

SAW Components

SAW filter

WLAN

Series/type:	B8312
Ordering code:	B39252B8312P810
Date:	November 20, 2012
Version:	2.2

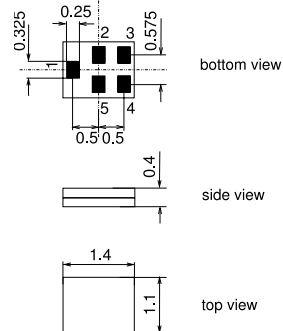
Data Sheet

Application

- Low-loss RF filter for WLAN
- 50 Ω / 50 Ω unbalanced to unbalanced operation
- Low insertion attenuation
- Usable passband 93 MHz


Features

- Package size 1.4 x 1.1 x 0.4 mm³
- RoHS compatible
- Approximate weight 0.003 g
- Package for **Surface Mount Technology (SMT)**
- Ni, gold-plated terminals
- **Electrostatic Sensitive Device (ESD)**
- **Moisture Sensitivity Level 3**


Pin Configuration

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

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SAW filter	2446.5 MHz

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Characteristics of Filter

Temperature range for specification: $T = -30\text{ °C to }+85\text{ °C}$
 Terminating input impedance: $Z_S = 50\Omega$
 Terminating output impedance: $Z_L = 50\Omega \parallel 2.0\text{ nH}$

		B8312			
		min.	typ. @ 25 °C	max.	
Center frequency	f_C	—	2446.5	—	MHz
Maximum insertion attenuation	α_{\max}				
2400.0 ... 2493.0 MHz		—	2.0	2.5	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
2400.0 ... 2493.0 MHz		—	0.5	1.0	dB
VSWR (Input and Output)					
2400.0 ... 2493.0 MHz		—	1.7	2.0 ¹⁾	
2400.0 ... 2493.0 MHz		—	1.7	2.1	
Attenuation	α				
50.0 ... 1511.0 MHz		40	45	—	dB
1511.0 ... 1880.0 MHz		36	40	—	dB
1880.0 ... 2110.0 MHz		30	40	—	dB
2110.0 ... 2170.0 MHz		30	35	—	dB
4800.0 ... 4986.0 MHz		27	35	—	dB
7200.0 ... 7479.0 MHz		—	20	—	dB

¹⁾ At 25 °C

Data Sheet

Maximum ratings of Filter

Operable temperature range	T	-30/+85	°C	
Storage temperature range	T _{stg}	-40/+85	°C	
DC voltage	V _{DC}	3 ¹⁾	V	
ESD voltage	V _{ESD}	50 ²⁾	V	machine model
	V _{HBM}	400 ³⁾	V	human body model
	V _{CDM}	600 ⁴⁾	V	charge device model
Input power at 2400.0 ... 2493.0 MHz	P _{IN}	23	dBm	CW signal, +65°C 2000hr

1) Bias voltage applied at pin 1 requires additional DC-blocking due to a shunt inductor to ground integrated inside filter

2) acc. to JESD22-A115B (machine model, 10 negative and 10 positive pulses)

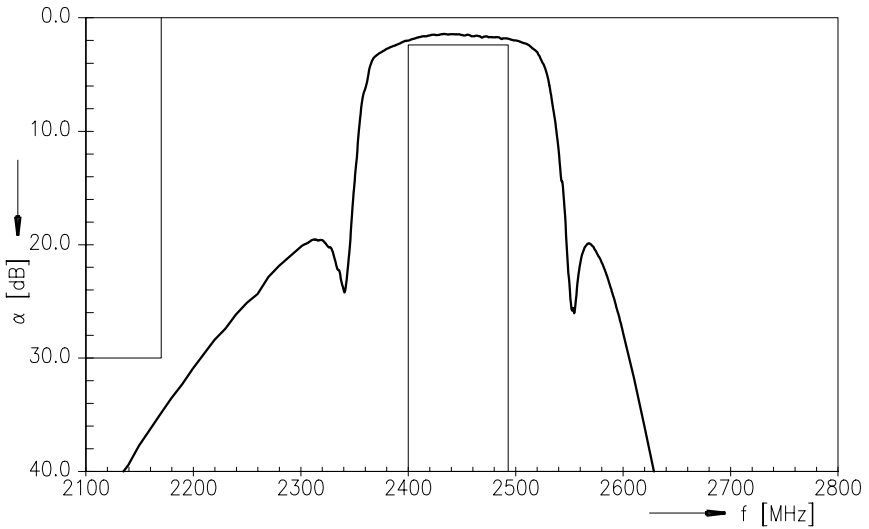
3) acc. to JESD22-A114F (human body model, 1 negative and 1 positive pulses)

