



SAW Components

SAW Rx filter

WCDMA band I

Series/type:	B9433
Ordering code:	B39212-B9433-M410
Date:	Mar. 26, 2007
Version:	2.0



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SAW Rx filter

2140.0 MHz

Data Sheet



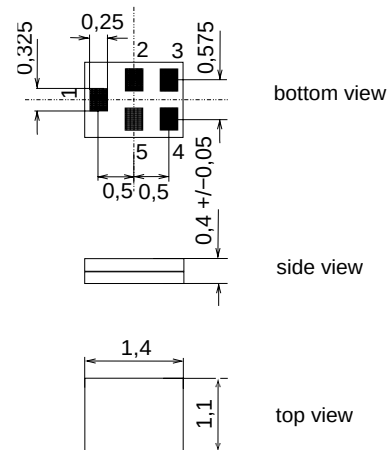
Application

- Low-loss RF filter for mobile telephone WCDMA Band 1 systems, receive path (RX)
- Unbalanced to unbalanced operation
- Low insertion attenuation
- Low amplitude ripple
- High selectivity up to 6 GHz
- Usable passband 60 MHz



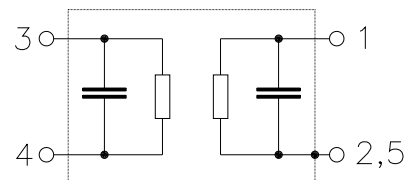
Features

- Package size 1.4 x 1.1 x 0.4 mm³
- Package code QCS5I
- RoHS compatible
- Approximate weight 0.003 g
- Package for Surface Mount Technology (SMT)
- Ni, gold-plated terminals
- Electrostatic Sensitive Device (ESD)



Pin configuration

- 1 Unbalanced input
- 4 Unbalanced output
- 2,3,5 To be grounded





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Characteristics

Temperature range for specification:	T = -30 °C to +85 °C
Terminating source impedance:	Z _S = 50Ω, 4.0 nH in parallel
Terminating load impedance:	Z _L = 50Ω, 1.3 nH in serial

		min.	typ. @ 25 °C	max.	
Center frequency	f _C	—	2140.0	—	MHz
Maximum insertion attenuation	α _{max}	—	2.0	2.3 ¹⁾	dB
Amplitude ripple (p-p)	Δα	—	0.6	1.0	dB
Input VSWR		—	1.5	1.9	
Output VSWR		—	1.5	1.9	
EVM		—	1.0	—	%
Attenuation	α				
100.0 ... 925.0 MHz		46	49	—	dB
925.0 ... 1300.0 MHz		40	44	—	dB
1300.0 ... 1800.0 MHz		38	43	—	dB
1800.0 ... 1920.0 MHz		38	43	—	dB
1920.0 ... 1980.0 MHz		43	49	—	dB
1980.0 ... 2025.0 MHz		30	45	—	dB
2025.0 ... 2050.0 MHz		17	24	—	dB
2050.0 ... 2075.0 MHz		5	9	—	dB
2210.0 ... 2255.0 MHz		12	32	—	dB
2255.0 ... 2300.0 MHz		20	33	—	dB
2300.0 ... 2400.0 MHz		31	38	—	dB
2400.0 ... 2500.0 MHz		35	41	—	dB
2500.0 ... 2800.0 MHz		37	47	—	dB
2800.0 ... 3200.0 MHz		35	39	—	dB
3200.0 ... 6000.0 MHz		40	54	—	dB

¹⁾ including a pcb loss of 0.2dB

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**Maximum ratings**

Operable temperature range	T	-30/+85	°C	machine model, 10 pulses
Storage temperature range	T _{stg}	-40/+85	°C	
DC voltage	V _{DC}	5	V	
ESD voltage	V _{ESD}	50 ¹⁾	V	
Input power at				effective power in the on-state CW, +65°C 2000hr
WCDMA Band I	P _{IN}	0	dBm	
Tx band	P _{IN}	24	dBm	

