



SAW Components

SAW Rx Filter

WCDMA Band I

Series/Type: **B9408**
Ordering code:

Date: **December 20, 2005**
Version: **1.0**



Preliminary Data



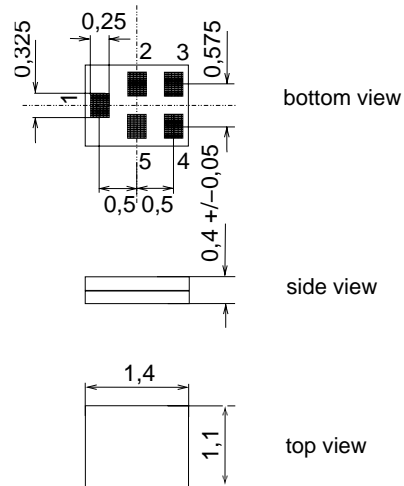
Application

- 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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SAW Filter	2140.0 MHz

Preliminary Data



Characteristics

Operating temperature range: T = -10 °C to +85 °C
 Terminating source impedance: Z_S = 50 Ω
 Terminating load impedance: Z_L = 200 Ω || 13 nH (balanced)

		B9408 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	2.1	dB
Amplitude ripple (p-p)	Δα					
2110.0 ... 2170.0	MHz	—	0.9	1.2	1.0	dB
Input VSWR						
2110.0 ... 2170.0	MHz	—	1.9	2.3	2.0	
Output VSWR						
2110.0 ... 2170.0	MHz	—	1.7	2.1	2.0	
Output amplitude balance (S₃₁/S₂₁)						
2110.0 ... 2170.0	MHz	-1.0	-0.8/0.8	1.0		dB
Output phase balance (φ(S₃₁) - φ(S₂₁)+180°)						
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.
 2) Values in column DesignGoal (DGL) indicate the target performance.



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2140.0 MHz

Preliminary Data



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.



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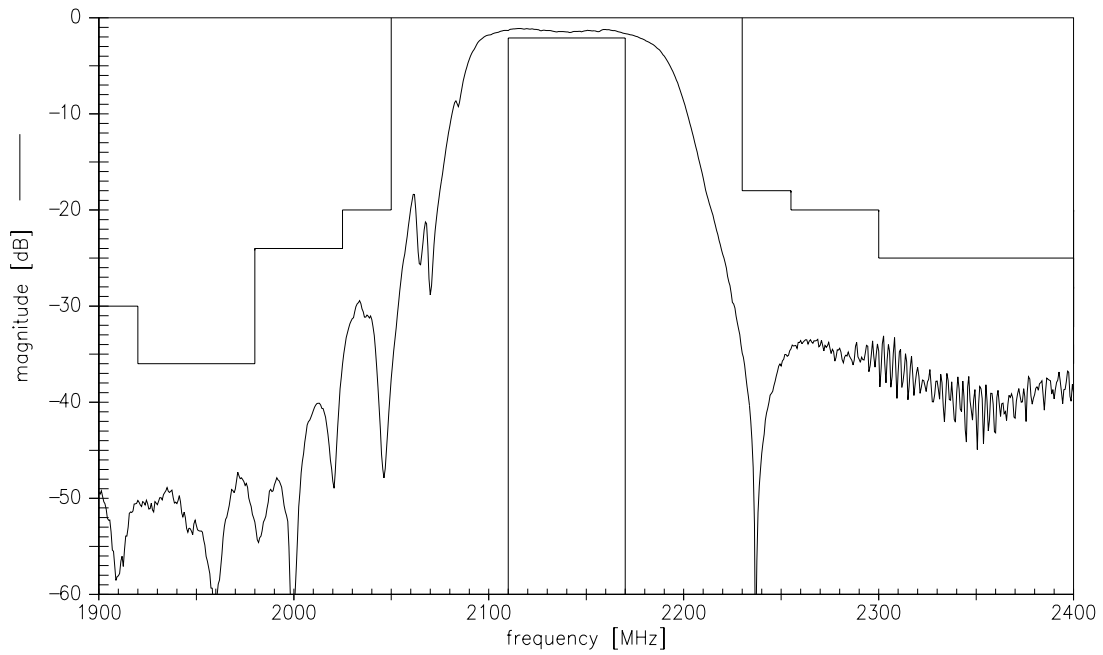
SAW Filter

