



SAW Components

SAW IF filter

Radiolink

Series/type:	B5210
Ordering code:	B39141B5210Z510
Date:	Jul 20, 2009
Version:	2.0



SAW Components

B5210

SAW IF filter

140.0 MHz

Data Sheet



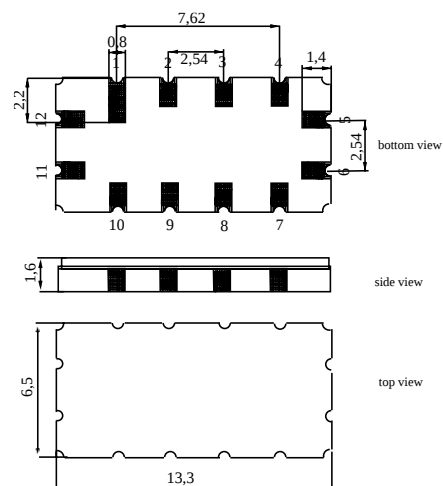
Application

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



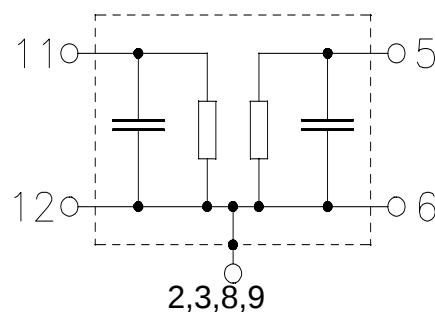
Features

- Package size 13.3 x 6.5 x 1.6 mm³
- 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





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Characteristics

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

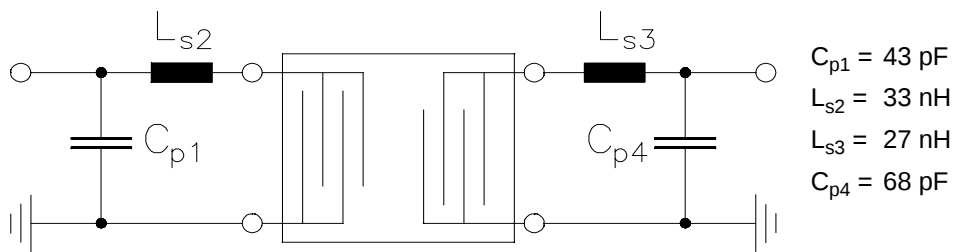
		min.	typ. @ 25 °C	max.	
Nominal frequency	f_N	—	140.0	—	MHz
Minimum insertion attenuation (including matching network)	$\alpha_{\min}$	—	8.6	10.0	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
	$f_N \pm 4.8\text{ MHz}$	—	0.5	1.0	dB
	$f_N \pm 6.0\text{ MHz}$	—	0.75	3.0	dB
Passband width					
	$\alpha_{\text{rel}} \leq 3.0\text{ dB}$	$B_{3.0\text{dB}}$	12	15.8	MHz
	$\alpha_{\text{rel}} \leq 30.0\text{ dB}$	$B_{30\text{dB}}$	—	19.5	36 MHz
Group delay ripple (p-p)	$\Delta\tau$				
	$f_N \pm 4.8\text{ MHz}$	—	65	160	ns
Relative attenuation (relative to $\alpha_{\min}$)	α_{rel}				
	$f_N - 130.0\text{ MHz} \dots f_N - 20.0\text{ MHz}$	40	60	—	dB
	$f_N + 20.0\text{ MHz} \dots f_N + 370.0\text{ MHz}$	40	60	—	dB
Temperature coefficient of frequency¹⁾	TC_f	—	-87	—	ppm/K

¹⁾ Temperature dependance of f_c : $f_c(T_A) = f_c(T_0) (TC_f(T_A))$



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Matching network to 50 Ω



Element values depend upon PCB layout

Maximum ratings

Operable temperature range	T	-5/+80	°C	
Storage temperature range	T _{stg}	-40/+85	°C	
DC voltage	V _{DC}	0	V	
Input power	P _{IN}	10	dBm	



