Measurement condition

Ambient temperature T_A:	23	°C
Input power level:	0	dBm
Source impedance:	50	Ω
Load impedance:	50	Ω
Terminating impedance:		
Input:	225.8 Ω || - 8.5 pF	
Output:	225.8 Ω || - 8.5 pF	

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 63.86 MHz without any tolerance or limit. The values of absolute attenuation a_{abs} 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	2.2	dB	max.	2.5	dB
Nominal frequency			f_N				63.86	MHz
Passband			PB			f_N ±	400	kHz
Passband variation			*)	0.05	dB	max.	0.2	dB
Absolute attenuation			a_{abs}					
0.3	MHz ...	40	MHz	65	dB	min.	45	dB
40	MHz ...	55	MHz	53	dB	min.	40	dB
55	MHz ...	59	MHz	48	dB	min.	25	dB
70	MHz ...	75	MHz	45	dB	min.	25	dB
75	MHz ...	120	MHz	50	dB	min.	40	dB
Power durability				-		max.	10	dBm
Operating temperature range			OTR	-			+23 °C	
Storage temperature range				-			-40 °C ... +85 °C	
Temperature coefficient of frequency			TC_f **)	-78	ppm/K		-	

*) detrend 3rd order
**) $\Delta f = TC_f(T - T_A)f_N$

Generated:

Checked / Approved:

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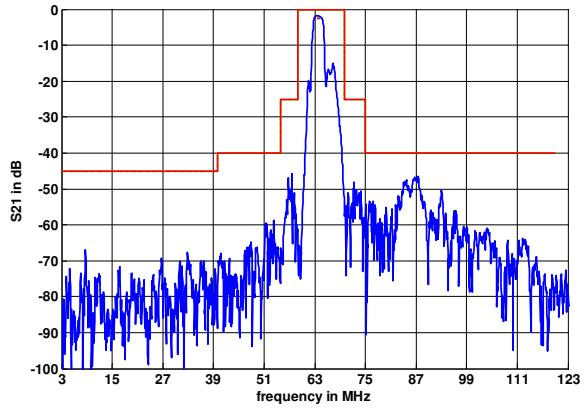
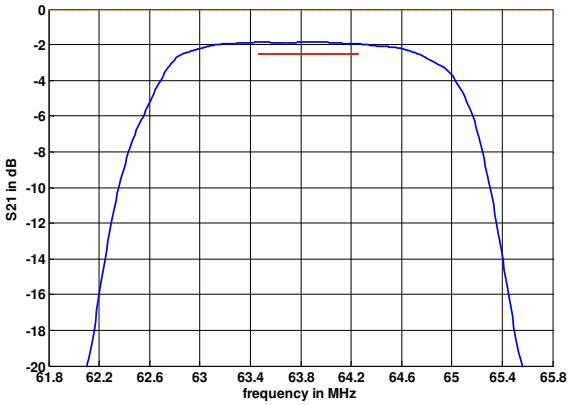
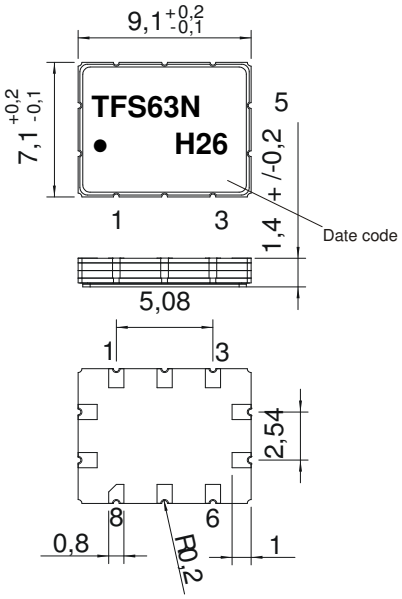
Filter characteristic





Construction and pin connection

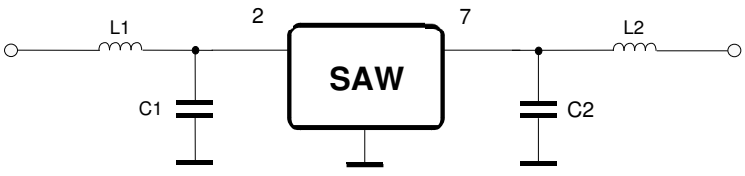
(All dimensions in mm)



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

Date code:	Year + week
H	2016
J	2017
K	2018
...	

Test circuit



1, 3, 4, 5, 6, 8, 9, 10

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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.