2140.0 MHz

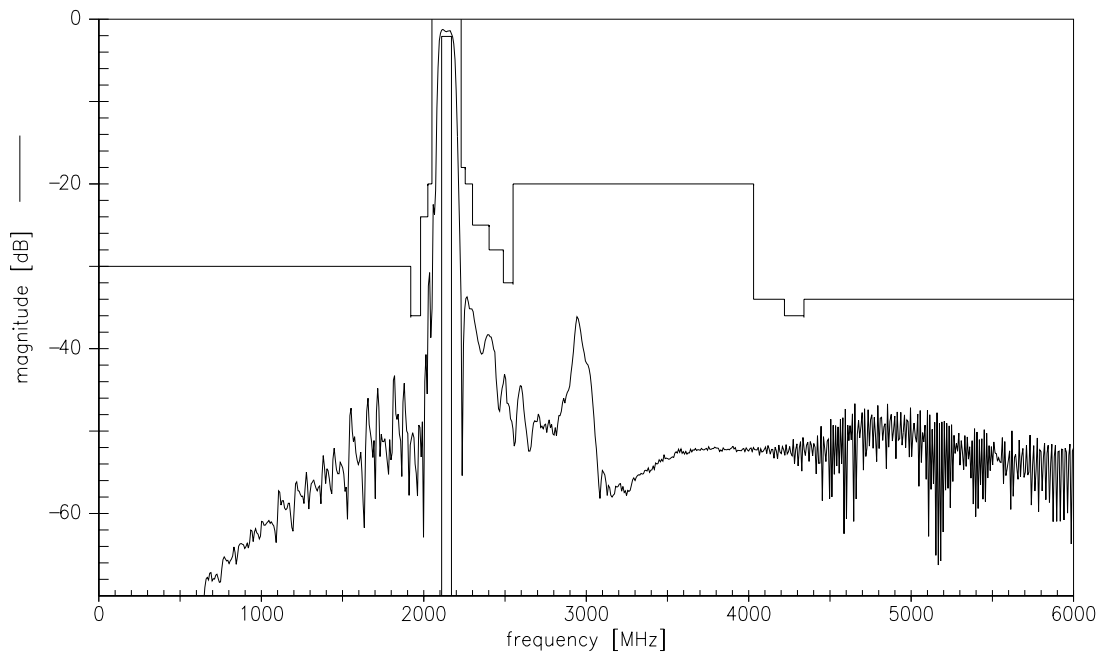
Preliminary Data



Transfer function



Transfer function (wideband)



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

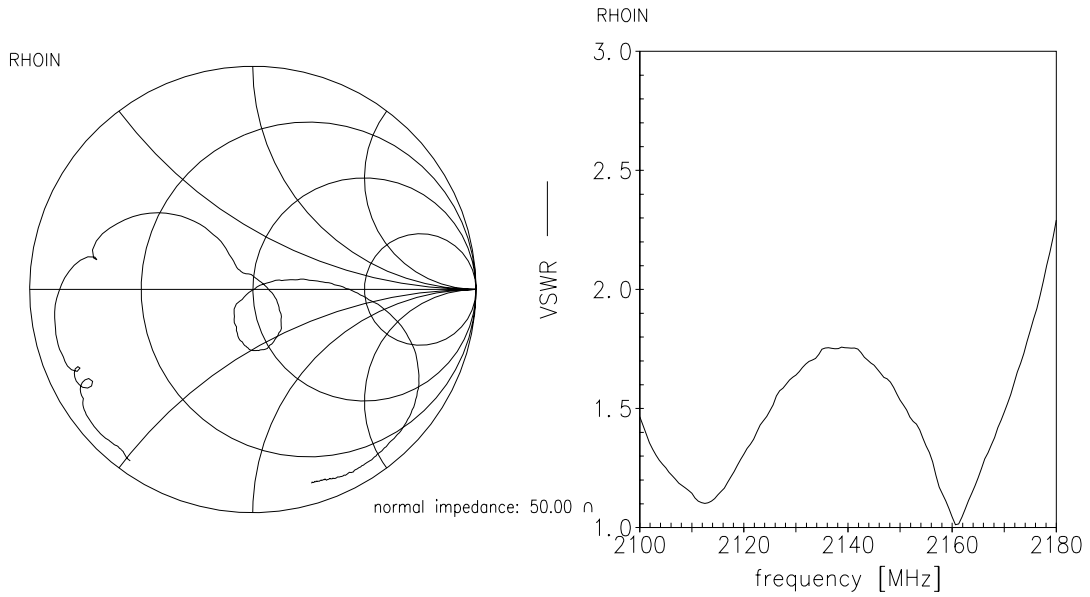


Preliminary Data

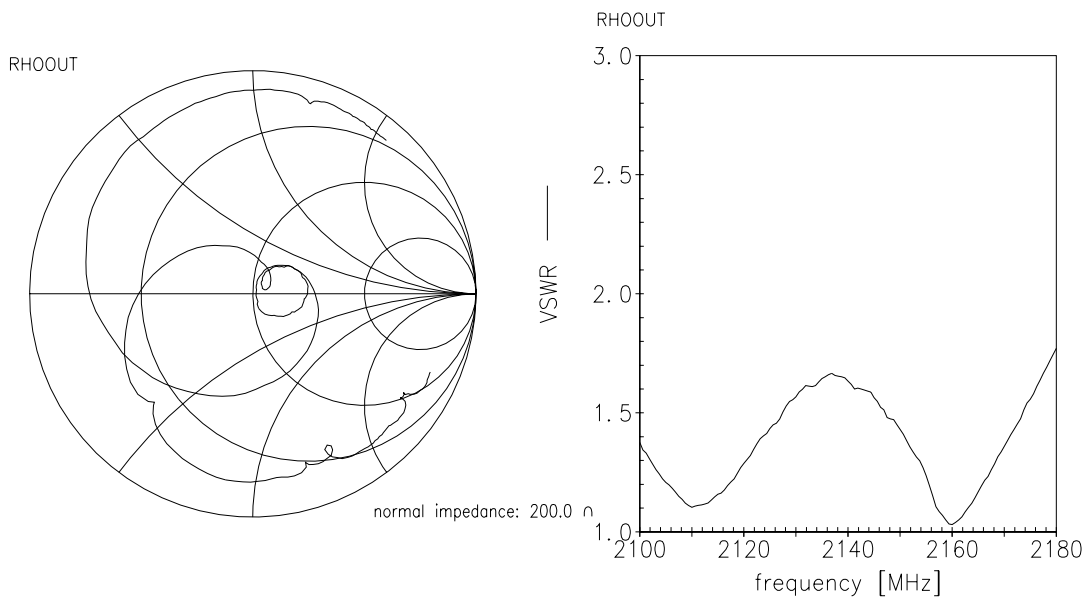


Smith chart

S₁₁ function



S₂₂ function





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SAW Filter **2140.0 MHz**

Preliminary Data



Type	B9408	
Ordering code		
Marking and Package		
Packaging		
Date Codes	L_1126	
S-Parameters	B9408_PB.s3p B9408_WB.s3p	
Soldering profile	S_6001	

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

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