

VI TELEFILTER**Filter specification****TFS 1575A****1/5****Measurement condition**

Ambient temperature:	23	°C
Input power level:	0	dBm
Terminating impedance:		
Input:	50	Ω
Output:	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 1575,42 MHz without 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 (reference level)		a_e	1,5 dB	max.	2,5	dB
			-		-	
Nominal frequency		f_N	-		1575,42	MHz
Passband		PB	-	$f_N \pm$	1,2	MHz
Pass band ripple			0,7 dB	max.	1,0	dB
Absolute attenuation		a_{abs}				
0,3 MHz ... 1520 MHz			42 dB	min.	35	dB
1520 MHz ... 1535 MHz			39 dB	min.	30	dB
1625 MHz ... 1630 MHz			55 dB	min.	30	dB
1630 MHz ... 2400 MHz			45 dB	min.	40	dB
2400 MHz ... 3000 MHz			45 dB	min.	30	dB
3000 MHz ... 6000 MHz			22 dB	min.	10	dB
VSWR within PB			1,5 : 1		2 : 1	
Operating temperature range		OTR	-		- 40 °C ... + 85 °C	
Storage temperature range			-		- 45 °C ... + 85 °C	
Temperature coefficient of frequency		TC_f *	-36 ppm/K		-	

*) $\Delta f(\text{Hz}) = TC_f(\text{ppm/K}) \times (T - T_0) \times f_{T0}(\text{MHz})$.

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

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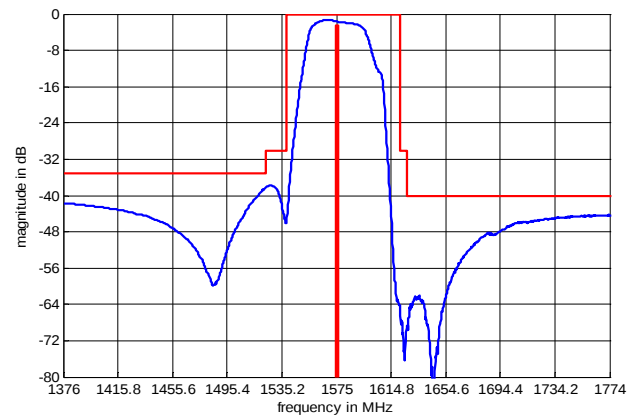
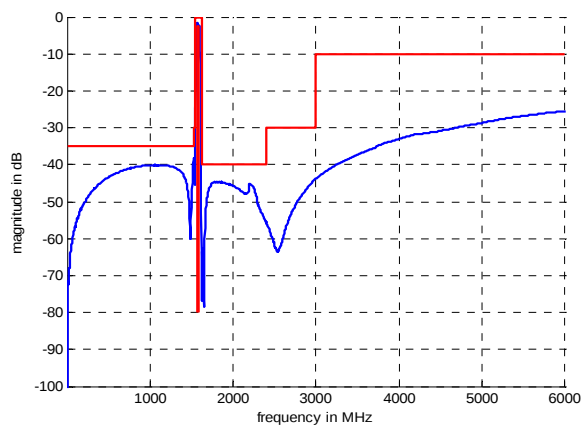
VI TELEFILTER

Filter specification

TFS 1575A

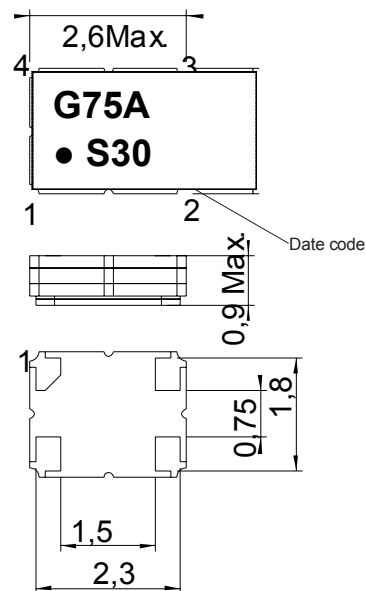
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Filter characteristic



Construction and pin connection

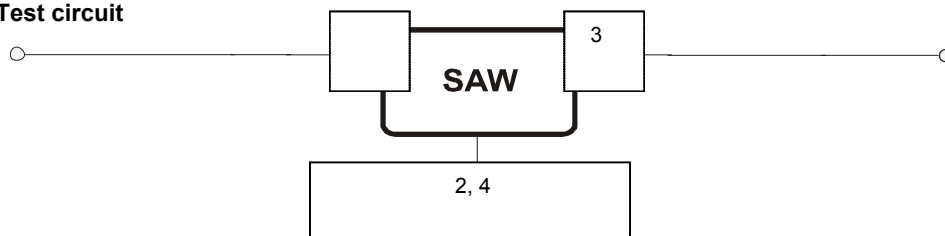
(All dimensions in mm)



1	Input
2	Ground
3	Output
4	Ground

Date code:	Year + week
S	2004
T	2005
U	2006
...	

