



SAW Components

Band 40 BAW filter

Series/type:	B9609
Ordering code:	B39232B9609P810
Date:	July 22, 2013
Version:	2.0

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Band 40 BAW filter

2350.0 MHz

Datasheet

SMD

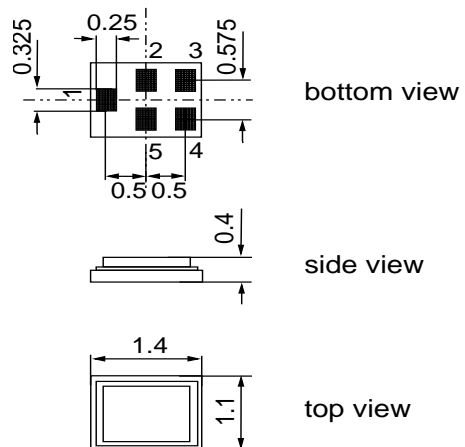
Application

- Low-loss RF filter for LTE Full Band 40 with Blue-tooth/WLAN Coexistence
- Usable passband: 100.0 MHz
- Unbalanced to unbalanced operation
- Good insertion attenuation
- High out of band selectivity
- Filter impedance 50 Ω



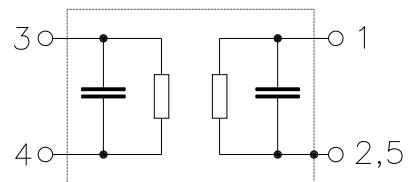
Features

- 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



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

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Characteristics

Temperature range for specification: $T = -20\text{ °C to }+85\text{ °C}$
 Terminating source impedance: $Z_S = 50\ \Omega \parallel 6.8\text{nH}$
 Terminating load impedance: $Z_L = 50\ \Omega$ (unbalanced)

		min.	typ. @ 25 °C	max.	
Center frequency	f_C	—	2350.0	—	MHz
Maximum insertion attenuation	α_{\max}				
2300.0 ... 2400.0 MHz		—	2.6	4.5	dB
2300.0 ... 2400.0 MHz		—	1.6 ¹⁾	—	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
2300.0 ... 2400.0 MHz		—	1.5	3.4	dB
VSWR (Input and Output)					
2300.0 ... 2400.0 MHz		—	2.0	2.4	
Attenuation	α				
100.0 ... 1574.0 MHz		22	24	—	dB
1574.0 ... 1680.0 MHz		22	24	—	dB
1845.0 ... 1880.0 MHz		25	27	—	dB
2110.0 ... 2170.0 MHz		33	36	—	dB
2423.0 ... 2441.0 MHz		24	55	—	dB
2428.0 ... 2446.0 MHz		45	54	—	dB
2450.0 ... 2500.0 MHz		36	39	—	dB
4600.0 ... 4800.0 MHz		8	13	—	dB

¹⁾ Averaged over passband



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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}	5	V	
ESD voltage	V _{ESD}	50 ¹⁾	V	Machine model
ESD voltage	V _{ESD}	500 ²⁾	V	Human Body model
ESD voltage	V _{ESD}	600 ³⁾	V	Charge Device model
Input power at 2300.0 - 2400.0 MHz	P _{IN}	27.5	dBm	LTE 10MHz Uplink signal, 55°C , 2000hr
Input power at 2300.0 - 2400.0 MHz	P _{IN}	31.0	dBm	LTE 10MHz Uplink signal, 55°C , Instantaneous Breakdown

