



# SAW filters for infrastructure systems

## Series/Type: **B5210**

The following products presented in this data sheet are being withdrawn.

Ordering Code	Substitute Product	Date of Withdrawal	Deadline Last Orders	Last Shipments
B39141B5210Z510		2012-01-13	2012-12-31	2013-03-30

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SAW Components

B5210

SAW IF filter

140.0 MHz

Data Sheet



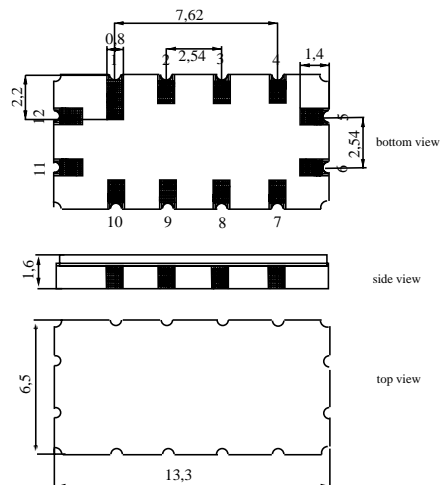
### Application

- Low-loss IF filter for Radiolink base station
- Usable passband 9.6 MHz



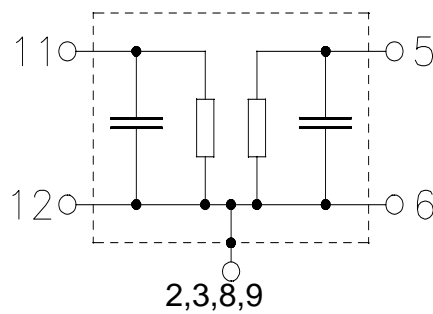
### Features

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



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



Data Sheet



Characteristics

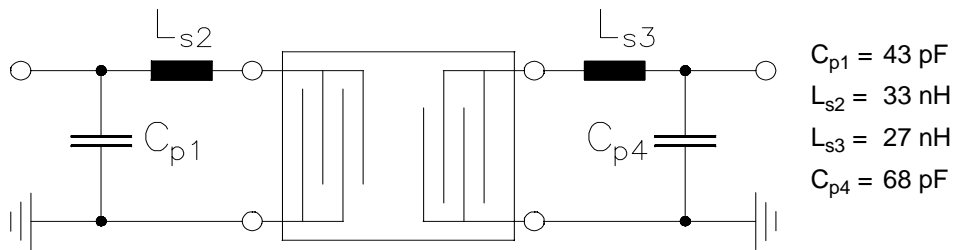
Operating temperature range:  $T = -5$  to  $80$  °C  
 Terminating source impedance:  $Z_S = 50 \Omega$  and matching network  
 Terminating load impedance:  $Z_L = 50 \Omega$  and matching network

		min.	typ. @ 25 °C	max.	
<b>Nominal frequency</b>	$f_N$	—	140.0	—	MHz
<b>Minimum insertion attenuation</b> (including matching network)	$\alpha_{min}$	—	8.6	10.0	dB
<b>Amplitude ripple (p-p)</b>	$\Delta\alpha$				
	$f_N \pm 4.8$ MHz	—	0.5	1.0	dB
	$f_N \pm 6.0$ MHz	—	0.75	3.0	dB
<b>Passband width</b>					
	$\alpha_{rel} \leq 3.0$ dB	$B_{3.0dB}$	12	15.8	— MHz
	$\alpha_{rel} \leq 30.0$ dB	$B_{30dB}$	—	19.5	36 MHz
<b>Group delay ripple (p-p)</b>	$\Delta\tau$				
	$f_N \pm 4.8$ MHz	—	65	160	ns
<b>Relative attenuation (relative to <math>\alpha_{min}</math>)</b>	$\alpha_{rel}$				
	$f_N - 130.0$ MHz ... $f_N - 20.0$ MHz	40	60	—	dB
	$f_N + 20.0$ MHz ... $f_N + 370.0$ MHz	40	60	—	dB
<b>Temperature coefficient of frequency<sup>1)</sup></b>	$TC_f$	—	-87	—	ppm/K

<sup>1)</sup> Temperature dependance of  $f_c$ :  $f_c(T_A) = f_c(T_0) (TC_f(T_A))$



**Matching network to 50 Ω**



**Element values depend upon PCB layout**

**Maximum ratings**

Operable temperature range	T	-5/+80	°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	



