

VI TELEFILTER**Development specification****TFS 1842A****1/5****Measurement condition**

Ambient temperature: 23 °C
 Input power level: 13 dBm
 Terminating impedances
 for input: 50 Ω (unbalanced)
 for output: 50 Ω // 1pF (balanced)

Characteristics**Remark:**

The maximum attenuation in the pass band is defined as the insertion loss a_g . The nominal frequency f_N is fixed at 1842,5 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.

Data		typ. value		tolerance/limit		
Insertion loss (Reference level)	within PB	-		max.	4,3	dB
Nominal frequency	f_N	-			1842,5	MHz
Centre frequency	f_C	1842,5	MHz	-		
Pass band	PB	-		$f_N \pm$	37,5	MHz
Pass-band ripple	within PB	-		max	2,3	dB
Absolute attenuation	a_{abs}					
0,0 MHz ...	1160,0 MHz	-		min	37	dB
1160,0 MHz ...	1430,0 MHz	-		min	30	dB
1430,0 MHz ...	1705,0 MHz	-		min	20	dB
1705,0 MHz ...	1785,0 MHz	-		min	9	dB
1920,0 MHz ...	1980,0 MHz	-		min	9	dB
1980,0 MHz ...	2100,0 MHz	-		min	20	dB
2100,0 MHz ...	6000,0 MHz	-		min	20	dB
Operating temperature range					- 10 °C ... + 75 °C	
Storage temperature range					- 40 °C ... + 85 °C	
Temperature coefficient of frequency	TCf	t.b.d.			-	
Input power level				max	5	dBm

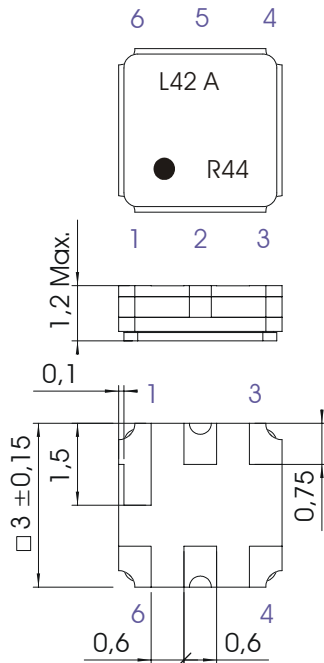
Generated:**Checked / approved:**

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

VI TELEFILTER reserves the right to make changes to the product(s) and/or information contained herein without notice. No liability is assumed as a result of their use or application. No rights under any patent accompany the sale of any such product(s) or information.

Construction, pin configuration and 50 Ohm matching network

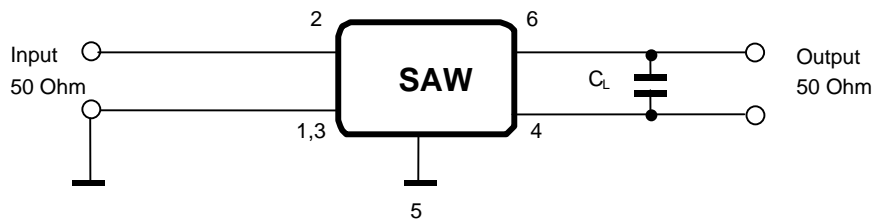
(All dimensions in mm)



Date code: Year+week

N	2001
P	2002
R	2003
	...

Pin 1	Input Ground
Pin 2	Input, unbalanced
Pin 3	Input Ground
Pin 4	Output, balanced
Pin 5	Ground
Pin 6	Output, balanced

50 Ω matching network:

Tele Filter GmbH
 Potsdamer Straße 18
 D 14 513 TELTOW / Germany
 Tel: (+49) 3328 4784-0 / Fax: (+49) 3328 4784-30
 E-Mail: ft@telefilter.com

VI TELEFILTER reserves the right to make changes to the product(s) and/or information contained herein without notice. No liability is assumed as a result of their use or application. No rights under any patent accompany the sale of any such product(s) or information.

Stability Characteristics

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

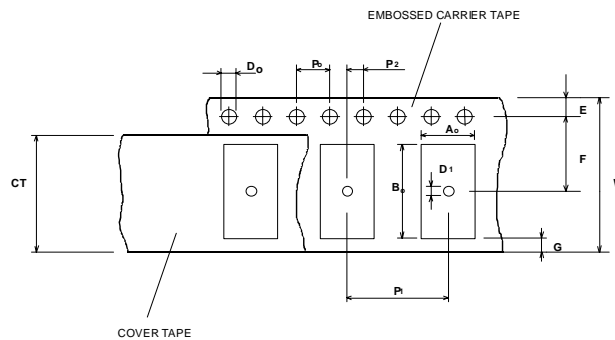
1. Shock: 500g, 18 ms, half sine wave, 3 shocks each plane;
DIN IEC 68 T2 - 27
2. Vibration: 10 Hz to 500 Hz, 0,35 mm or 5g respectively, 1 octave per min, 10 cycles per plan, 3 plans;
DIN IEC 68 T2 - 6
3. Change of temperature: -55 °C to 125°C / 30 min. each / 10 cycles
DIN IEC 68 part 2 – 14 Test N
4. Resistance to solder heat (reflow): reflow possible: twice max. ;
for temperature conditions, please 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 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

