

Measurement condition

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

Characteristics

Remark:

The reference level for the relative attenuation a_{rel} of the TFS806A 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 806 MHz without any tolerance or limit. The values of relative attenuation a_{rel} are guaranteed for 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	2.5 dB	max.	3.0	dB
Nominal frequency	f_N			806.0	MHz
Passband	PB			$f_N \pm 15.0$	MHz
Passband variation		0.5 dB	max.	0.8	dB
Relative attenuation	a_{rel}				
1.0 MHz ... 715.4 MHz		51 dB	min.	25	dB
715.4 MHz ... 761.0 MHz		17 dB	min.	15	dB
761.0 MHz ... 770.0 MHz		10 dB	min.	5	dB
841.0 MHz ... 880.0 MHz		12 dB	min.	10	dB
880.0 MHz ... 921.0 MHz		30 dB	min.	20	dB
921.0 MHz ... 3000.0 MHz		34 dB	min.	25	dB
3000.0 MHz ... 3800.0 MHz		20 dB	min.	15	dB
Group delay ripple within PB		13 ns	max.	50	ns
Return loss within PB		21 dB	min.	9	dB
Operating temperature range	OTR	-		- 40 °C ... + 85 °C	
Storage temperature range		-		- 40 °C ... + 85 °C	
Temperature coefficient of frequency	TC_f *	-72 ppm/K			

*) $\Delta f_c(\text{Hz}) = TC_f (\text{ppm/K}) \times (T - T_o) \times f_{T_o} (\text{MHz})$

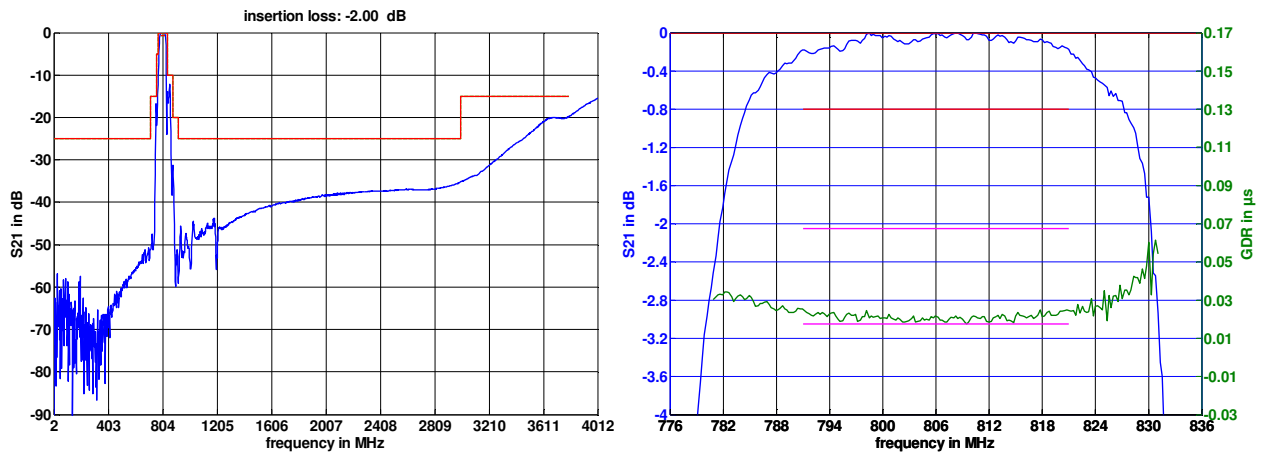
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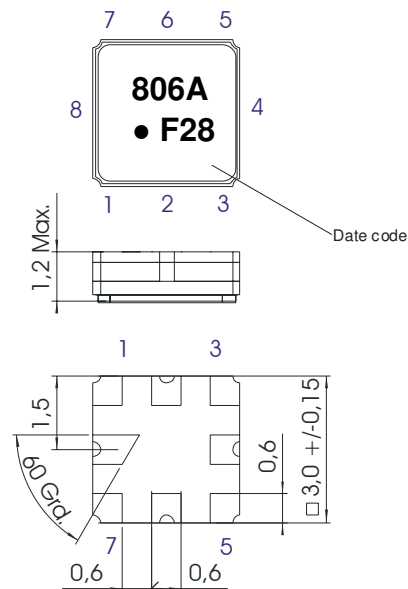
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Filter characteristic



Construction and pin connection

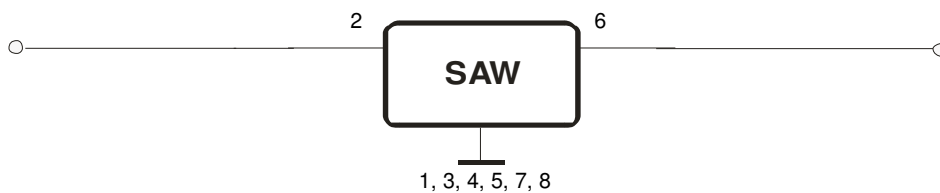
(All dimensions in mm)



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

Date code: Year + week
 F 2015
 G 2016
 H 2017
 ...