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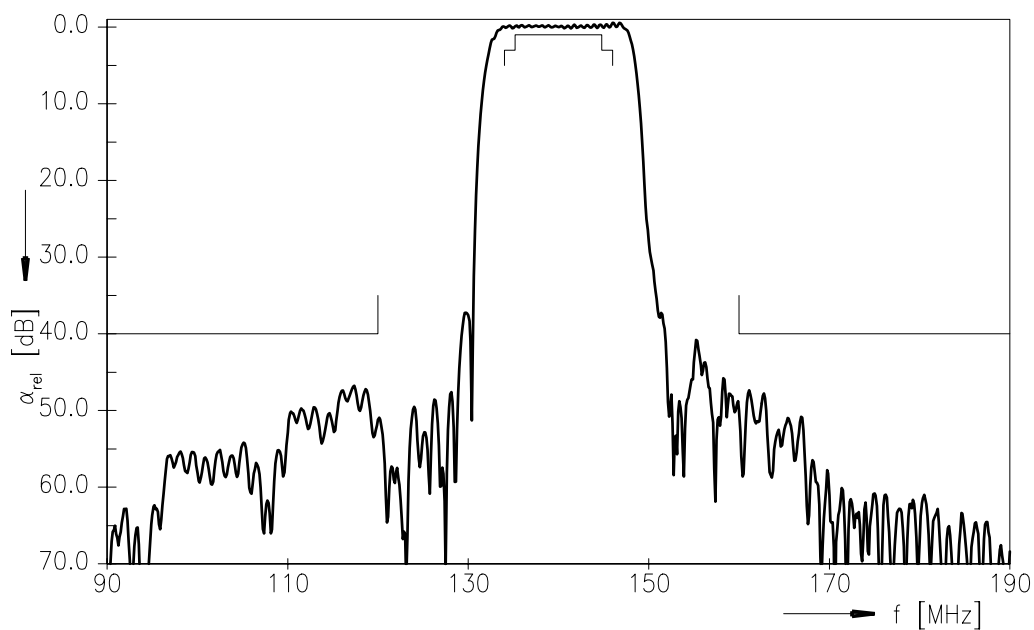
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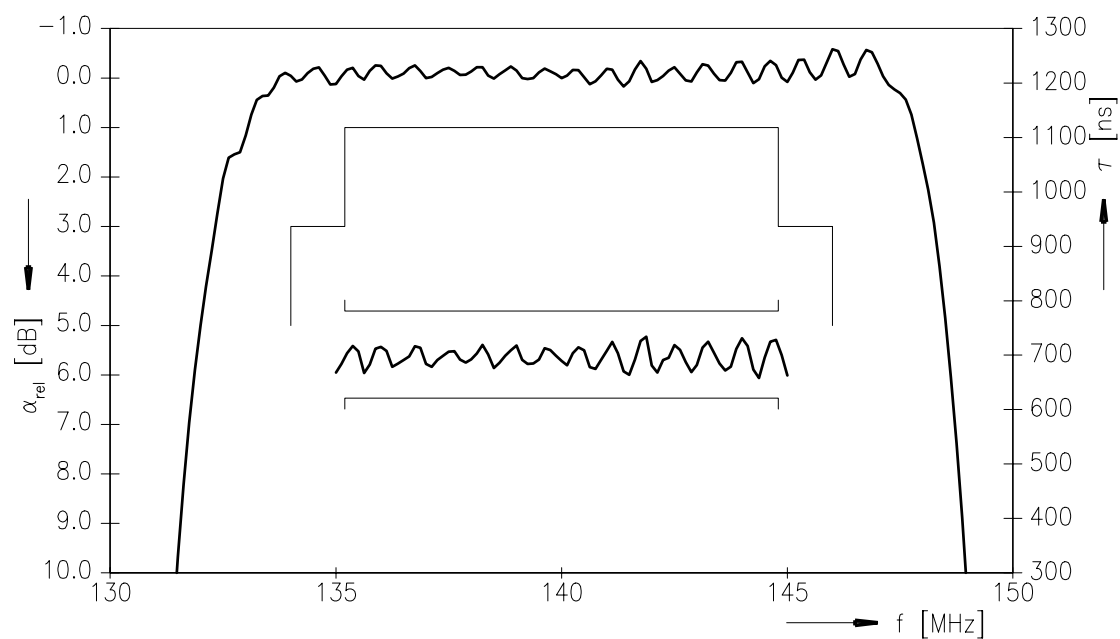
Data Sheet



Transfer function (S21 wideband)



Transfer function (S21 narrowband)





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Data Sheet	SMD

References

Type	B5210
Ordering code	B39141B5210Z510
Marking and package	C61157-A7-A55
Packaging	F61074-V8163-Z000
Date codes	L_1126
S-parameters	B5210_NB.s2p
Soldering profile	S_6001
RoHS compatible	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."

For further information please contact your local EPCOS sales office or visit our webpage at www.epcos.com.

Published by EPCOS AG
Surface Acoustic Wave Components Division
P.O. Box 80 17 09, 81617 Munich, GERMANY

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