



SAW Components

SAW filter

WLAN

Series/type:	B9455
Ordering code:	B39252B9455M410
Date:	August 14, 2009
Version:	2.0



SAW Components

B9455

SAW filter

2450.0 MHz

Data Sheet



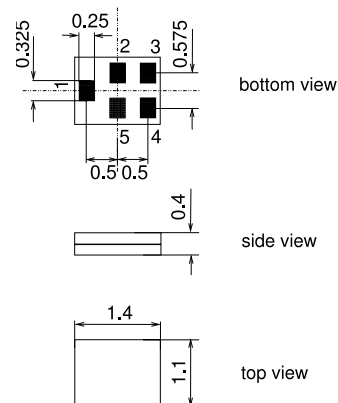
Application

- Low-loss RF filter for WLAN
- 50 Ω / 50 Ω unbalanced to unbalanced operation
- Low insertion attenuation
- Usable passband 100.0 MHz



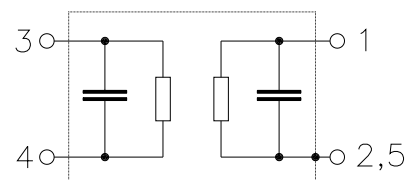
Features

- 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 Input unbalanced
- 4 Output unbalanced
- 3 To be grounded via coil (see matching circuit on page 4)
- 2,5 To be grounded





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Characteristics of Filter Utilizing Matching Circuit

Temperature range for specification: $T = -30^{\circ}\text{C}$ to $+85^{\circ}\text{C}$
 Terminating source impedance: $Z_S = 50\ \Omega$ + matching network
 Terminating load impedance: $Z_L = 50\ \Omega$ + matching network

					B9455			
					min.	typ. @ 25 °C	max.	
Center frequency	f_C				—	2450.0	—	MHz
Maximum insertion attenuation	$\alpha_{\max}$	2400.0 ... 2500.0	MHz		—	1.7	2.0	dB
Amplitude ripple (p-p)	$\Delta\alpha$	2400.0 ... 2500.0	MHz		—	0.5	1.0	dB
VSWR (Input and Output)		2400.0 ... 2500.0	MHz		—	1.5	2.0	
Attenuation	α	50.0 ... 1350.0	MHz		40	43	—	dB
		1350.0 ... 1990.0	MHz		35	37	—	dB
		1990.0 ... 2170.0	MHz		25	29	—	dB
		2750.0 ... 4800.0	MHz		11	13	—	dB
		4800.0 ... 5000.0	MHz		28	32	—	dB
		5000.0 ... 5500.0	MHz		25	28	—	dB
		5500.0 ... 6000.0	MHz		22	26	—	dB
		6000.0 ... 7500.0	MHz		—	23	—	dB



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Maximum ratings

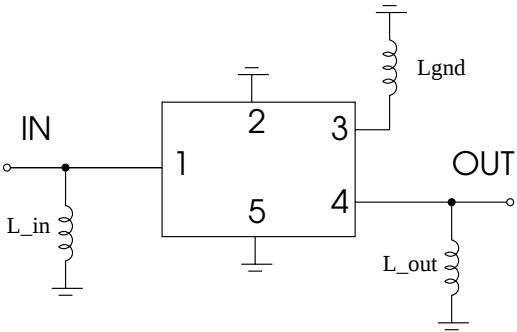
Operable temperature range	T	-30/+85	°C	
Storage temperature range	T _{stg}	-40/+85	°C	
DC voltage	V _{DC}	3	V	
ESD voltage	V _{ESD}	50 ¹⁾	V	machine model, 10 pulses
Input power at 2400,0 ... 2500.0 MHz	P _{IN}	24	dBm	CW signal, +65°C, 2000hr

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

Matching Circuit

Matching element values
(ideal coils, Q = ∞):