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, 1ms, half sine wave, 3 shocks each plane;
DIN IEC 68 T2 - 27
2. Vibration: 10Hz to 500Hz, 0.35 mm or 5g respectively, 1 octave per min, 10 cycles per plane, 3 planes; DIN IEC 68 T2 - 6
3. Change of temperature: -55°C to 125°C / 15min. each / 100 cycles
DIN IEC 68 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;

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

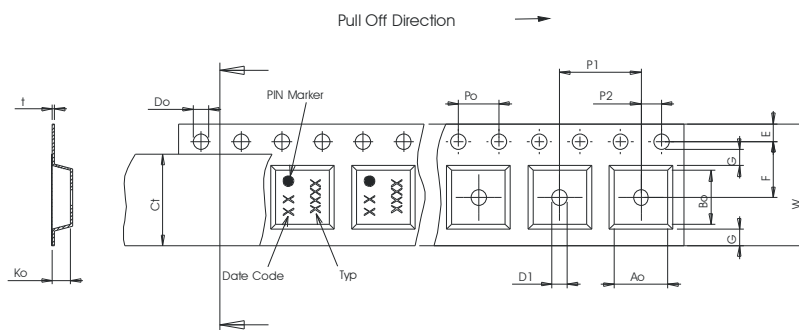
Packing

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: 3000
 reel of empty components at start: min. 300 mm
 reel of empty components at start including leader: min. 500 mm
 trailer: min. 300 mm

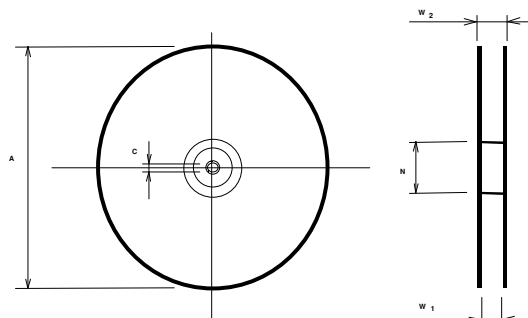
Tape (all dimensions in mm)

- 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 : 5.3 ± 0.1



Reel (all dimensions in mm)

- A : 330 or 180
- W1 : 8.4 +1.5/-0
- W2(max) : 14.4
- N(min) : 60
- C : 13.0 ± 0.2



The minimum bending radius is 45 mm.

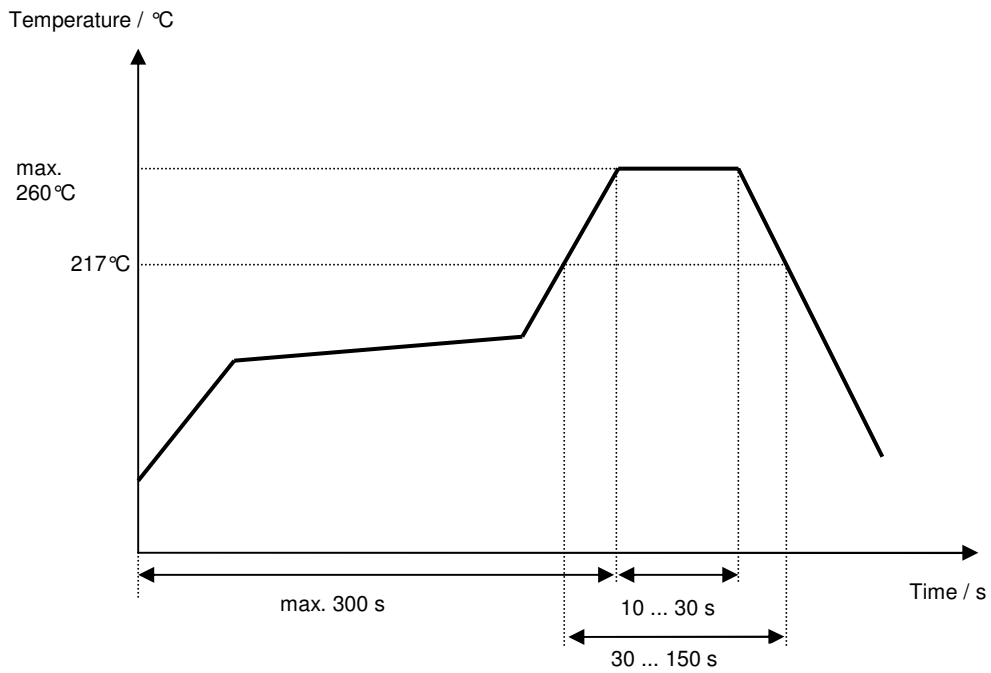
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Air reflow temperature conditions

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	S.Springfeldt	09.06.2015
1.1	Correction of laser marking image	S.Springfeldt	09.07.2015