



## **SAW Components**

### **SAW IF filter**

RadioLink

<b>Series/type:</b>	<b>B5211</b>
<b>Ordering code:</b>	<b>B39141B5211Z510</b>
<b>Date:</b>	<b>June 23, 2009</b>
<b>Version:</b>	<b>2.0</b>



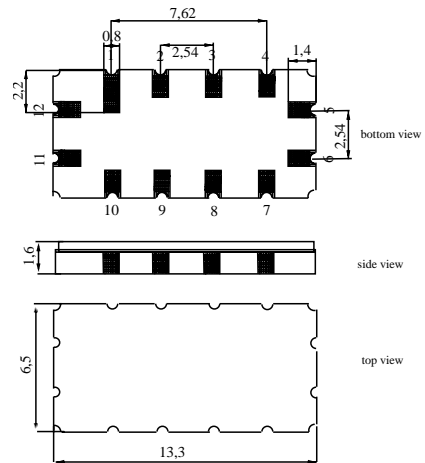
**Application**

- Low-loss IF filter for RadioLink
- Usable passband 17.6 MHz



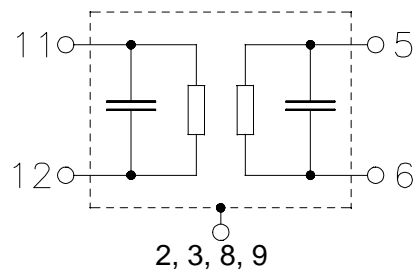
**Features**

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



**Pin configuration**

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





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**140 MHz**

**Data Sheet**



**Characteristics**

Temperature range for specification:  $T = -5\text{ °C to }+80\text{ °C}$   
 Terminating source impedance:  $Z_S = 50\ \Omega$  and matching network  
 Terminating load impedance:  $Z_L = 50\ \Omega$  and matching network

		min.	typ. @ 25 °C	max.	
<b>Nominal frequency</b>	$f_N$	—	140	—	MHz
<b>Minimum insertion attenuation</b> (including matching network)	$\alpha_{\min}$	—	8.7	10	dB
<b>Passband width</b>					
	$\alpha_{\text{rel}} \leq 3.0\text{ dB}$ $B_{3.0\text{dB}}$	22	24.7	—	MHz
	$\alpha_{\text{rel}} \leq 40.0\text{ dB}$ $B_{40\text{dB}}$	—	32	60	MHz
<b>Amplitude ripple (p-p)</b>	$\Delta\alpha$				
	$f_N \pm 8.8\text{ MHz}$	—	0.6	1.0	dB
	$f_N \pm 11.0\text{ MHz}$	—	1.0	3.0	dB
<b>Group delay ripple (p-p)</b>	$\Delta\tau$				
	$f_N \pm 8.8\text{ MHz}$	—	35	160	ns
<b>Relative attenuation</b> (relative to $\alpha_{\min}$ )	$\alpha_{\text{rel}}$				
	$f_N - 130.0\text{ MHz} \dots f_N - 30.0\text{ MHz}$	40	47	—	dB
	$f_N + 30.0\text{ MHz} \dots f_N + 370.0\text{ MHz}$	40	46	—	dB
<b>Temperature coefficient of frequency</b>	$TC_f$	—	-87	—	ppm/K

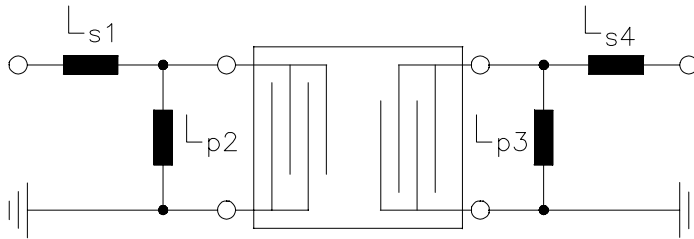


Data Sheet



Matching network to 50 Ω

(Element values depend upon PCB layout)



