

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 filter specification	A. Molke	24.07.2023

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