



SAW Components

SAW Rx Filter

WCDMA Band I

Series/Type:	B9412
Ordering code:	B39212B9412M510
Date:	Aug 24, 2006
Version:	2.2



Data Sheet



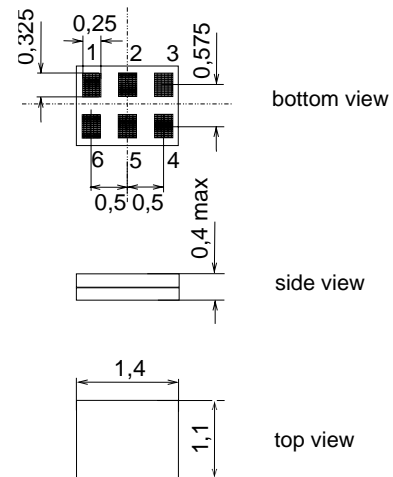
Application

- Low-loss RF filter for mobile telephone WCDMA system (Band I), receive path (RX)
- Usable passband 60 MHz
- Balanced to balanced operation
- Pb-free



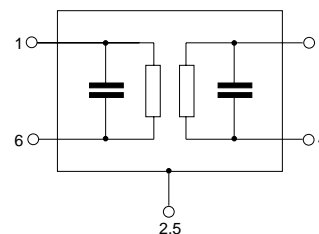
Features

- Package size 1.4 x 1.1 x 0.4 mm³
- Package code DCT6A
- RoHS compatible
- Approx. weight 0.003 g
- Package for **Surface Mount Technology (SMT)**
- Ni, gold-plated terminals
- **Electrostatic Sensitive Device (ESD)**



Pin configuration

- 1,6 Input, balanced
- 3,4 Output, balanced
- 2,5 Case ground





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2140.0 MHz

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Characteristics

Temperature range for specification: $T = -10$ to $+85$ °C
 Terminating source impedance: $Z_S = 100 \Omega$ (balanced)
 Terminating load impedance: $Z_L = 100 \Omega$ (balanced)

		min.	typ. @ 25°C	max.	
Center frequency	f_C	—	2140.0	—	MHz
Maximum insertion attenuation 2110.0 ... 2170.0 MHz	α_{max}	—	2.1	2.5	dB
Amplitude ripple (p-p) 2110.0 ... 2170.0 MHz	$\Delta\alpha$	—	0.9	1.3	dB
Amplitude ripple per 5 MHz channel (p-p) 2110.0 ... 2170.0 MHz	$\Delta\alpha_{5MHz}$	—	0.7	0.9	dB
Group delay variation over frequency on 5 MHz channel 2110.0 ... 2170.0 MHz	$\Delta\tau$	—	14	20	ns
Output phase balance ($\phi(S_{out2}) - \phi(S_{out1}) + 180^\circ$) 2110.0 ... 2170.0 MHz		-10	± 5	10	°
Output amplitude balance (S_{out2}/S_{out1}) 2110.0 ... 2170.0 MHz		-1.0	± 0.5	1.0	dB
Input VSWR 2110.0 ... 2170.0 MHz	$VSWR_{IN}$	—	1.8	2.1	
Output VSWR 2110.0 ... 2170.0 MHz	$VSWR_{OUT}$	—	1.8	2.1	
Attenuation 0.3 ... 1920.0 MHz 1920.0 ... 1980.0 MHz 1980.0 ... 2075.0 MHz 2400.0 ... 6000.0 MHz	α_{min}	25 30 13 20	32 33 35 33	— — — —	dB dB dB dB



