Measurement condition

Ambient temperature:	23	℃
Input power level:	0	dBm
Terminating impedance:		
Input:	43 Ω || - 1 pF	
Output:	43 Ω || - 1 pF	
Source Impedance:	50	Ω
Load Impedance:	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 1747,5 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	dB	max.	2,5	dB
Nominal frequency	f_N		-			1747,5	MHz
Passband	PB		-		f_N	± 37,5	MHz
Absolute attenuation	a_{abs}						
1 MHz ... 350 MHz			48	dB	min.	34	dB
350 MHz ... 1678 MHz			15	dB	min.	14	dB
1819 MHz ... 4000 MHz			18	dB	min.	14	dB
Input power level wilthin PB			-		max.	7	dBm
Return loss within PB			10,5	dB	max.	8	dB
Operating temperature range	OTR		-		- 40 ℃ ... + 85℃		
Storage temperature range			-		- 40 ℃ ... + 85℃		
Temperature coefficient of frequency	TC_f	*	-46	ppm/K		-	

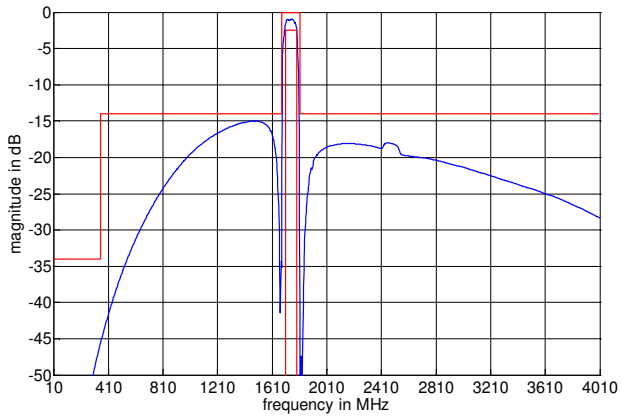
*) $\Delta f(Hz) = TC_f(ppm/K) \times (T-T_0) \times f_{To}(MHz)$.

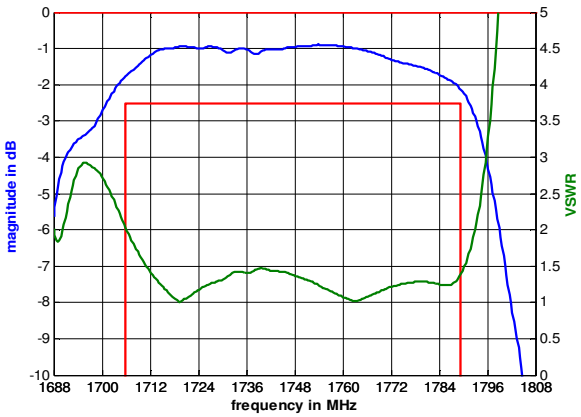
Generated:

Checked / Approved:

Vectron International GmbH
Potsdamer Straße 18
D 14 513 TELTOW / Germany
Tel: (+49) 3328 4784-0 / Fax: (+49) 3328 4784-30
E-Mail: tft@vectron.com

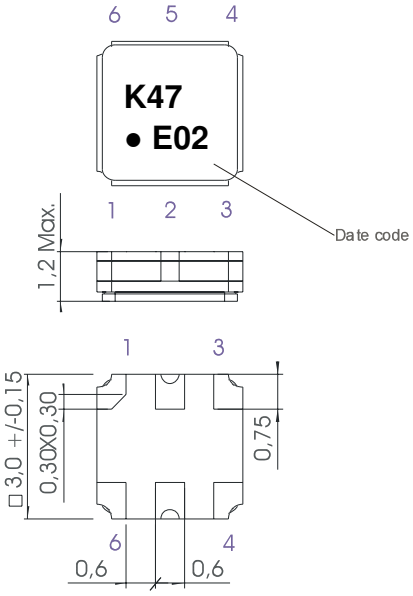
Filter characteristic





Construction and pin connection

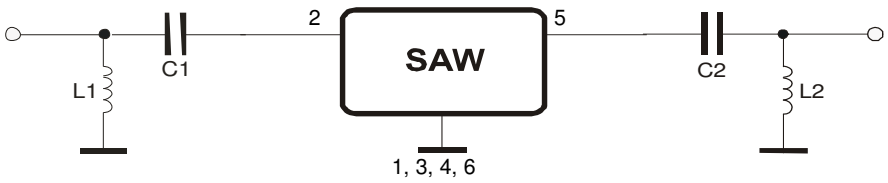
(All dimensions in mm)



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

Date code:	Year + week
E	2014
F	2015
G	2016
...	

50 Ω Test circuit



Vectron International GmbH
Potsdamer Straße 18
D 14 513 TELTOW / Germany
Tel: (+49) 3328 4784-0 / Fax: (+49) 3328 4784-30
E-Mail: tft@vectron.com

Stability characteristics, reliability

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

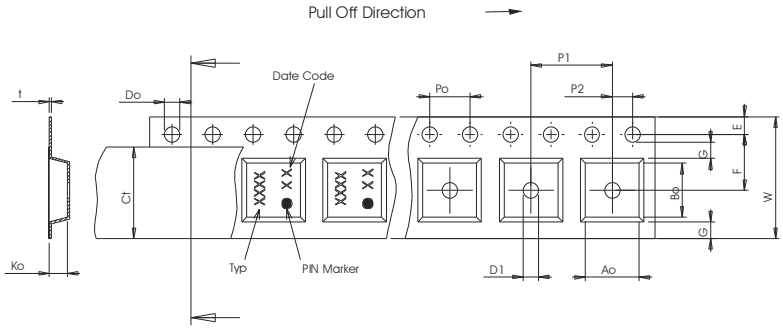
1. Shock:	500g, 1 ms, half sine wave, 3 shocks each plane; DIN IEC 68 T2 - 27
2. Vibration:	10 Hz to 500 Hz, 0.35 mm or 5 g respectively, 1 octave per min, 10 cycles per plane, 3 planes; DIN IEC 68 T2 - 6
3. Change of temperature:	-55 °C to 125°C / 15 min. each / 100 cycles DIN IEC 68 part 2 – 14 Test 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

