

**VI TELEFILTER****Filter specification****TFS 395****1/5****Measurement condition**

Ambient temperature:	23	°C
Input power level:	0	dBm
Terminating impedance: *		
Input:	256 Ω	-7.1 pF
Output:	288 Ω	-6.1 pF

**Characteristics**

Remark:

The reference level for the relative attenuation  $a_{rel}$  of the TFS 395 is the minimum of the pass band attenuation. This value is defined as the insertion loss  $a_e$ . The nominal frequency  $f_N$  is fixed at 395 MHz without any tolerance. The values of relative attenuation  $a_{rel}$  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.

<b>D a t a</b>		<b>typ. value</b>		<b>tolerance / limit</b>		
<b>Insertion loss</b> (reference level)	$a_e$	10	dB	max.	12	dB
<b>Nominal frequency</b>	$f_N$				395,0	MHz
<b>Passband</b>	PB	19,3	MHz	$f_N$	± 8,5	MHz
<b>Pass band ripple</b>		0,4	dB	max.	1,0	dB
<b>Relative attenuation</b>	$a_{rel}$					
$f_N$	... $f_N$ ± 8,5 MHz	0,7	dB	max.	1	dB
$f_N$ ± 16,5 MHz	... $f_N$ ± 30,0 MHz	39	dB	min.	35	dB
<b>Group delay ripple within PB</b>		29	ns	max.	100	ns
<b>Input power level</b>		-		max.	10	dB
<b>Operating temperature range</b>	OTR	-			- 10 °C ... + 80 °C	
<b>Storage temperature range</b>		-			- 40 °C ... + 85 °C	
<b>Temperature coefficient of frequency</b>	$TC_f$ **	-20	ppm/K		-	

\*) The terminating impedances depend on parasitics and q-values of matching elements and the board used, and are to be understood as reference values only. Should there be additional questions do not hesitate to ask for an application note or contact our design team.

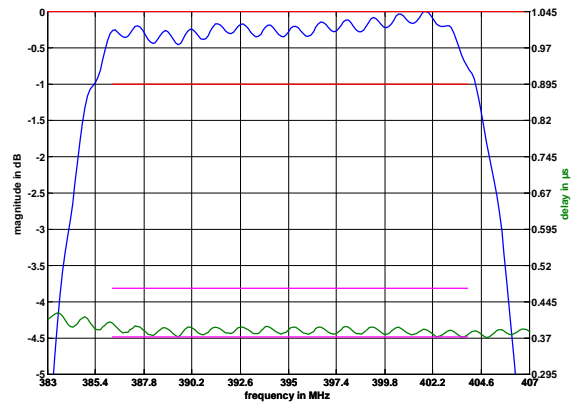
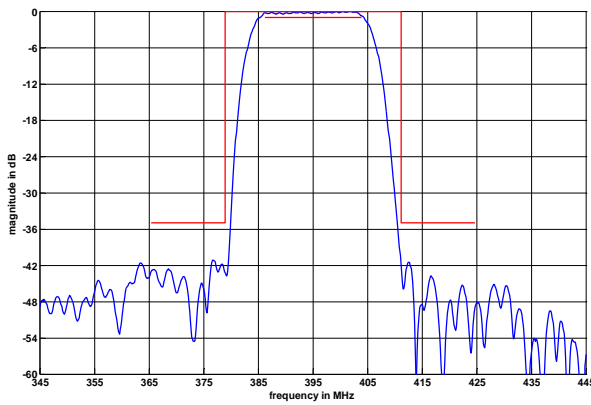
\*\*\*)  $\Delta f_c(\text{Hz}) = TC_f(\text{ppm/K}) \times (T - T_A) \times f_{CAT}(\text{MHz})$