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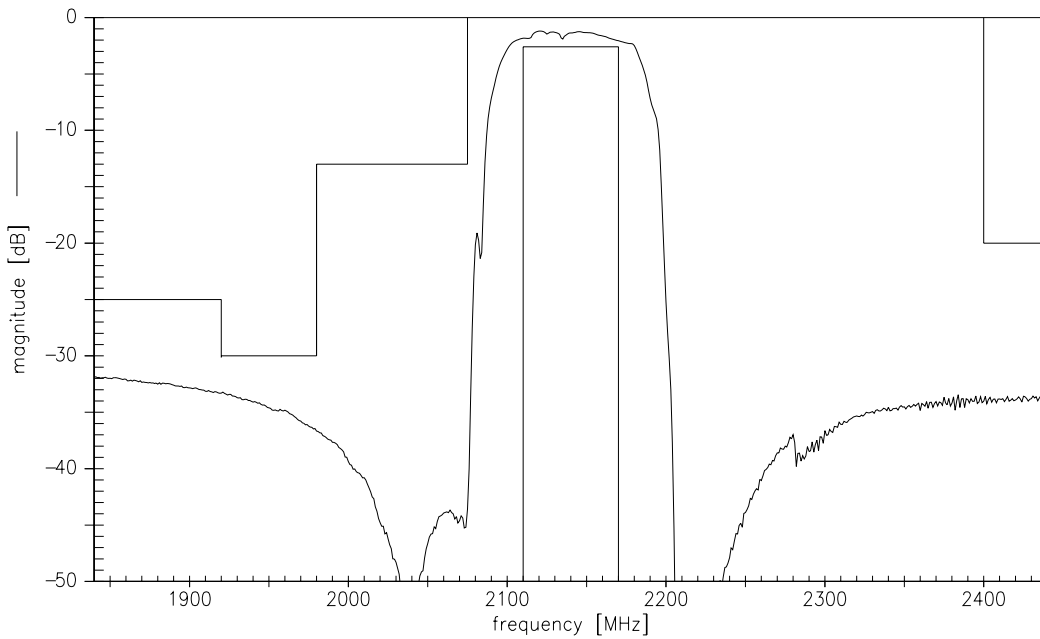
Maximum ratings

Operable temperature range	T	-10/+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
Input Power	P _{IN}	13	dBm	CW signal

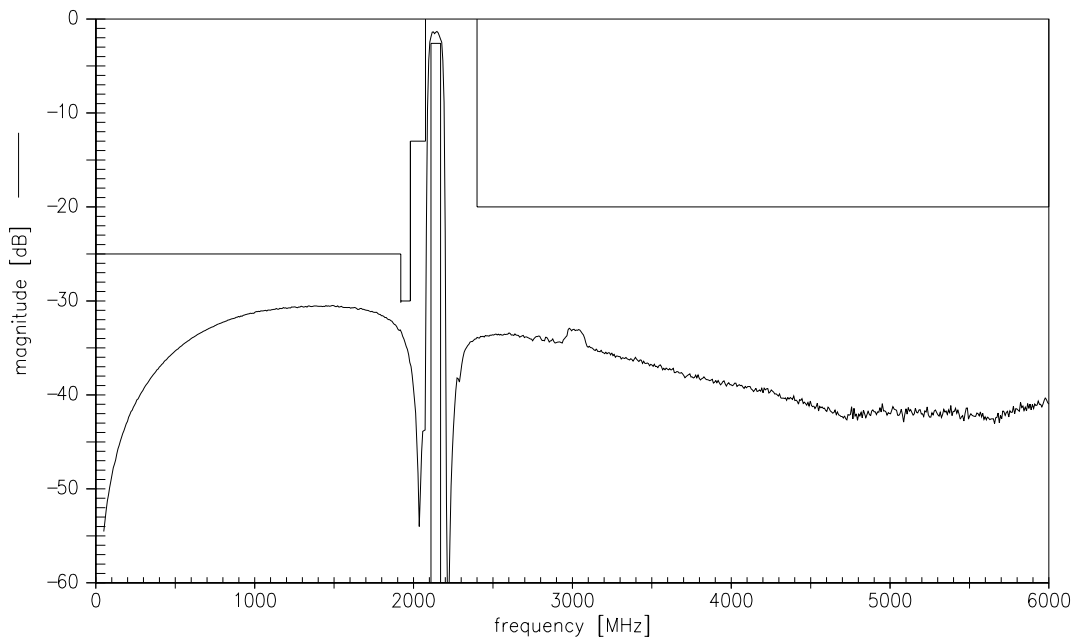
¹⁾ acc. to JESD22-A115A (Machine model), 10 negative & 10 positive pulses.