50 Ω Test circuit



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VI TELEFILTER**Filter specification****TFS 1575A****3/5****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 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;

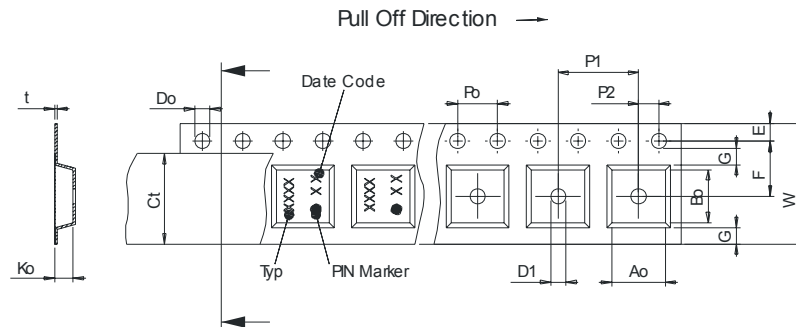
Packing

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

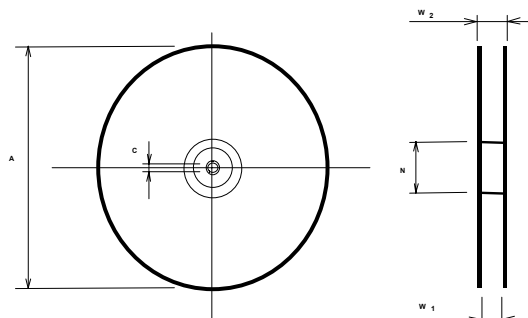
max. pieces of filters peer reel: 9000
reel of empty components at start: min. 300 mm
reel of empty components at start including leader: min. 500 mm
trailer: min. 300 mm

Tape (all dimensions in mm)

W	: 8,00 + 0,3/- 0,1
Po	: 4,00 ± 0,1
Do	: 1,50 ± 0,05
E	: 1,75 ± 0,1
F	: 3,50 ± 0,05
G(min)	: 0,75
P2	: 2,00 ± 0,1
P1	: 4,00 ± 0,1
D1(min)	: 1,00
Ao	: 2,25 ± 0,1
Bo	: 2,80 ± 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.

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VI TELEFILTER**Filter specification****TFS 1575A****4/5****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.	

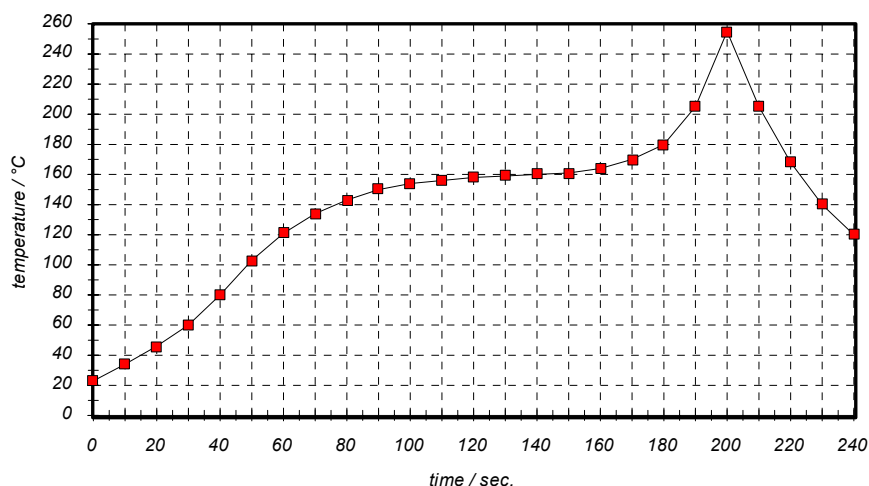
Chip-mount air reflow profile

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

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VI TELEFILTER**Filter specification****TFS 1575A****5/5****History**

Version	Reason of Changes	Name	Date
1.0	- generation of Filter specification	S. Sabah	23.03.2004
1.1	- change construction - add test circuit - add packing	M.Springfeldt	23.07.2004

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