SAW Components

SAW Rx Filter

WCDMA Band I

Series/Type: **B9411**
Ordering code:

Date: December 19, 2005
Version: 1.0

Preliminary Data

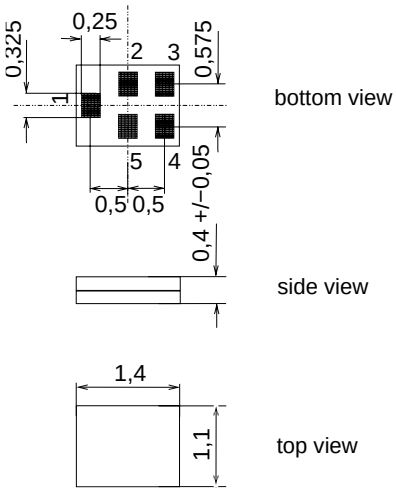
SMD

Application

- Low-loss RF filter for mobile telephone WCDMA systems, receive path (RX)
- Impedance transform from 50 Ω to 100 Ω
- Unbalanced to balanced operation
- Very low insertion attenuation
- Low amplitude ripple
- Usable passband 60 MHz

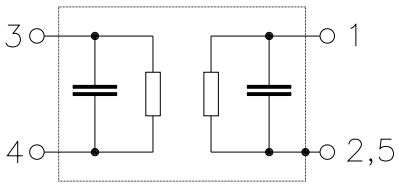
Features

- Package size 1.4 x1.1 x 0.4 mm³
- Package code QCS5F
- RoHS compliant
- Approx. weight 0.003 g
- Package for **S**urface **M**ount **T**echnology (**SMT**)
- Ni, gold-plated terminals



Pin configuration

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



Preliminary Data

SMD

Characteristics

Operating temperature range: T = –10 ˚C to +85 ˚C
Terminating source impedance: Z_S = 50 Ω
Terminating load impedance: Z_L = 100 Ω || 20 nH (balanced)

		B9411[1]			DGL[2]	
		min.	typ. @ 25 ˚C	max.	min./ 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		—	0.8	1.2		dB
Input VSWR						
2110.0 ... 2170.0 MHz		—	1.8	2.2	2.1	
Output VSWR						
2110.0 ... 2170.0 MHz		—	1.9	2.2	2.1	
Output amplitude balance ($\|S_{31}/S_{21}\|$)						
2110.0 ... 2170.0 MHz		–1.0	–0.8/0.4	1.0		dB
Output phase balance ($\phi(S_{31}) - \phi(S_{21})+180^\circ$)						
2110.0 ... 2170.0 MHz		–10	–6/+3	10		°
Attenuation	α					
0.0 ... 1920.0 MHz		35	44	—		dB
1920.0 ... 1980.0 MHz		40	49	—		dB
1980.0 ... 2025.0 MHz		32	36	—		dB
2025.0 ... 2050.0 MHz		20	26	—		dB
2250.0 ... 6000.0 MHz		20	28	—		dB

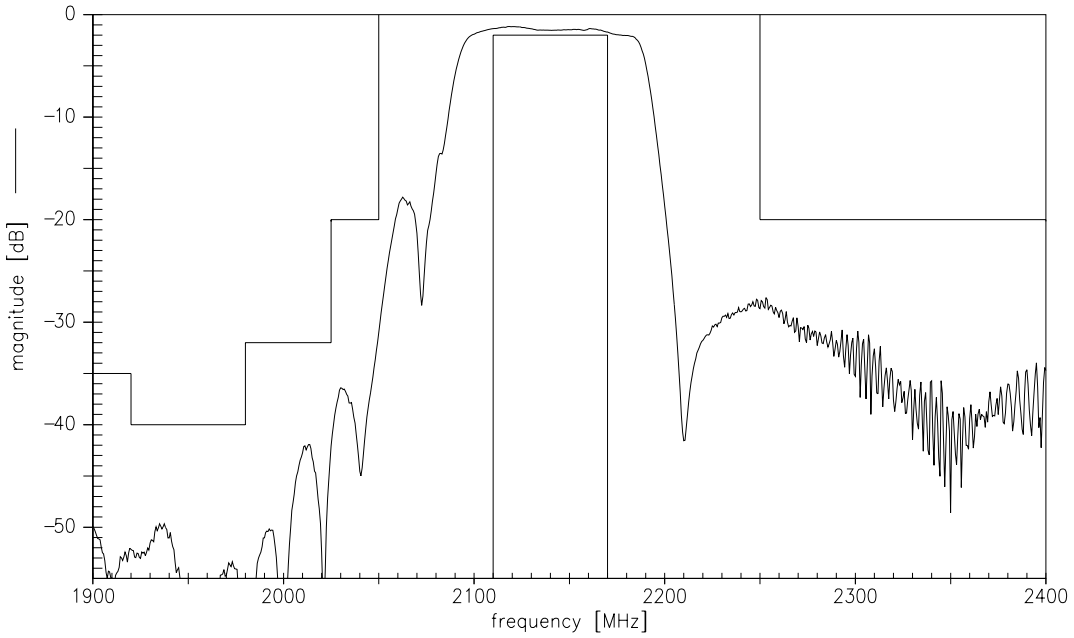
1) Values in columns min, typ and max indicate the development status of the current version.
2) Values in column DesignGoal (DGL) indicate the target performance.