Transfer function (narrowband)



Transfer function (wideband)



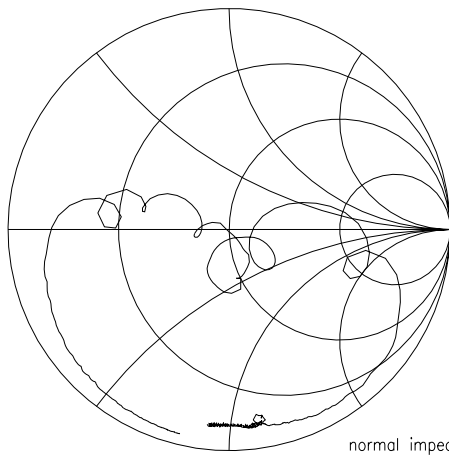


Data Sheet

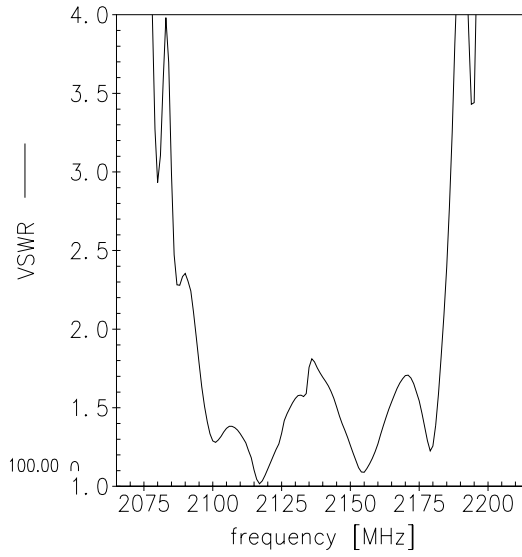


Smith chart

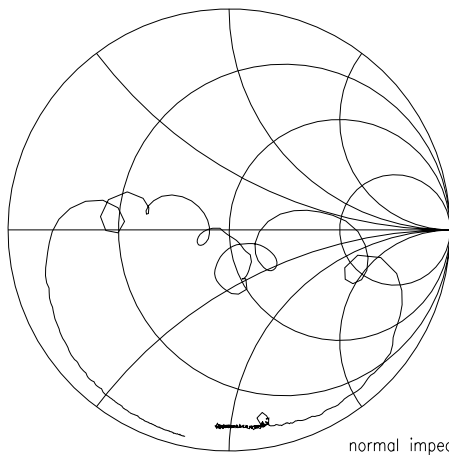
S₁₁ function



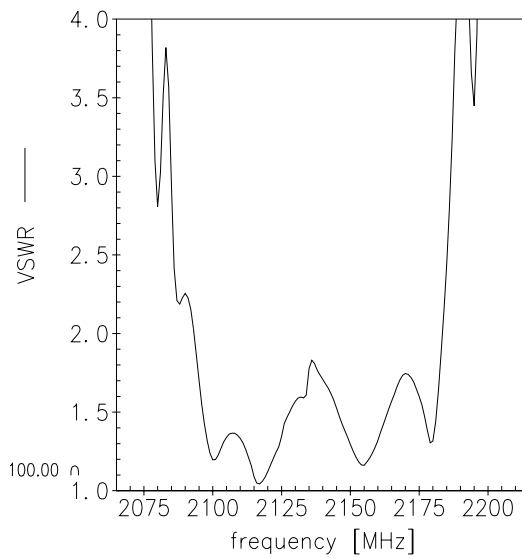
normal impedance: 100.00 Ω



S₂₂ function



normal impedance: 100.00 Ω





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References

Type	B9412
Ordering code	B39212B9412M510
Marking and Package	C61157-A8-A2
Packaging	F61074-V8212-Z000
Date Codes	L_1126
S-Parameters	B9412_NB.s4p B9412_WB.s4p
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 .

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

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