Vectron International — Filter specification — TFS 256 — 1/5

Measurement condition

Ambient temperature:	23	°C
Input power level:	0	dBm
Terminating impedance:		
Input:	200	Ω
Output:	200	Ω

Characteristics

Remark:
The nominal frequency f_N is fixed at 256,0 MHz. The insertion loss a_e is defined as loss value determined at f_N. All specified data are met within the operating temperature range.

D a t a		**typ. value**		**tolerance / limit**		
Insertion Loss (reference level)	a_e	1,35	dB	max.	3,5	dB
Nominal Frequency	f_N	-			256,0	MHz
Centre Frequency	f_C	256,0	MHz			
Bandwidth	BW					
3 dB		5,85	MHz		-	
Absolute Attenuation	a_{abs}					
f_N - 85,333 MHz		53	dB	min.	48	dB
f_N + 85,333 MHz		48	dB	min.	45	dB
f_N ± 170,666 MHz		51	dB	min.	48	dB
f_N + 256,000 MHz		51	dB	min.	48	dB
Input power level				max.	10	dBm
Operating Temperature Range	OTR	-		- 25 °C ... + 85 °C		
Storage Temperature Range		-		- 45 °C ... + 95 °C		
Temperature Coefficient of Frequency	TC_f *	- 32	ppm/K			

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

Generated:

Checked / Approved:

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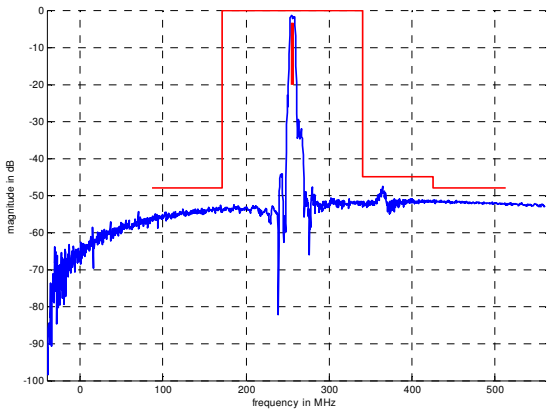
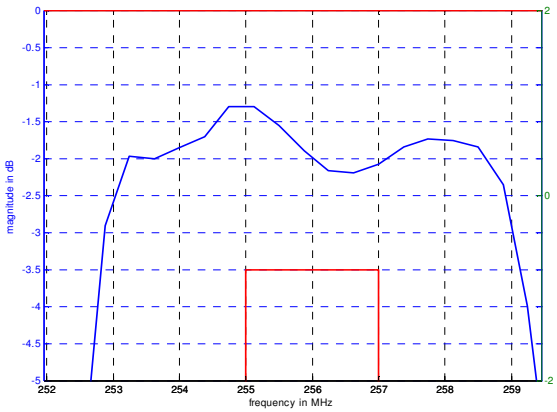
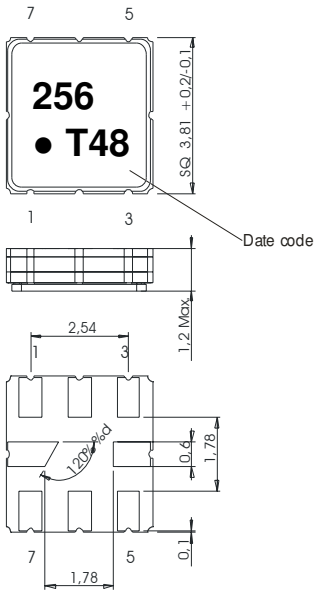
Filter characteristic





Construction and pin connection

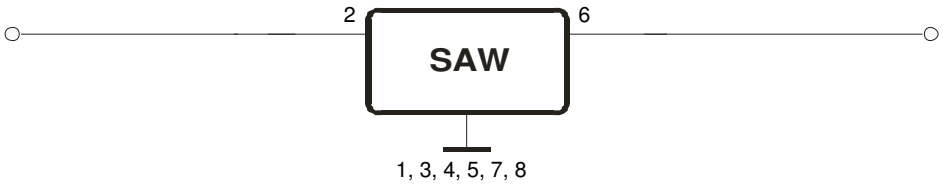
(All dimensions in mm)