L_{in} = 1.8 nH
L_{out} = 2.5 nH
L_{gnd} = 1.9 nH





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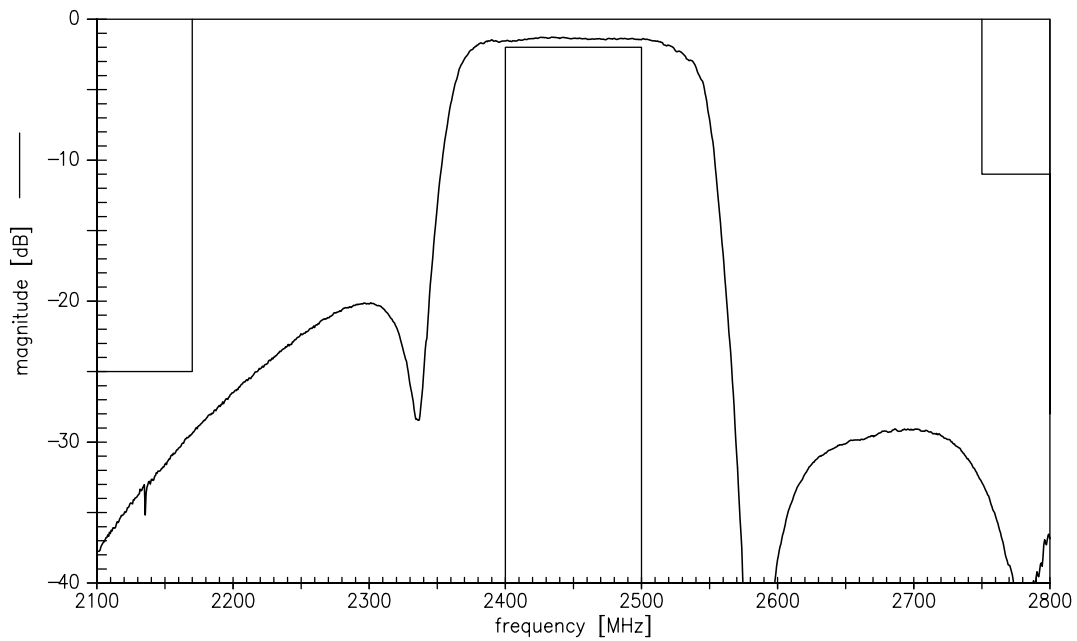
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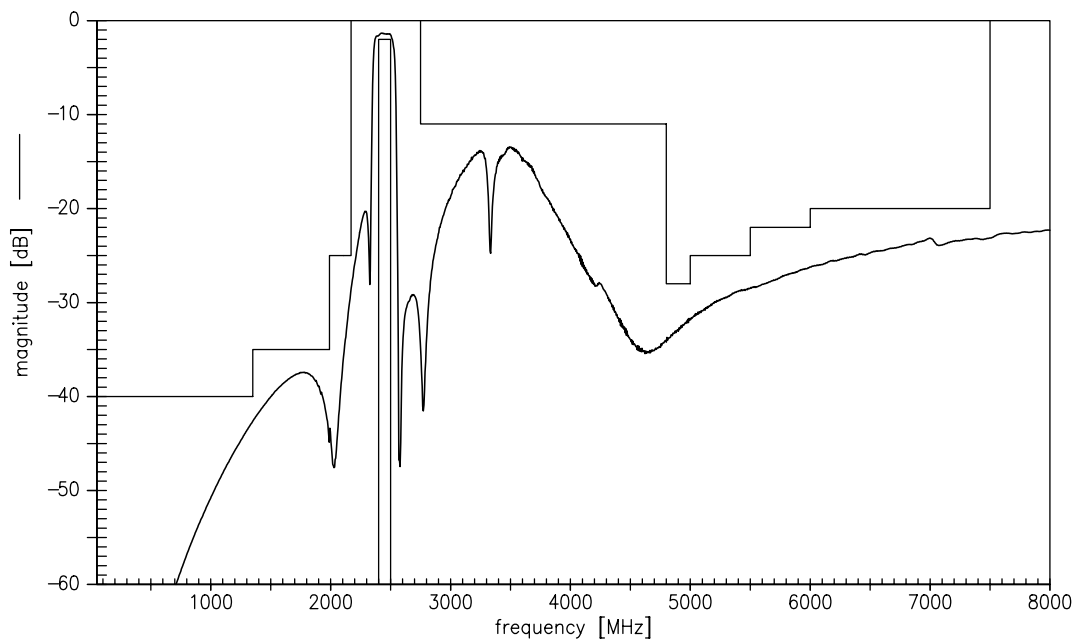
Data Sheet



Transfer Function Including Matching Circuit



Transfer Function Including Matching Circuit (wideband)