Maximum ratings

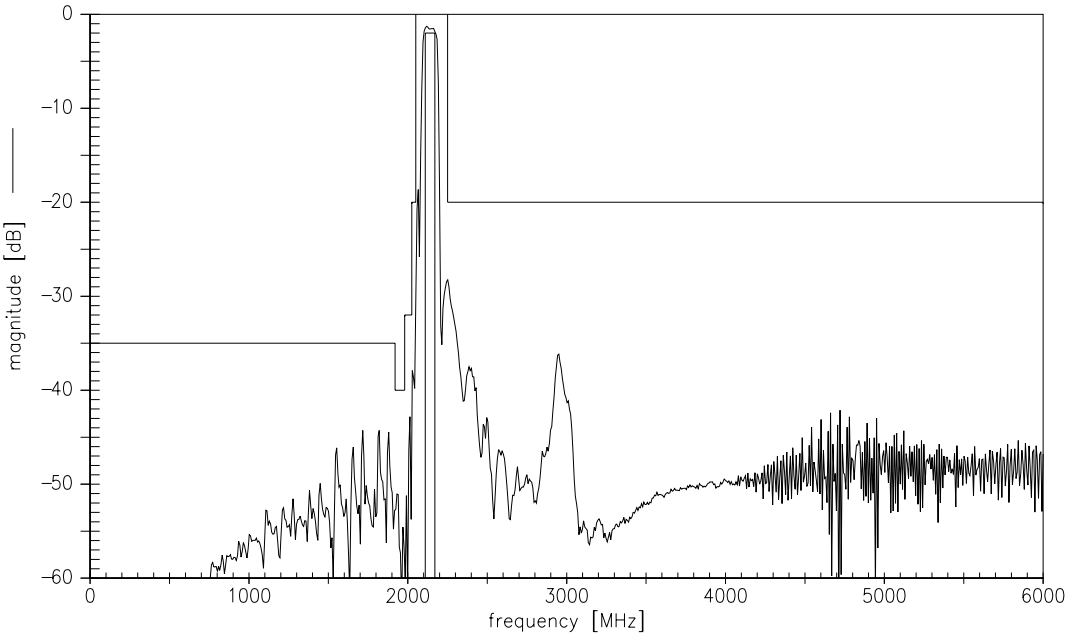
Operable temperature range	T	–30/+85	°C	
Storage temperature range	T_{stg}	–40/+85	°C	
DC voltage	V_{DC}	5	V	
ESD voltage	V_{ESD}	50[1)]	V	machine model, 10 pulses
Source Power	P_S	5	dBm	cw signal