4) acc. to JESD22-C101E (filled induced charged device model, 3 negative and 3 positive pulses)

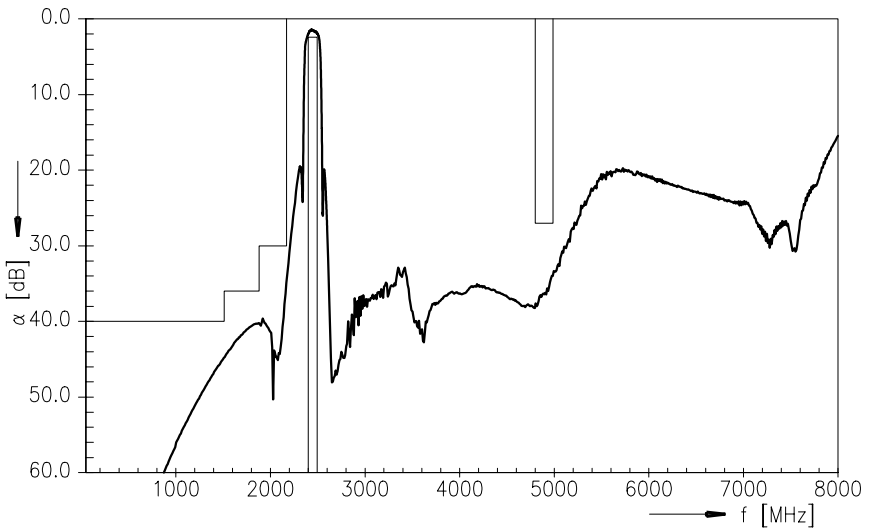
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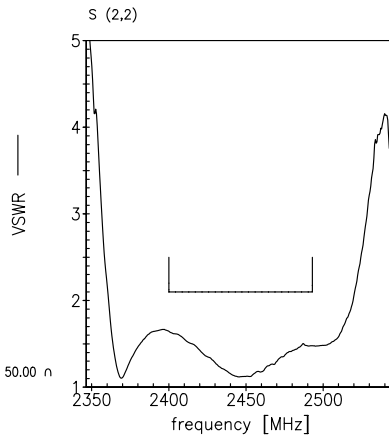
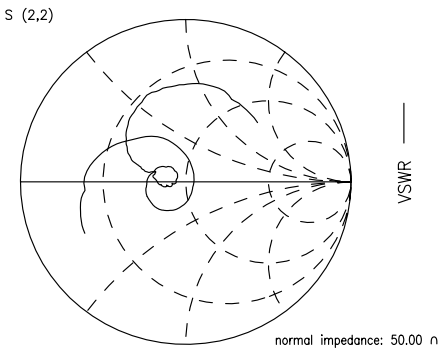
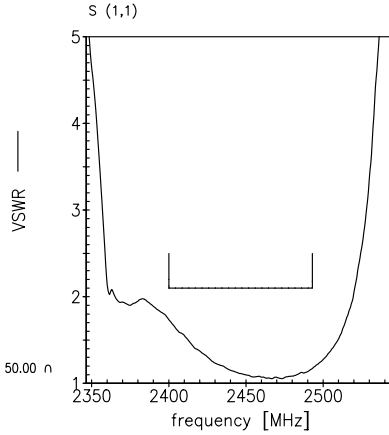
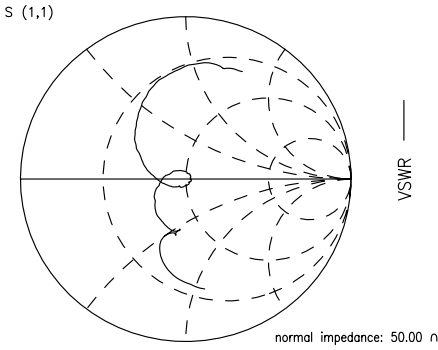
Transfer Function



Transfer Function (wideband)



Data Sheet
Smith Charts



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References

Type	B8312
Ordering code	B39252B8312P810
Marking and package	C61157-A8-A70
Packaging	F61074-V8237-Z000
Date codes	L_1126
S-parameters	B8312_NB.s2p B8312_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.

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