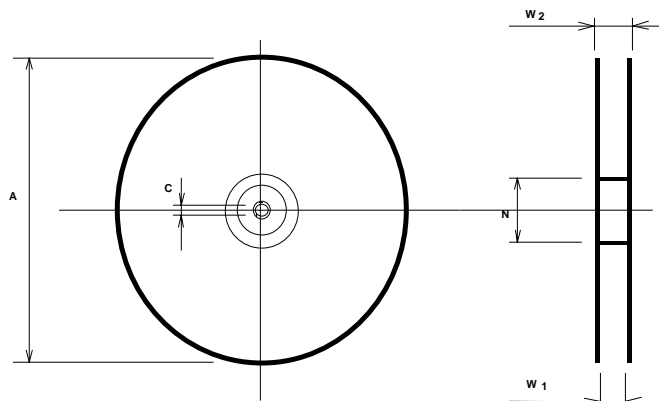
Tape (all dimensions in mm)

W	: 8	± 0,3
Po	: 4	± 0,1
Do	: 1,5	+ 0,1
E	: 1,75	± 0,1
F	: 3,5	± 0,05
G (min)	: 0,75	
P2	: 2	± 0,05
P1	: 4	± 0,1
D1(min)	: 1,5	
Ao	: 3,25	± 0,1
Bo	: 3,25	± 0,1
CT	: 5,5	± 0,2



Reel (all dimensions in mm):

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



The minimum bending radius is 45 mm. The mounting surface of the filters faces the bottom side of the embossed carrier tape. Markings on the filters can be read if the upper side of the carrier tape is regarded with the sprocket holes on its right.

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

VI TELEFILTER reserves the right to make changes to the product(s) and/or information contained herein without notice. No liability is assumed as a result of their use or application. No rights under any patent accompany the sale of any such product(s) or information.

Air reflow temperature conditions

1st and 2nd air reflow profile

Name:	pre-heating periods	main-heating periods	peak temperature
Temperature:	150 °C - 170 °C	over 200 °C	255 °C ± 5 °C
Time:	60 sec. - 90 sec.	20 sec. - 25 sec.	

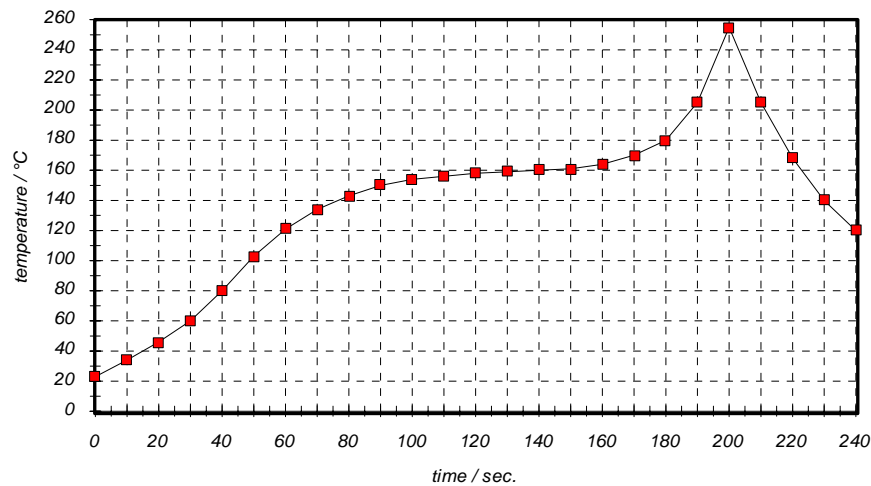
Chip-mount air reflow profile

Table for temperature vs. time during the air reflow process

Tolerance of temperatures: ± 5 °C

time / sec.	temperature / °C	time / sec.	temperature / °C
0	23	140	160
10	34	150	161
20	46	160	164
30	60	170	170
40	80	180	180
50	103	190	205
60	121	195	230
70	134	200	255
80	143	205	230
90	150	210	205
100	154	215	180
110	156	220	165
120	158	230	140
130	159	240	120

History

Version	Reason of Change	Name	Date
1.0	generation of "Development specification" according to customer requirements	Dr. Sabah	24.07.2003
1.1	add page 2 ... 5 of specification	Konietzko	16.09.2003
1.2	change relative attenuation to absolute attenuation	Roizengaft	17.10.2003
1.3	change of package layout	Roizengaft	27.10.2003
1.4	definition of packing	Roizengaft	30.10.2003