



SAW Components

SAW Tx Filter

WCDMA Band I

Series/Type:	B9414
Ordering code:	B39202B9414M410
Date:	August 16, 2006
Version:	2.0

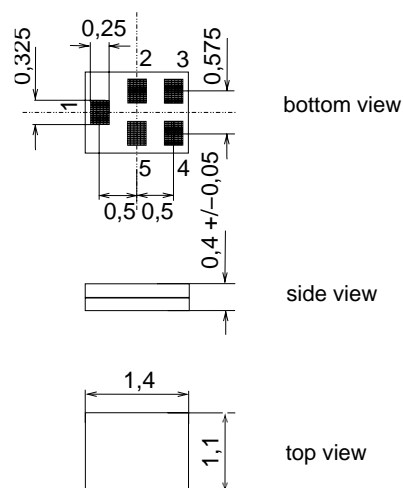
Application

- Low-loss RF filter for mobile telephone WCDMA systems, transmit path (TX)
- Unbalanced operation
- Very low insertion attenuation
- Low amplitude ripple
- Very low Error Vector Magnitude (EVM)
- High Rx-suppression
- Usable passband 60 MHz



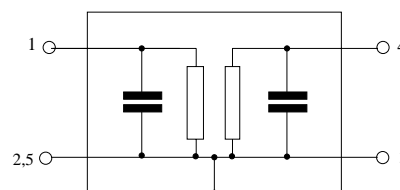
Features

- Package size 1.4 x 1.1 x 0.4 mm³
- Package code QCS51
- RoHS compatible
- Approx. weight 0.003 g
- Package for **Surface Mount Technology (SMT)**
- Ni, gold-plated terminals
- **Electrostatic Sensitive Device (ESD)**



Pin configuration

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



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Characteristics

Operating temperature range: $T = -20\text{ }^{\circ}\text{C}$ to $+85\text{ }^{\circ}\text{C}$
 Terminating source impedance: $Z_S = 50\text{ }\Omega$ (unbalanced)
 Terminating load impedance: $Z_L = 50\text{ }\Omega$ (unbalanced)

		min.	typ. @ 25 °C	max.	
Center frequency	f_C	—	1950.0	—	MHz
Maximum insertion attenuation	α_{\max}				
1920.0 ... 1980.0 MHz		—	2.5	3.2 ¹⁾	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
1920.0 ... 1980.0 MHz		—	1.1	1.8 ²⁾	dB
Input VSWR					
1920.0 ... 1980.0 MHz		—	1.8	2.2	
Output VSWR					
1920.0 ... 1980.0 MHz		—	1.8	2.2	
Attenuation	α				
0.0 ... 960.0 MHz		27	34	—	dB
960.0 ... 1575.0 MHz		25	35	—	dB
1575.0 ... 1576.0 MHz		32	35	—	dB
1576.0 ... 1730.0 MHz		30	35	—	dB
1730.0 ... 1880.0 MHz		30	38	—	dB
2025.0 ... 2050.0 MHz		35	54	—	dB
2110.0 ... 2170.0 MHz		35	38	—	dB
2200.0 ... 3100.0 MHz		33	37	—	dB
3100.0 ... 3960.0 MHz		30	42	—	dB
3960.0 ... 6000.0 MHz		20	34	—	dB