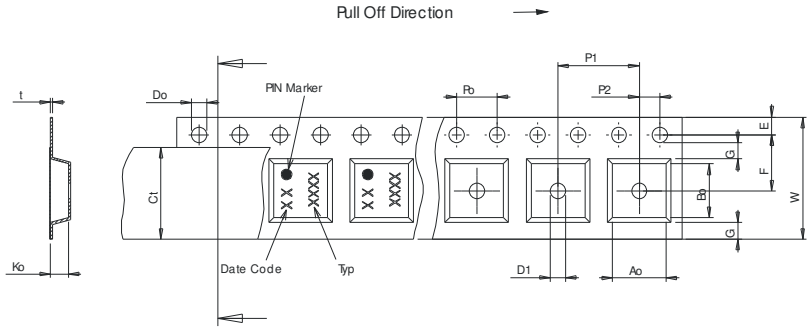
ESD SIMULATION MODEL	CLASSIFICATION LEVEL	CRITERIA
Human Body Model (HBM) acc. to ANSI/ESDA/JEDEC JS-001-2014	Class 0B	1 positive + 1 negative pulse 125 … 250 Volts

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

Packing

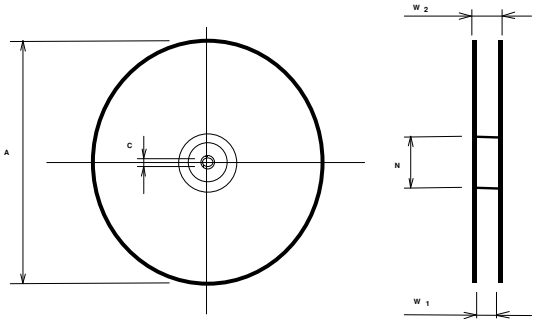
Tape & Reel: IEC 286 – 3, with exception of value for N and minimum bending radius;
tape type II, embossed carrier tape with top cover tape on the upper side;

max. pieces of filters per reel:	2000
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	:	16.00 ± 0.3
Po	:	4.00 ± 0.1
Do	:	1.50 +0.1/-0
E	:	1.75 ± 0.10
F	:	7.50 ± 0.10
G(min)	:	0.60
P2	:	2.00 ± 0.1
P1	:	12.00 ± 0.1
D1(min)	:	1.50
Ao	:	7.60 ± 0.10
Bo	:	9.60 ± 0.10
Ct	:	13.3



Reel (all dimensions in mm)

A	:330	or 180
W1	: 16.4	
W2(max)	: 22.4	
N(min)	: 50	
C	: 13.0	

The minimum bending radius is 45 mm.

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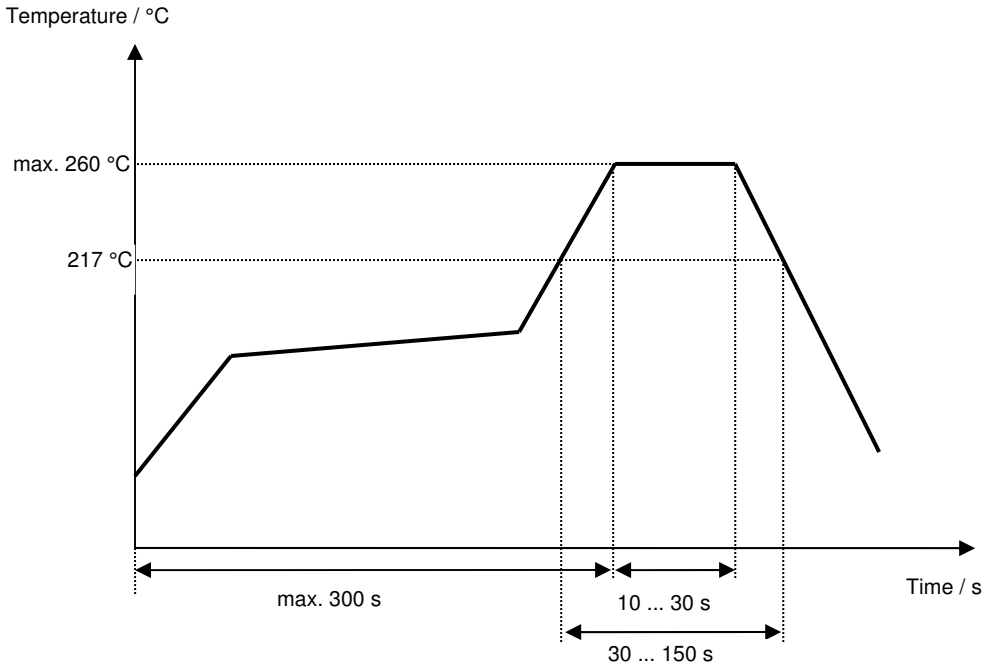
Air reflow temperature conditions

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	C. Noack	22.06.2016

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