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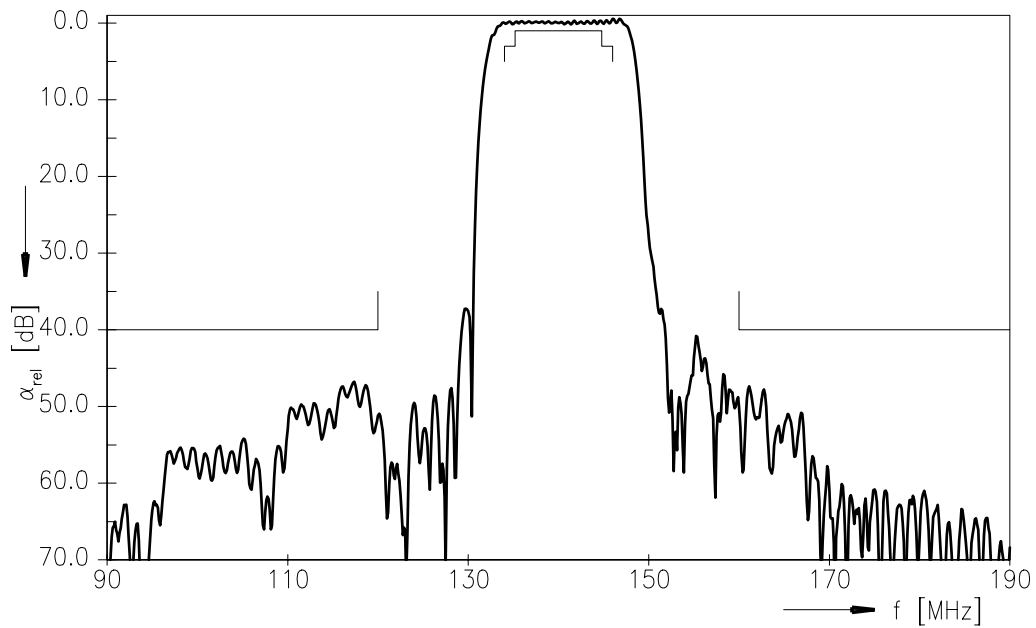
SAW IF filter

140.0 MHz

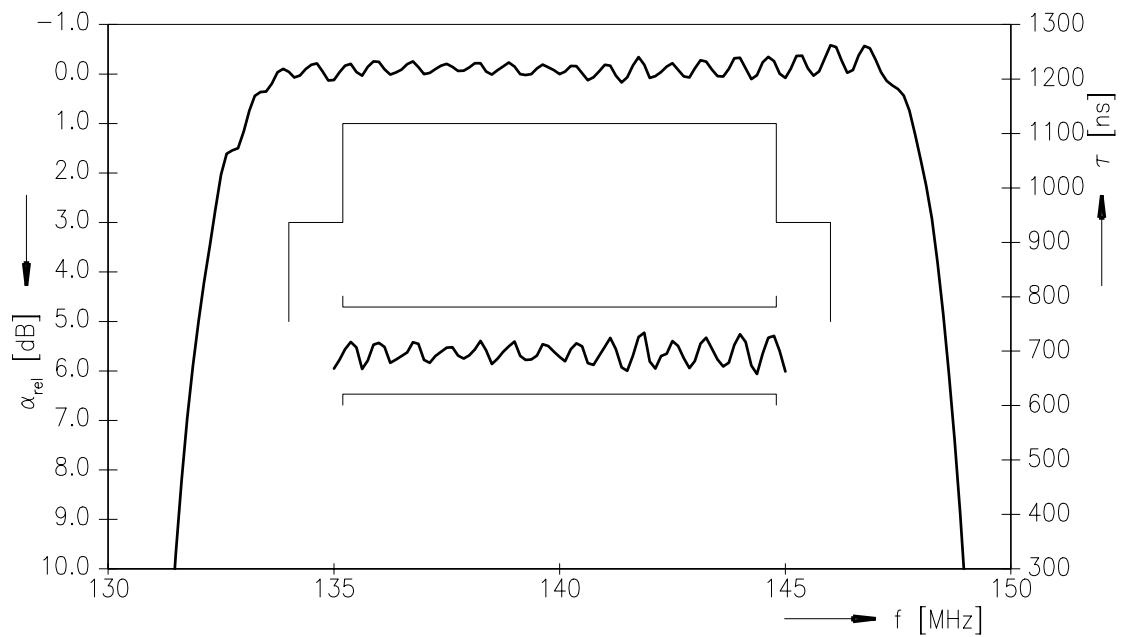
Data Sheet



Transfer function ( S21 wideband )



Transfer function ( S21 narrowband )



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



**SAW Components**

**B5210**

**SAW IF filter**

**140.0 MHz**

Data Sheet



## References

<b>Type</b>	B5210
<b>Ordering code</b>	B39141B5210Z510
<b>Marking and package</b>	C61157-A7-A55
<b>Packaging</b>	F61074-V8163-Z000
<b>Date codes</b>	L_1126
<b>S-parameters</b>	B5210_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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