



SAW Components

SAW Rx Filter

WCDMA Band I

Series/Type:	B9408
Ordering code:	B39212B9408K610
Date:	December 18, 2006
Version:	2.0



Data Sheet



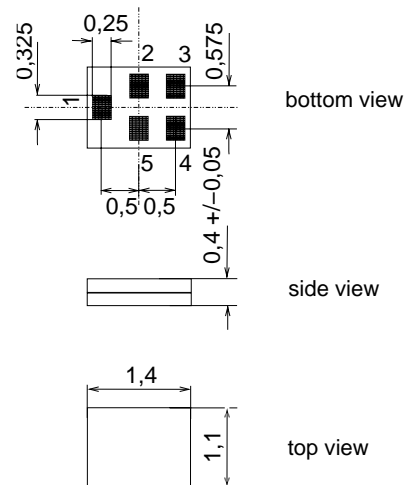
Application

- Low-loss RF filter for mobile telephone WCDMA systems, receive path (RX)
- Impedance transform from 50 Ω to 200 Ω
- Unbalanced to balanced operation
- Very low insertion attenuation
- Low amplitude ripple
- Usable passband 60 MHz



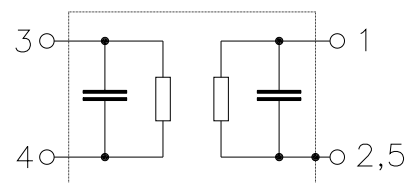
Features

- Package size 1.4 x 1.1 x 0.4 mm³
- Package code QCS5F
- RoHS compatible
- Approx. weight 0.003 g
- Package for Surface Mount Technology (SMT)
- Ni, gold-plated terminals



Pin configuration

- 1 Input, unbalanced
- 3,4 Output balanced
- 2,5 To be grounded





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2140.0 MHz

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Characteristics

Operating temperature range: $T = -10\text{ °C to }+85\text{ °C}$
 Terminating source impedance: $Z_S = 50\ \Omega$
 Terminating load impedance: $Z_L = 200\ \Omega \parallel 13\text{ nH (balanced)}$

		B9408 ¹⁾			
		min.	typ. @ 25 °C	max.	
Center frequency	f_C	—	2140.0	—	MHz
Maximum insertion attenuation	α_{\max}				
2110.0 ... 2170.0	MHz	—	2.0	2.3	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
2110.0 ... 2170.0	MHz	—	0.9	1.2	dB
Input VSWR					
2110.0 ... 2170.0	MHz	—	1.9	2.2	
Output VSWR					
2110.0 ... 2170.0	MHz	—	1.7	2.1	
Output amplitude balance (S_{31}/S_{21})					
2110.0 ... 2170.0	MHz	-1.0	-0.8/0.8	1.0	dB
Output phase balance ($\phi(S_{31}) - \phi(S_{21}) + 180^\circ$)					
2110.0 ... 2170.0	MHz	-10	-4/4	10	°
Attenuation	α				
0.0 ... 1920.0	MHz	30	42	—	dB
1920.0 ... 1980.0	MHz	36	48	—	dB
1980.0 ... 2025.0	MHz	23	31	—	dB
2025.0 ... 2050.0	MHz	20	27	—	dB
2230.0 ... 2255.0	MHz	18	28	—	dB
2255.0 ... 2300.0	MHz	20	33	—	dB
2300.0 ... 2402.0	MHz	25	34	—	dB
2402.0 ... 2490.0	MHz	28	38	—	dB
2490.0 ... 2550.0	MHz	32	43	—	dB
2550.0 ... 4030.0	MHz	20	36	—	dB
4030.0 ... 4220.0	MHz	34	51	—	dB
4220.0 ... 4340.0	MHz	36	50	—	dB
4340.0 ... 6000.0	MHz	40	46	—	dB

¹⁾ Values in columns min, typ and max indicate the development status of the current version.