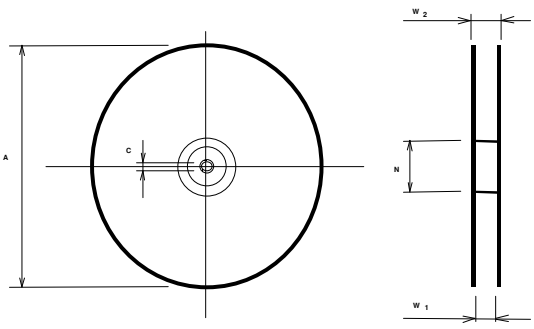
Tape & Reel: IEC 286 – 3, with exception of value for N and minimum bending radius;
tape type II, embossed carrier tape with top cover tape on the upper side;

max. pieces of filters per reel:	9000
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	:	5,5 ± 0,1



Reel (all dimensions in mm)

A	:330	
W1	: 8,4	+1,5/-0
W2(max)	: 14,4	
N(min)	: 50	
C	: 13,0	+0,5/-0,2

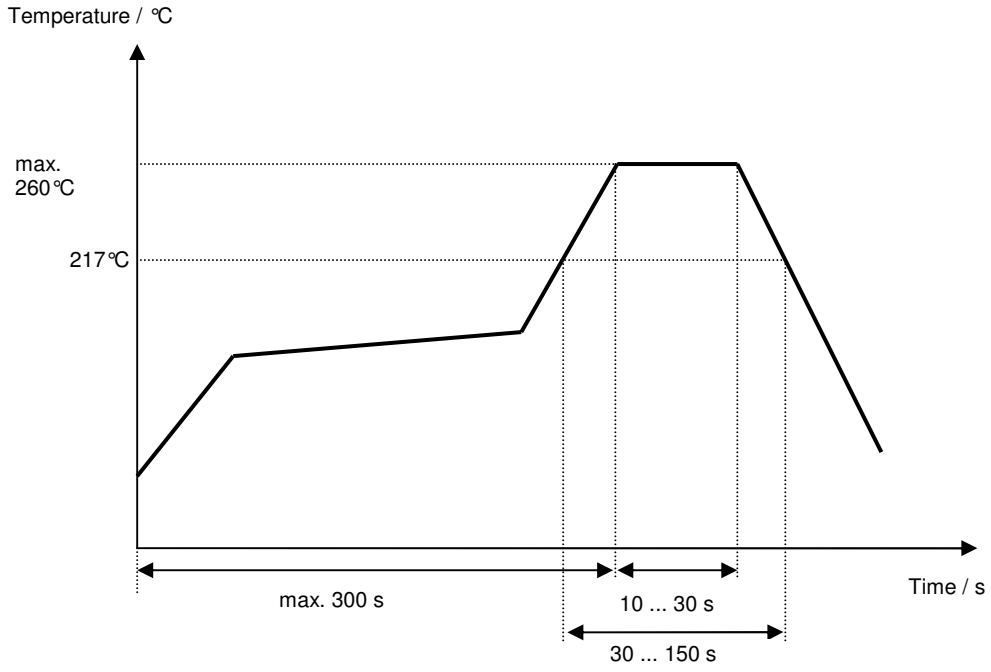
The minimum bending radius is 45 mm.

Vectron International GmbH
Potsdamer Straße 18
D 14 513 TELTOW / Germany
Tel: (+49) 3328 4784-0 / Fax: (+49) 3328 4784-30
E-Mail: tft@vectron.com

Air reflow temperature conditions

Conditions	**Exposure**
Average ramp-up rate (30℃ to 217℃)	less than 3℃/second
> 100℃	between 300 and 600 seconds
> 150℃	between 240 and 500 seconds
> 217℃	between 30 and 150 seconds
Peak temperature	max. 260℃
Time within 5℃ of actual peak temperature	between 10 and 30 seconds
Cool-down rate (Peak to 50℃)	less than 6℃/second
Time from 30℃ to Peak temperature	no greater than 300 seconds

Chip-mount air reflow profile



Vectron International GmbH
Potsdamer Straße 18
D 14 513 TELTOW / Germany
Tel: (+49) 3328 4784-0 / Fax: (+49) 3328 4784-30
E-Mail: tft@vectron.com

History

Version	Reason of Changes	Name	Date
1.0	- Generation of specification according to customer requirements.	Roizengaft	16.02.2004
1.1	- Add of matching network	Roizengaft	25.02.2004
1.2	- Change absolute attenuation from 11 dB to 14 dB	Dr. Wall	13.05.2004
1.3	- Change test circuit	M. Springfeldt	26.07.2004
1.4	- Changed reflow profile; added typical values and filter characteristic; generation of filter specification	Martens	18.01.2005
1.5	- Changed OTR and stability characteristics	Strehl	26.06.2007
1.6	- Maximum input power updated	Kortenbeutel	07.01.2014

Vectron International GmbH
Potsdamer Straße 18
D 14 513 TELTOW / Germany
Tel: (+49) 3328 4784-0 / Fax: (+49) 3328 4784-30
E-Mail: tft@vectron.com