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



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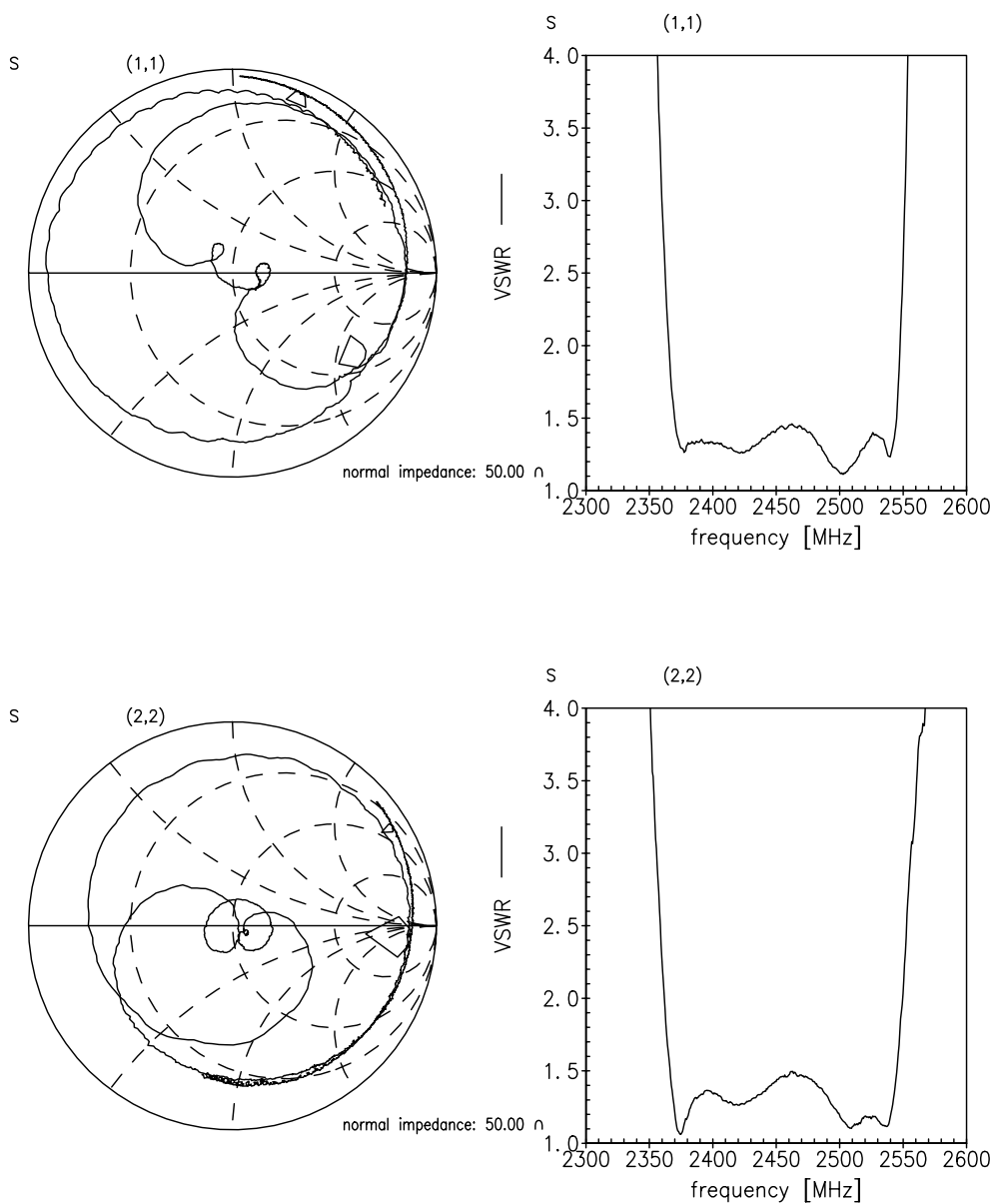
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Data Sheet



Smith Charts Including Matching Circuit



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**References**

Type	B9455
Ordering code	B39252B9455M410
Marking and package	C61157-A8-A3
Packaging	F61074-V8237-Z000
Date codes	L_1126
S-parameters	B9455_NB.s3p B9455_WB.s3p See file header for pin/port assignment
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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Please read *cautions and warnings and important notes* at the end of this document.



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