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

Transfer function

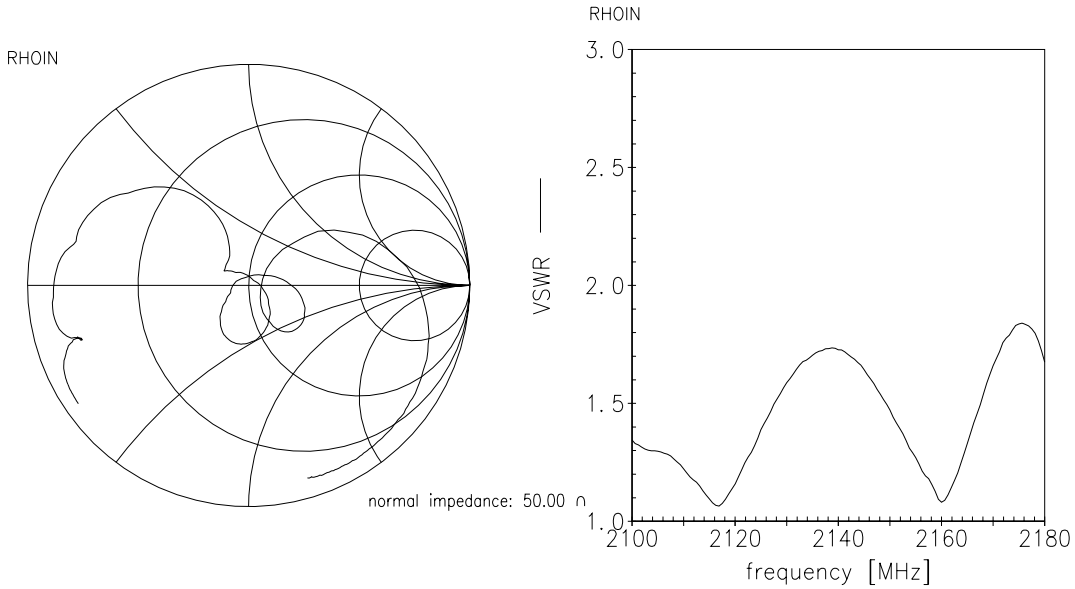


Transfer function (wideband)

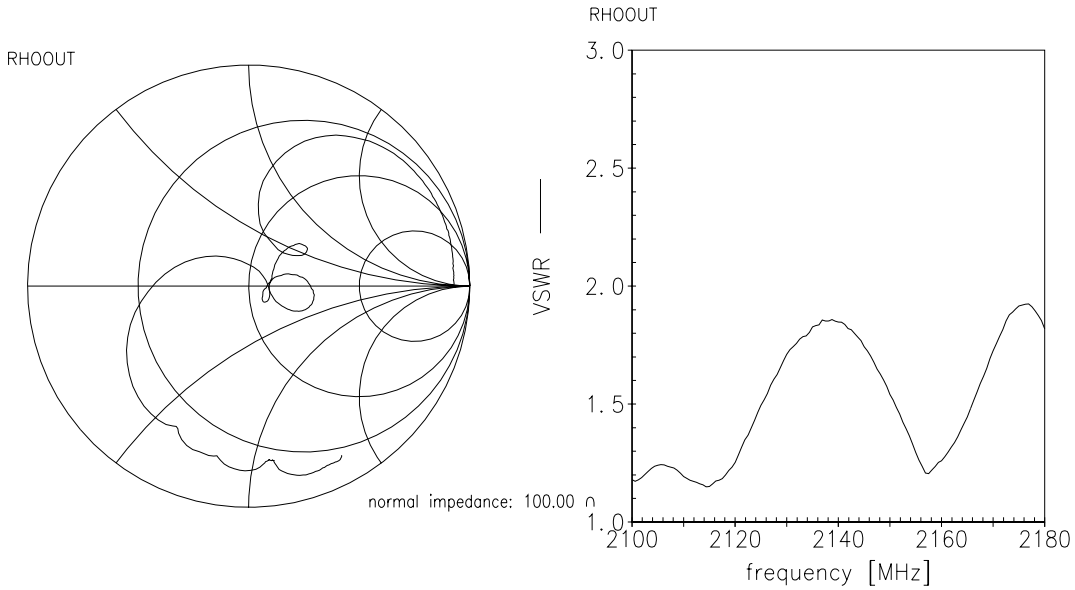


Smith chart

S_{11} function



S_{22} function



Type	B9411	
Ordering code		
Marking and Package		
Packaging		
Date Codes	L_1126	
S-Parameters	B9411_PB.s3p B9411_WB.s3p	
Soldering profile	S_6001	

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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