**Generated:****Checked / Approved:**

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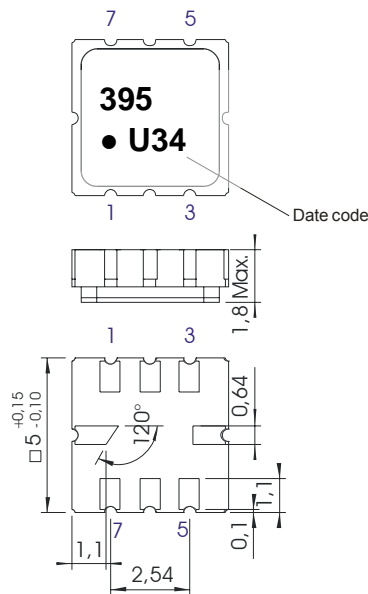
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**Filter characteristic**



**Construction and pin connection**

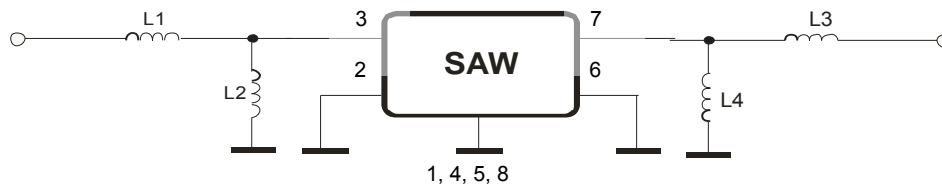
(All dimensions in mm)



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

Date code: Year + week  
 U 2006  
 V 2007  
 W 2008  
 ...

**50 Ohm Test circuit**



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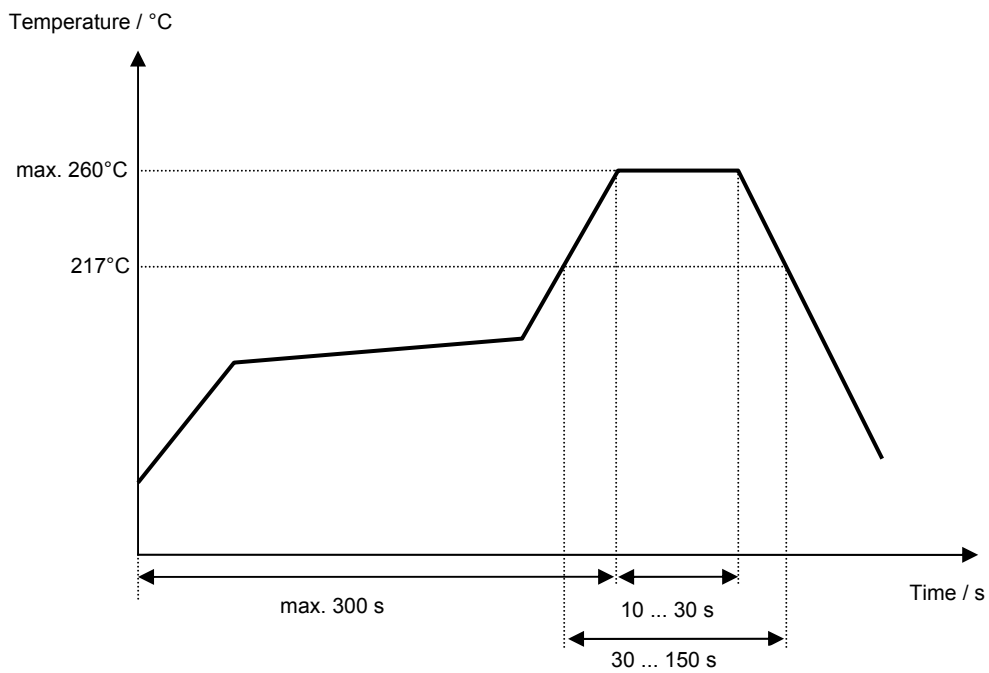
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**Air reflow temperature conditions**

<b>Conditions</b>	<b>Exposure</b>
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 395****5/5****History**

<b>Version</b>	<b>Reason of Changes</b>	<b>Name</b>	<b>Date</b>
1.0	Generation of development specification	Strehl	21.12.2005
1.1	Change construction	Strehl	22.02.2006
1.2	generated of filter specification added terminating impedances added typical values added filter characteristic added test circuit	Chilla	09.08.2006

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