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



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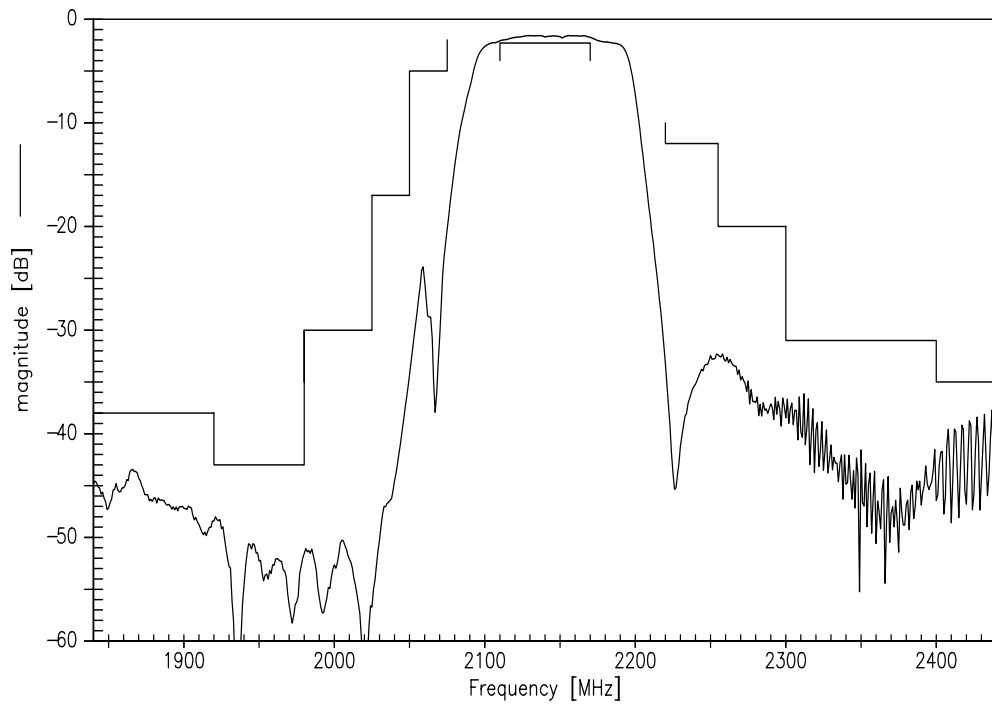
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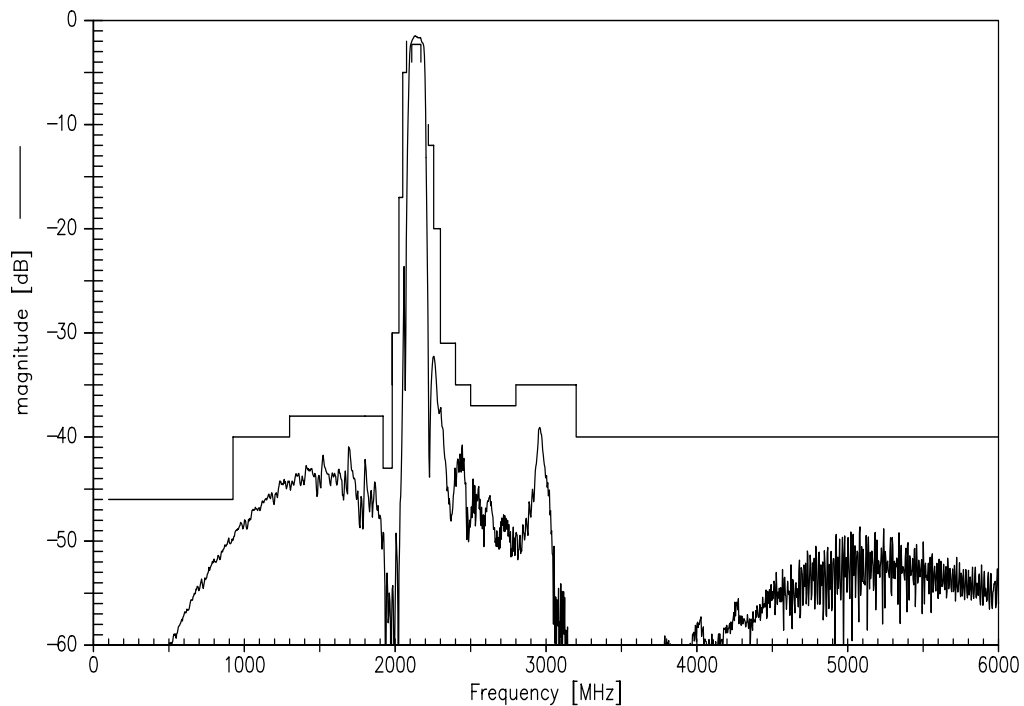
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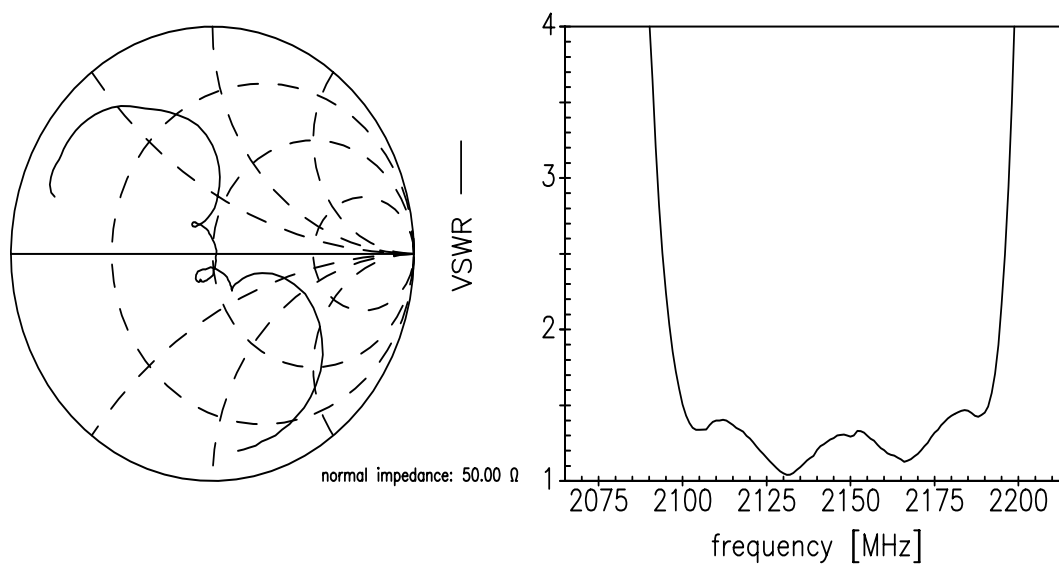
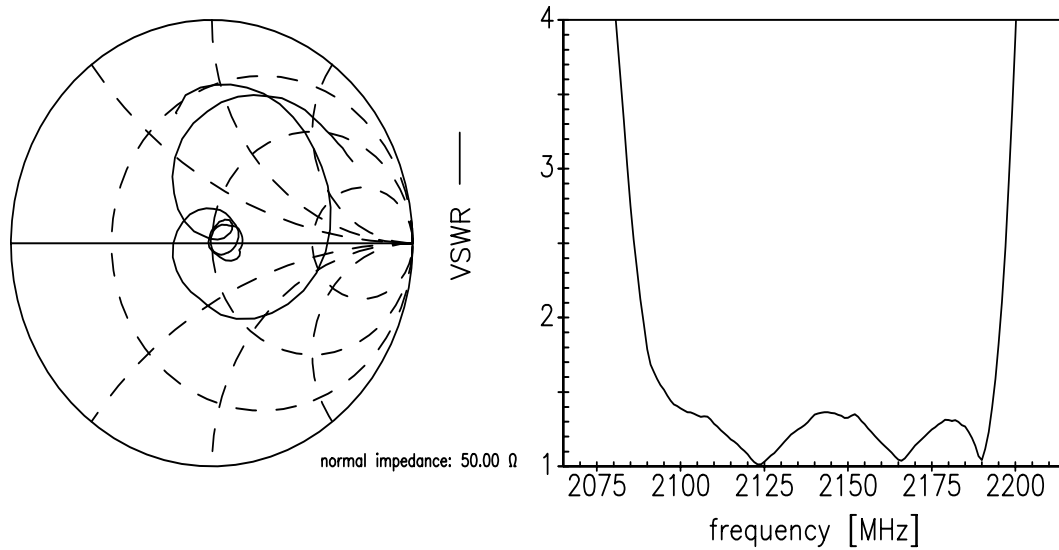
Transfer function



Transfer function (wideband)



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



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Data Sheet

**References**

Type	B9433
Ordering code	B39212-B9433-M410
Marking and package	C61157-A8-A3
Packaging	F61074-V8212-Z000
Date codes	L_1126
S-parameters	B9433_NB.s2p B9433_WB.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."
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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Surface Acoustic Wave Components Division

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