¹⁾ IA max. 3.0dB at 25°C

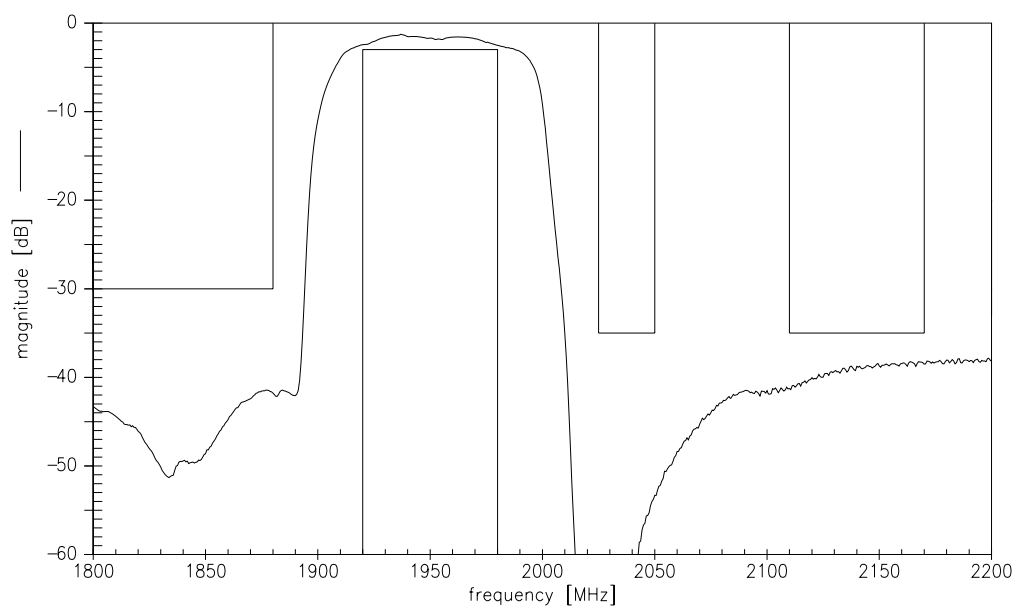
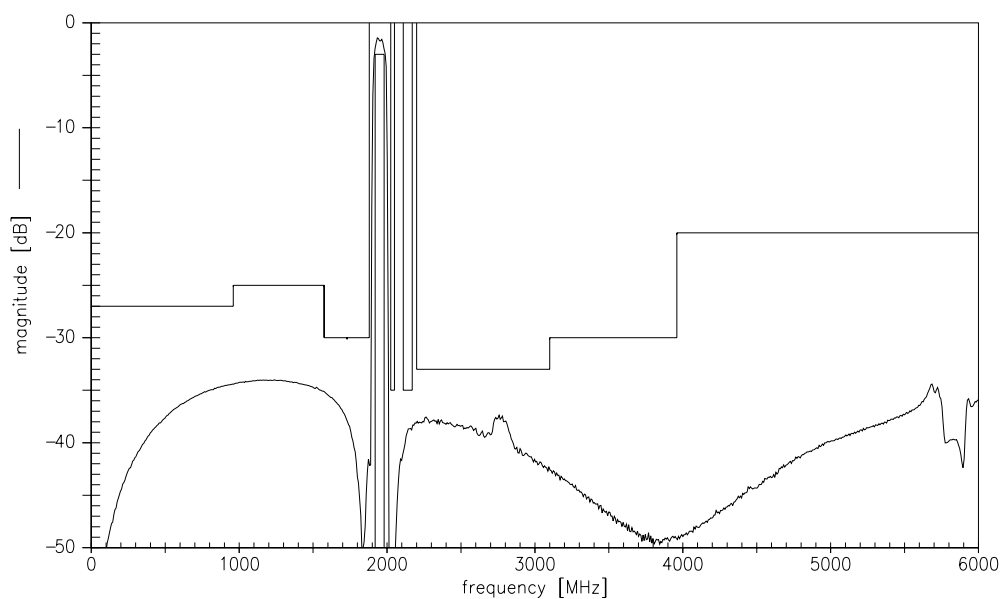
²⁾ AR max. 1.6dB at 25°C
 EVM typ. < 1.3% at 25°C, typ. < 2.2% over temperature

