

VI TELEFILTER**Filter specification****TFS 915L****1/5****Measurement condition**

Ambient temperature:	23	°C
Input power level:	0	dBm
Terminating impedance:		
Input:	50	Ω
Output:	50	Ω
Source:	128 Ω -2,5 pF	
Load:	128 Ω -2,5 pF	

Characteristics

Remark:

The reference level for the relative attenuation a_{rel} of the TFS 915L is the minimum attenuation in the pass band. The minimum attenuation in the pass band is defined as the insertion loss a_e . The nominal frequency f_N is fixed at 915 MHz without any tolerance or limit. 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	3,2	dB	max.	5,5	dB
Nominal frequency	f_N	-			915	MHz
Passband @3dB	PB	1265	KHz	$f_N \pm$	0,35	
Amplitude ripple	within PB	0,4	dB	max.	3,5	dB
Relative attenuation	a_{rel}					
@ $f_N - 10,7$	MHz	50	dB	min.	20	dB
@ $f_N + 10,7$	MHz	45	dB	min.	20	dB
@ $f_N - 21,4$	MHz	60	dB	min.	30	dB
@ $f_N + 21,4$	MHz	45	dB	min.	30	dB
Input power level		-		max.	10	dBm
Operating temperature range	OTR	-			- 10 °C ... + 60 °C	
Storage temperature range		-			- 40 °C ... + 85 °C	
Frequency inversion temperature		25	°C		-	
Temperature coefficient of frequency	TC_f *	- 0,035	ppm/K ²		-	

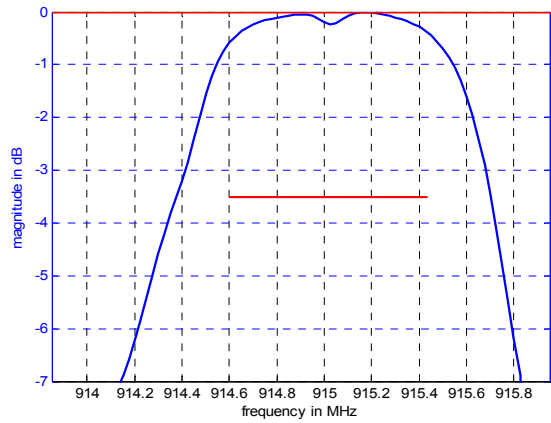
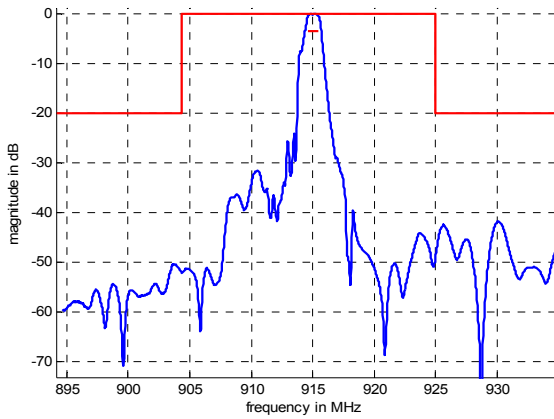
*) $\Delta f_c(\text{Hz}) = TC_f(\text{ppm/K}^2) \times (T - T_0)^2 \times f_{CAT}(\text{MHz})$.

Generated:**Checked / Approved:**

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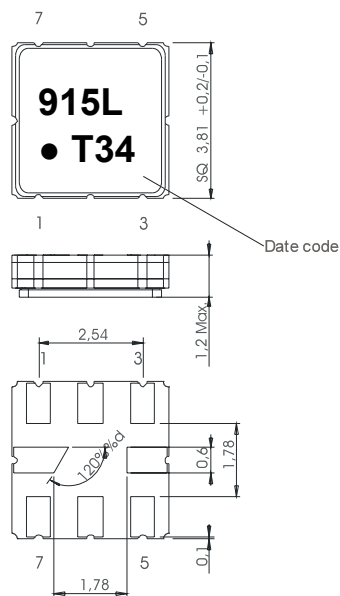
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Filter characteristic



Construction and pin connection

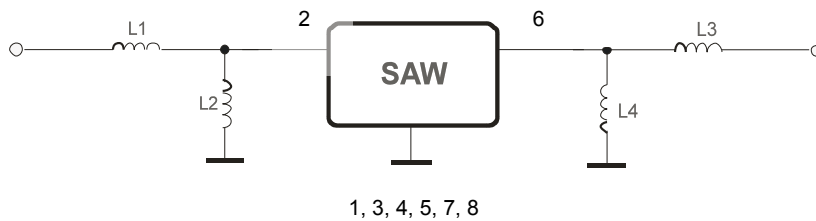
(All dimensions in mm)



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

Date code: Year + week
 T 2005
 U 2006
 V 2007
 ...

50 Ω Test circuit



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Stability characteristics

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

- 1. Shock: 500g, 1 ms, half sine wave, 3 shocks each plane;
DIN IEC 68 T2 - 27
- 2. Vibration: 10 Hz to 500 Hz, 0,35 mm or 5 g respectively, 1 octave per min, 10 cycles per plan, 3 plans;
DIN IEC 68 T2 - 6
- 3. Change of temperature: -55 °C to 125°C / 30 min. each / 10 cycles
DIN IEC 68 part 2 – 14 Test N
- 4. Resistance to solder heat (reflow): reflow possible: twice max.;
for temperature conditions refer to the attached "Air reflow temperature conditions" on page 4;

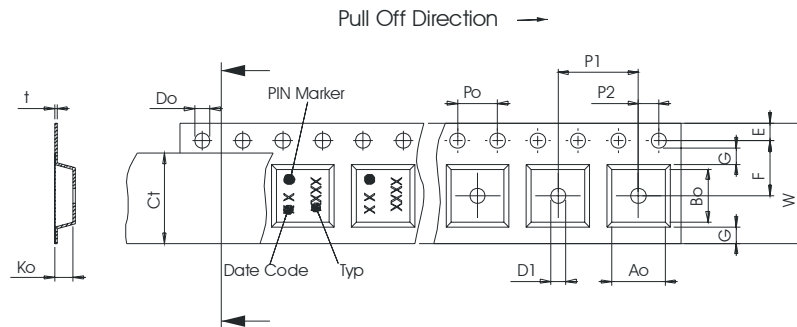
Packing

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 peer 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

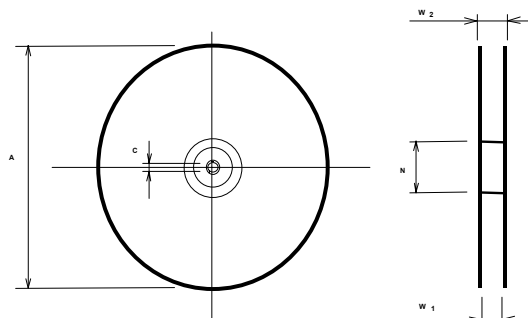
Tape (all dimensions in mm)

- W : 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 : 9,5 ± 0,1



Reel (all dimensions in mm)

- A : 330
- W1 : 12,4 +2/-0
- W2(max) : 18,4
- N(min) : 50
- C : 13,0 +0,5/-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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VI TELEFILTER**Filter specification****TFS 915L****5/5****History**

Version	Reason of Changes	Name	Date
1.0	Generation of Filter specification	Dr. Sabah	16.08.200

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