



## **SAW Components**

### **SAW IF filter**

CDMA

<b>Series/type:</b>	<b>B5076</b>
<b>Ordering code:</b>	<b>B39141-B5076-Z510</b>
<b>Date:</b>	<b>Dec 10, 2007</b>
<b>Version:</b>	<b>2.0</b>



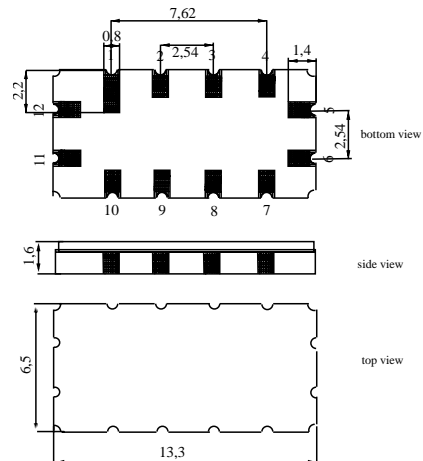
### Application

- Low-loss IF filter for CDMA base station
- Usable passband 25 MHz



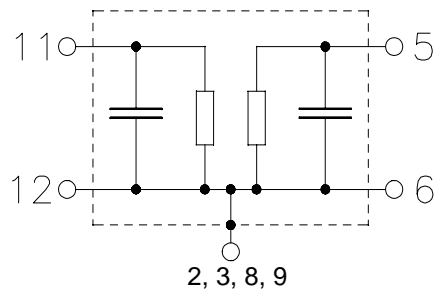
### Features

- Package size 13.3 x 6.5 x 1.6 mm<sup>3</sup>
- Package code QCC12
- RoHS compatible
- Approx. weight 0.44 g
- Ceramic package for Surface Mount Technology (SMT)
- Ni, gold-plated terminals
- Electrostatic Sensitive Device (ESD)
- Filter surface passivated



### Pin configuration

- 11, 12 Input
- 5 Output
- 6 Output ground
- 1, 4, 7, 10 To be grounded
- 2, 3, 8, 9 Case ground





Data sheet



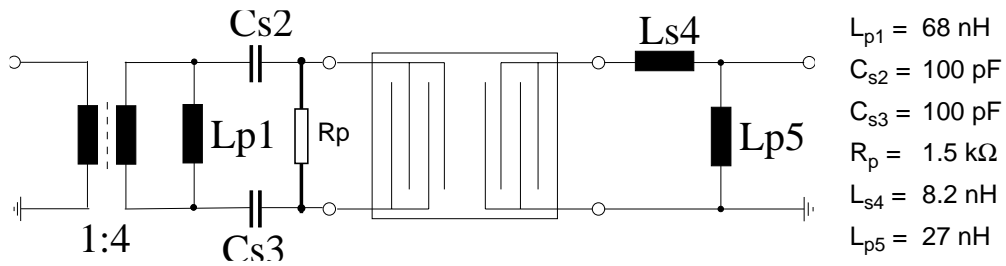
Characteristics

Operating temperature range:  $T = -40$  to  $85\text{ }^{\circ}\text{C}$   
 Terminating source impedance:  $Z_S = 200\ \Omega$  bal. and matching network  
 Terminating load impedance:  $Z_L = 50\ \Omega$  unbal. and matching network

		min.	typ. @ 25 °C	max.	
<b>Nominal frequency</b>	$f_N$	—	140	—	MHz
<b>Minimum insertion attenuation</b> (including matching network)	$\alpha_{\min}$	—	10.2	13	dB
<b>Passband width</b>	$B_{1.2\text{dB}}$				
$\alpha_{\text{rel}} \leq 1.2\text{ dB}$		25	27	—	MHz
<b>Amplitude ripple (p-p)</b>	$\Delta\alpha$				
$f_N \pm 12.5\text{ MHz}$		—	0.7	1.2	dB
<b>Phase ripple (p-p)</b>	$\Delta\varphi$				
$f_N \pm 12.5\text{ MHz}$		—	8	10	$^{\circ}$
<b>Phase ripple (rms)</b>	$\Delta\varphi$				
$f_N \pm 12.5\text{ MHz}$		—	2	—	$^{\circ}$
<b>Group delay ripple (p-p)</b>	$\Delta\tau$				
$f_N \pm 12.5\text{ MHz}$		—	40	100	ns
<b>Absolute group delay</b> mean within	$\tau_{\text{mean}}$				
$f_N \pm 12.5\text{ MHz}$		—	740	—	ns
<b>Relative attenuation</b> (relative to $\alpha_{\min}$ )	$\alpha_{\text{rel}}$				
1 MHz ... 120 MHz		40	45	—	dB
162 MHz ... 201 MHz		40	45	—	dB
201 MHz ... 1 GHz		40	50	—	dB
1 GHz ... 2 GHz		30	40	—	dB
<b>VSWR</b> (input and output)					
$f_N \pm 12.5\text{ MHz}$		—	1.5:1	2:1	
<b>Temperature coefficient of frequency</b>	$TC_f$	—	-87	—	ppm/K



Matching network to 200/50 Ω



- Transformer is only required for measurement at 50 Ω balanced, it accounts for additional 0.8dB insertion loss.

- The parallel resistor can also be omitted. In this case maximum VSWR will be about 0.1 increased, the insertion attenuation will improve by 0.4dB.

- Element values depend upon PCB layout and board parasitics

Maximum ratings

Operable temperature range	T	-40/+85	°C	
Storage temperature range	T <sub>sta</sub>	-40/+85	°C	
DC voltage	V <sub>DC</sub>	0	V	
ESD voltage	V <sub>ESD</sub>	200 <sup>1)</sup>	V	machine model, 1 pulse
Input power	P <sub>IN</sub>	15	dBm	

<sup>1)</sup> acc. to J-STD22A-0115A (machine model, 1 pulse +/-).