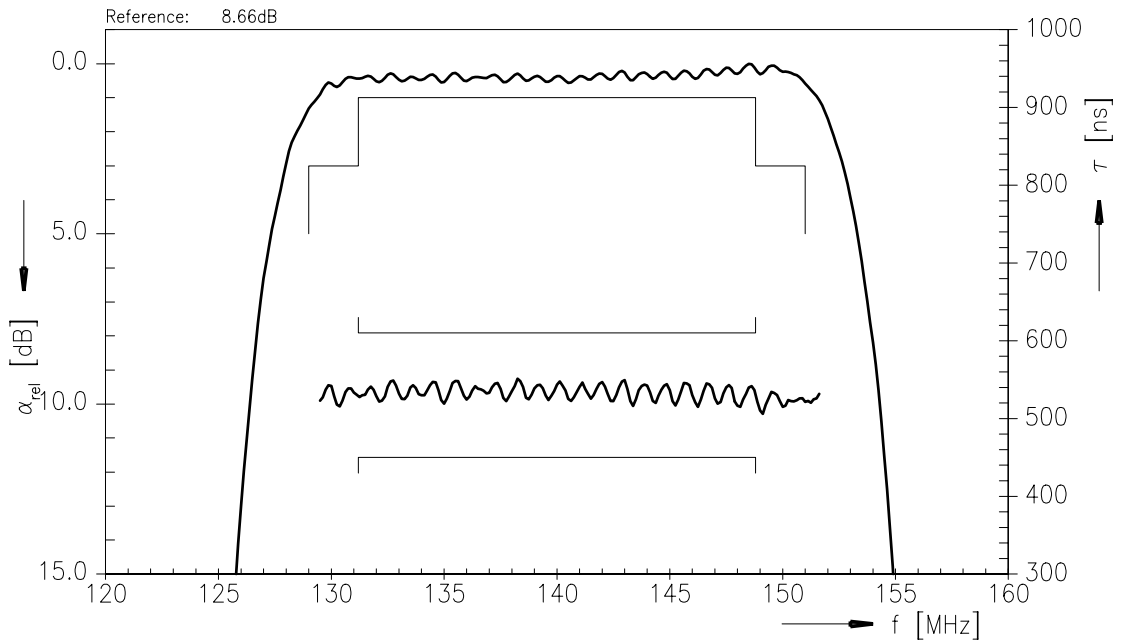
- $L_{s1} = 56 \text{ nH}$
- $L_{p2} = 39 \text{ nH}$
- $L_{p3} = 47 \text{ nH}$
- $L_{s4} = 47 \text{ nH}$

Maximum ratings

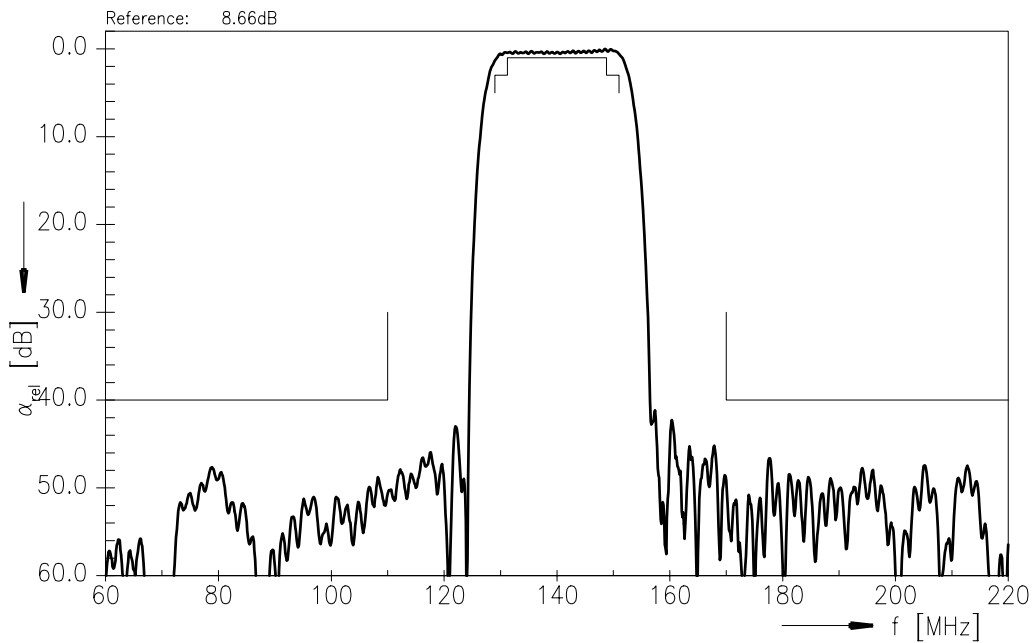
Operable temperature range	T	-40/+85	°C	
Storage temperature range	T <sub>stg</sub>	-40/+85	°C	
DC voltage	V <sub>DC</sub>	0	V	
Input Power	P <sub>IN</sub>	10	dBm	



Transfer function (S21, Narrowband)



Transfer function (S21, Wideband)



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



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**140 MHz**

Data Sheet



## References

<b>Type</b>	B5211
<b>Ordering code</b>	B39141B5211Z510
<b>Marking and package</b>	C61157-A7-A55
<b>Packaging</b>	F61074-V8163-Z000
<b>Date codes</b>	L_1126
<b>S-parameters</b>	B5211_NB.s2p
<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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