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

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

200 Ω Test circuit



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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 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;

This filter is RoHS compliant (2002/95/EG, 2005/618/EG)

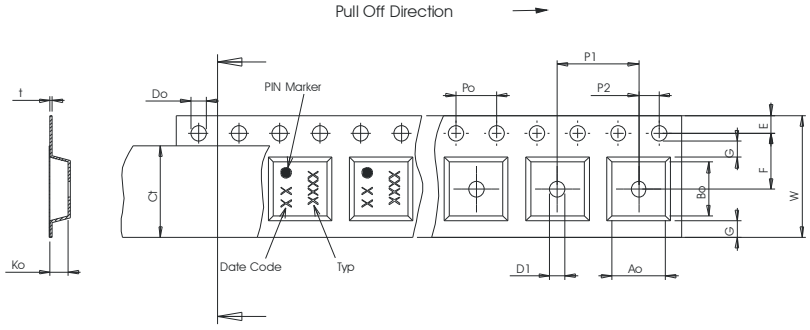
Packing

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

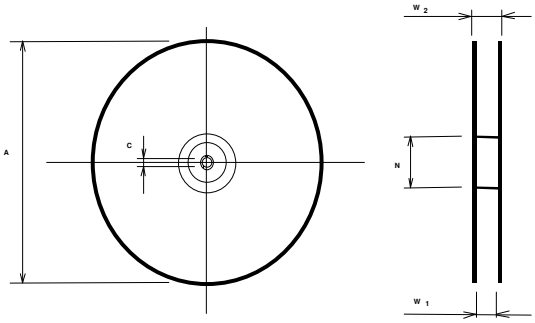
Tape (all dimensions in mm)

W	: 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	: 9,2	± 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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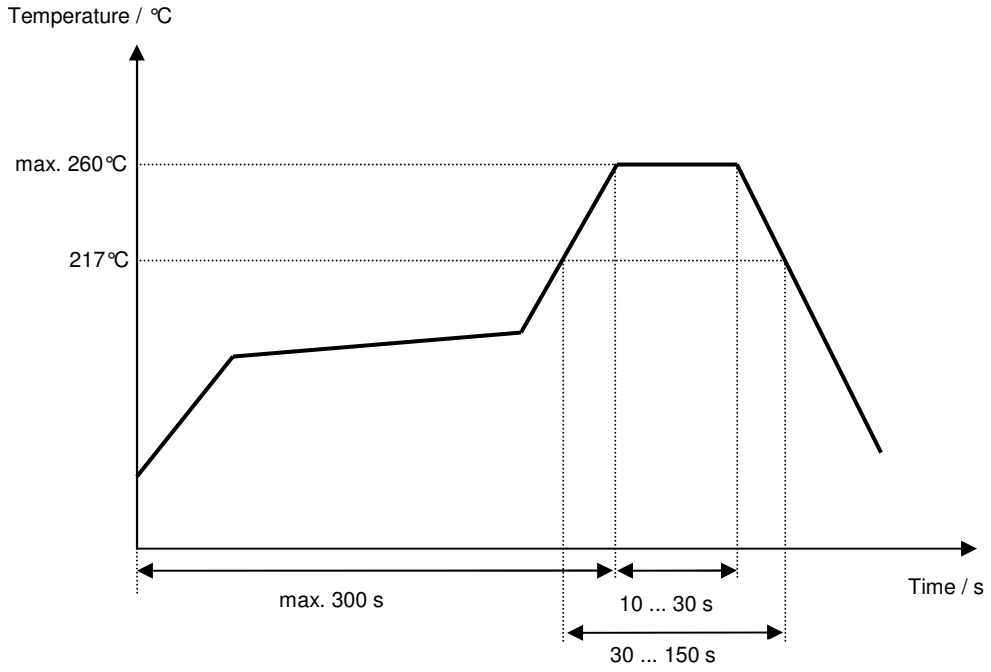
Air reflow temperature conditions

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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History

Version	Reason of Changes	Name	Date
1.0	- Generation of development specification	Strehl	25.08.2005
1.1	- Add typical values, add filter characteristic, - change absolute attenuation, change stability characteristics, - generation of filter specification	Channaa	28.11.2005
2.0	- Changed pull off direction from reel	Schönbein	11.05.2012

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