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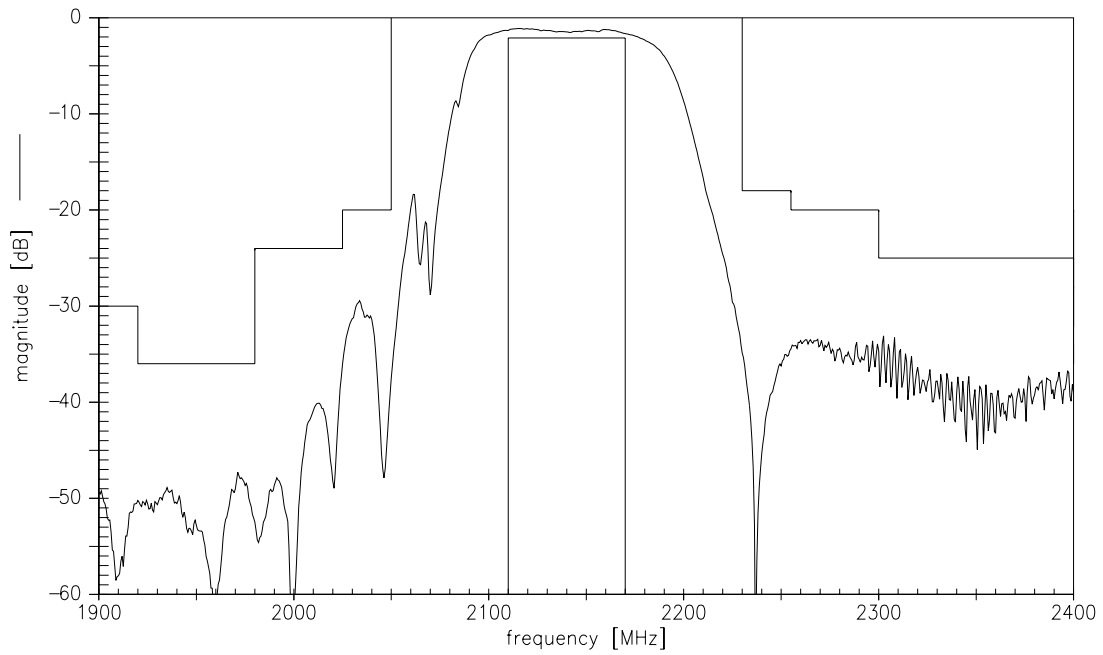
Maximum ratings

Operable temperature range	T	-30/+85	°C	
Storage temperature range	T _{stg}	-40/+85	°C	
DC voltage	V _{DC}	5	V	
ESD voltage	V _{ESD}	50 ¹⁾	V	machine model, 10 pulses
Source Power	P _S	5	dBm	cw signal

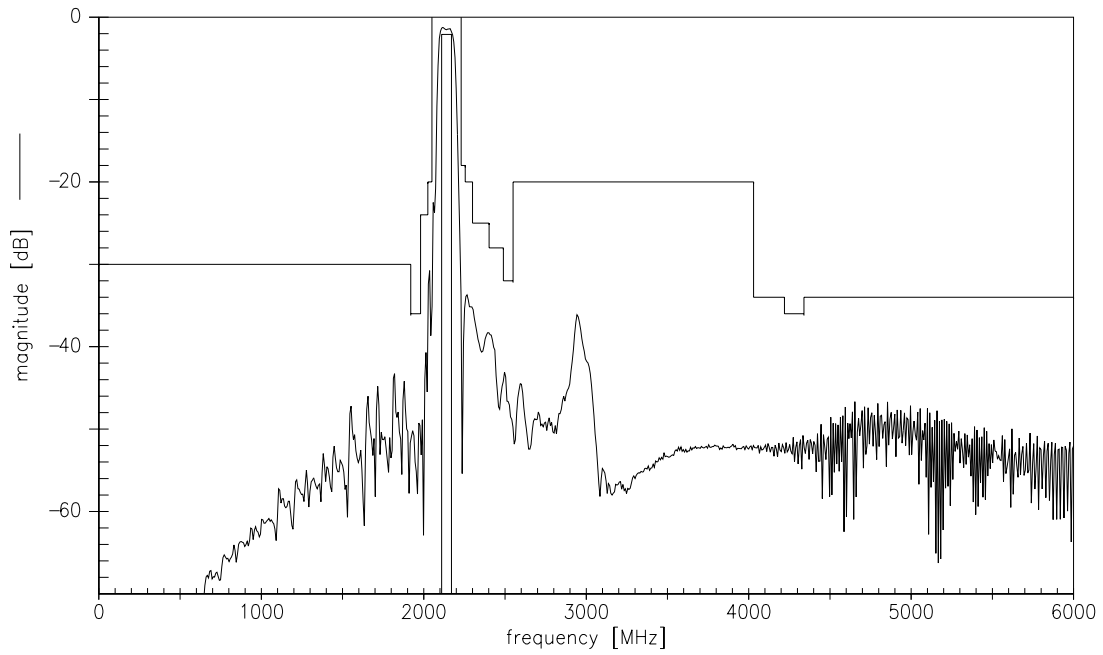
1) acc. to JESD22-A115A (machine model), 10 negative & 10 positive pulses.