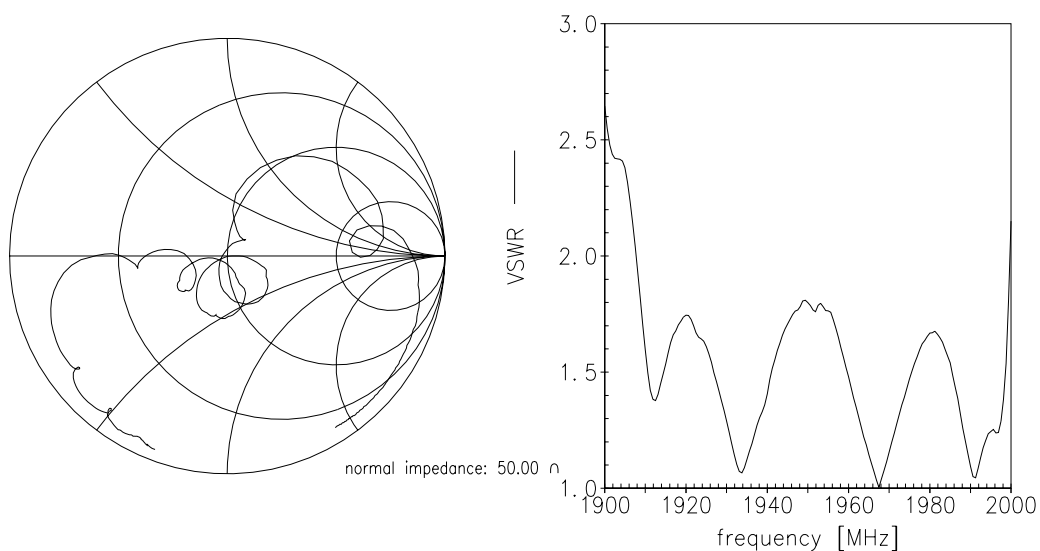
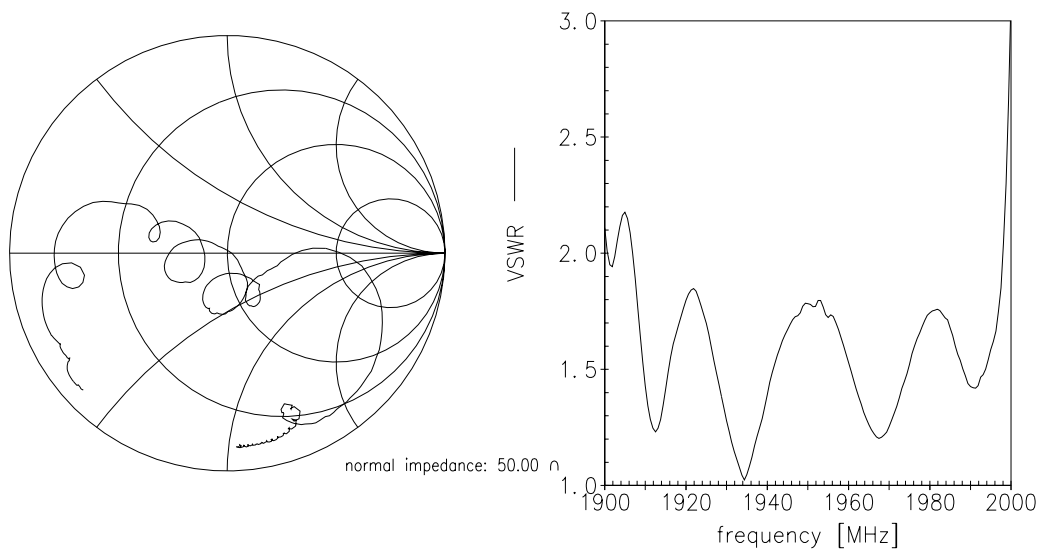
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Maximum ratings

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	10	dBm	cw signal

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

Transfer function

Transfer function (wideband)




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References

Type	B9414
Ordering Code	B39202B9414M410
Marking and Package	C61157-A8-A3-2-27
Packaging	F61074-V8212-Z000-2-27
Date Codes	L_1126
Soldering profile	S_6001
S-Parameters	B9414_NB.s2p B9414_WB.s2p
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 .

Published by EPCOS AG

Surface Acoustic Wave Components Division

P.O. Box 80 17 09, 81617 Munich, GERMANY

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