SAW Components

B5076

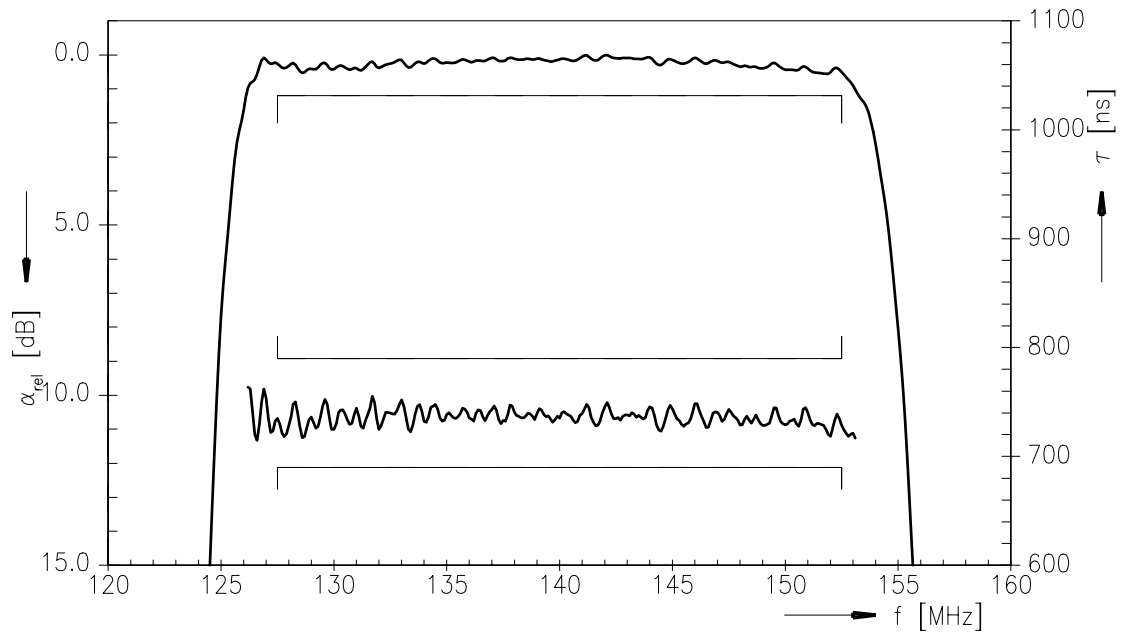
SAW IF filter

140.0 MHz

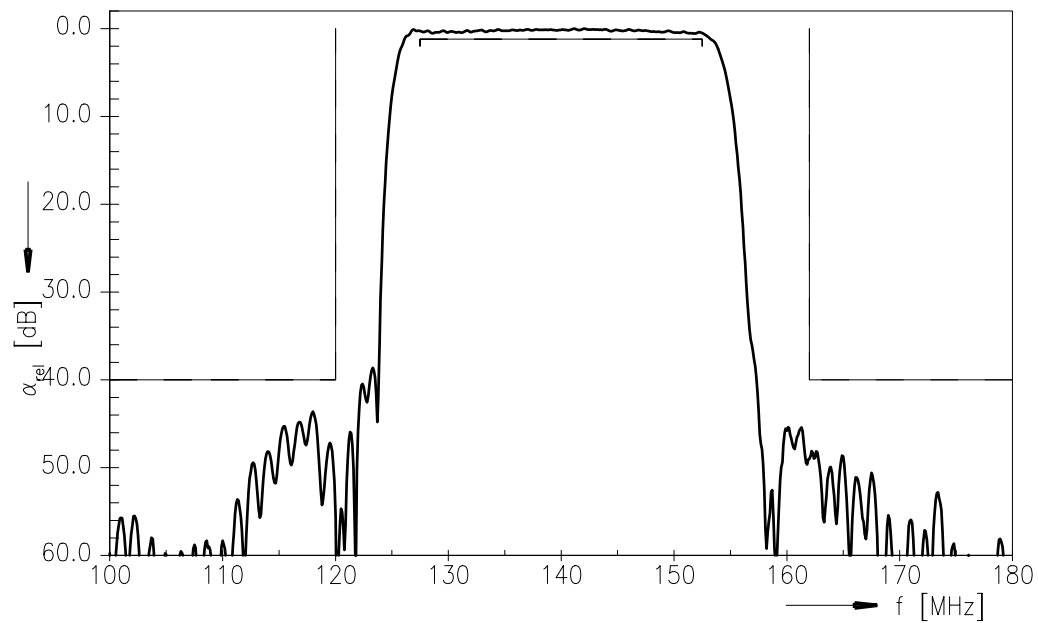
Data sheet



Transfer function (passband)



Transfer function



Please read *cautions and warnings* and *important notes* at the end of this document.



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**B5076**

**SAW IF filter**

**140.0 MHz**

Data sheet



## References

<b>Type</b>	B5076
<b>Ordering code</b>	B39141-B5076-Z510
<b>Marking and package</b>	C61157-A7-A55
<b>Packaging</b>	F61074-V8163-Z000
<b>Date codes</b>	L_1126
<b>S-parameters</b>	
<b>Soldering profile</b>	S_6001
<b>RoHS compatible</b>	defined as compatible with the following documents: "DIRECTIVE 2002/95/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 27 January 2003 on the restriction of the use of certain hazardous substances in electrical and electronic equipment. 2005/618/EC from April 18th, 2005, amending Directive 2002/95/EC of the European Parliament and of the Council for the purposes of establishing the maximum concentration values for certain hazardous substances in electrical and electronic equipment."

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