Transfer function



Transfer function (wideband)



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

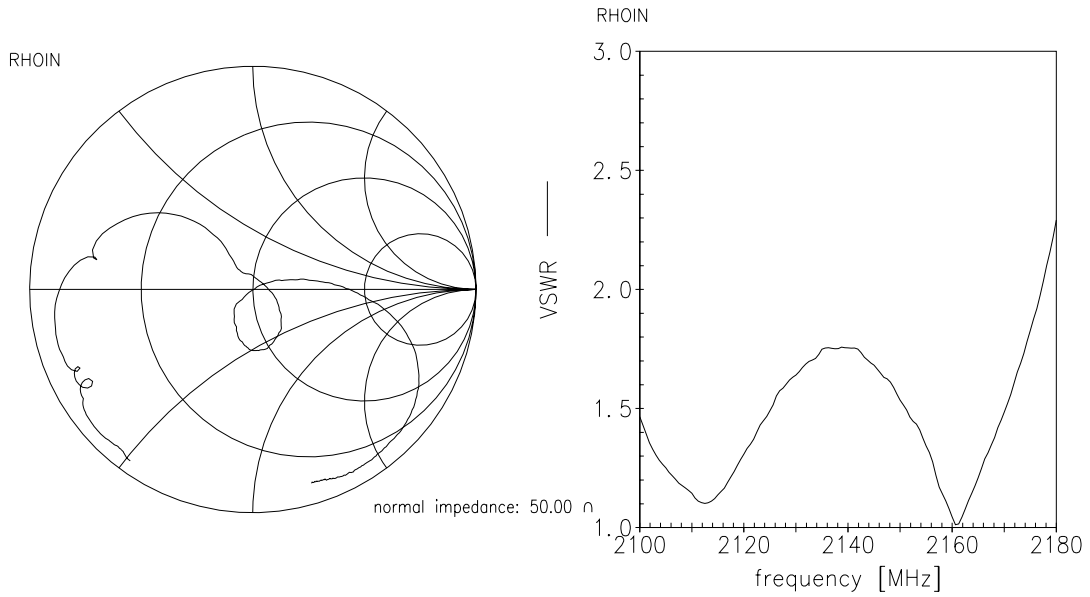


Data Sheet

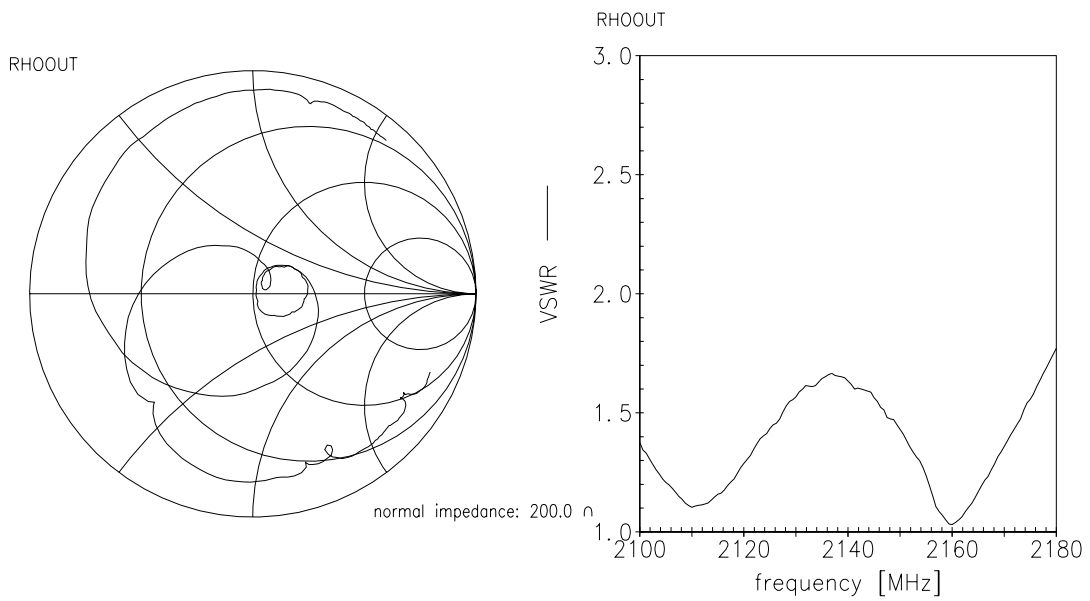


Smith chart

S₁₁ function



S₂₂ function





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Type	B9408
Ordering code	B39212B9408K610
Marking and Package	C61157-A8-27
Packaging	F61074-V8212-27
Date Codes	L_1126
S-Parameters	B9408_NB.s3p B9408_WB.s3p
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."
Moldability	Before using in overmolding environment, please contact your EPCOS sales office.

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

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