1) acc. to JESD22-A115A

2) acc. to JESD22-A114F

3) acc. to JESD22-C101



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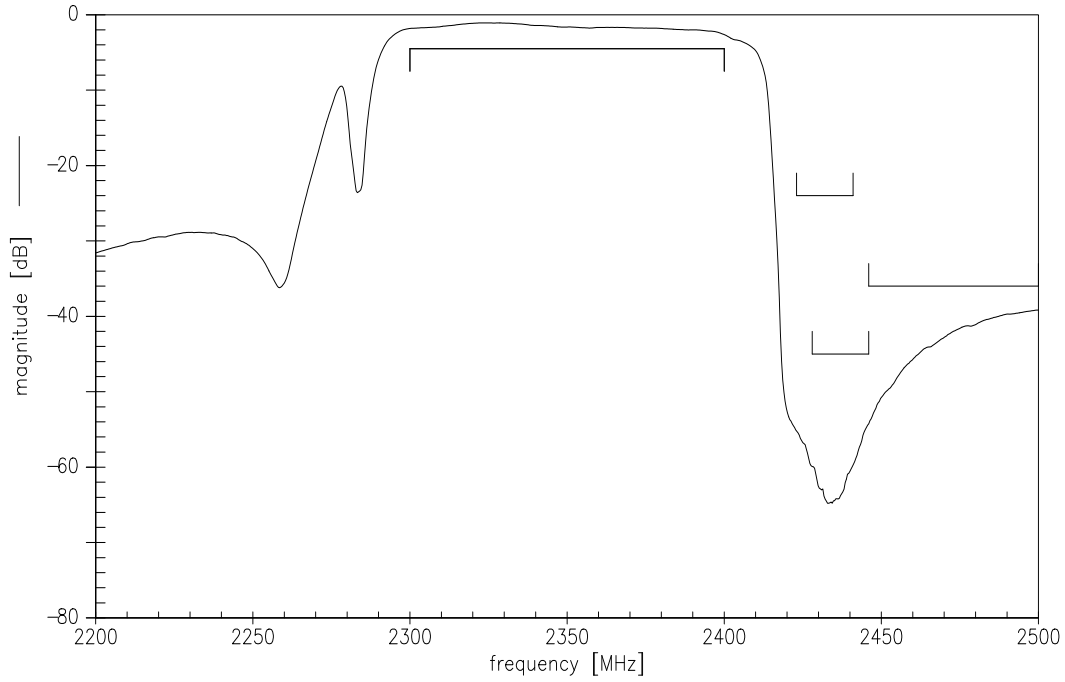
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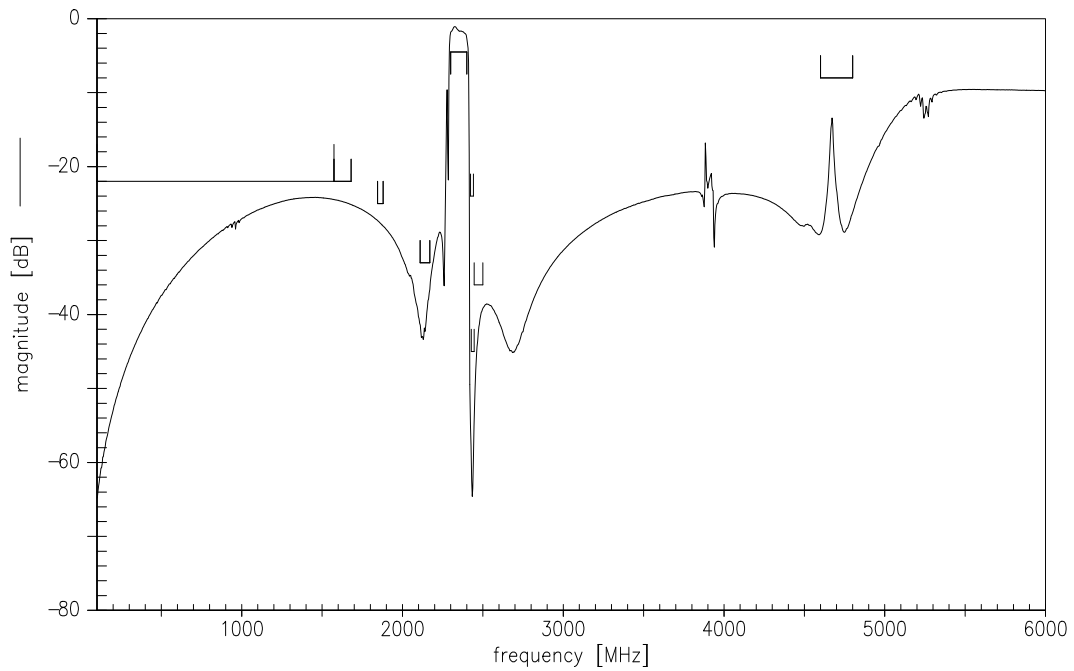
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Transfer function



Transfer function (wideband)



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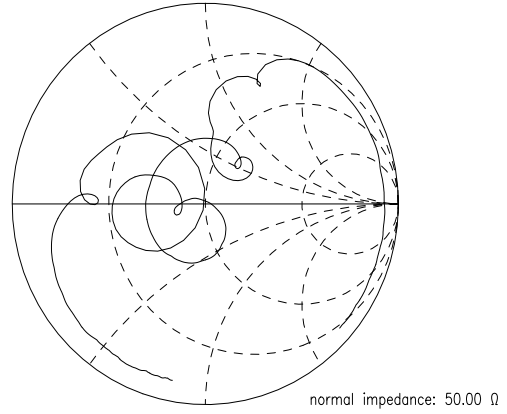
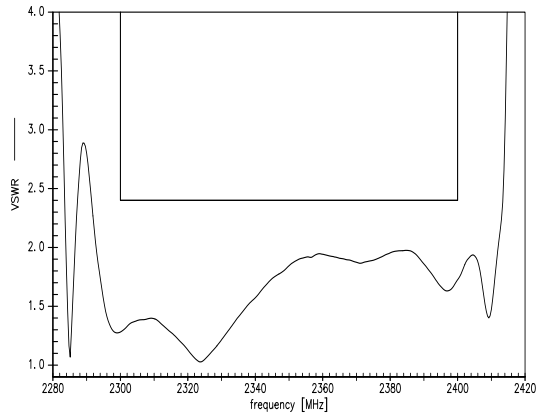
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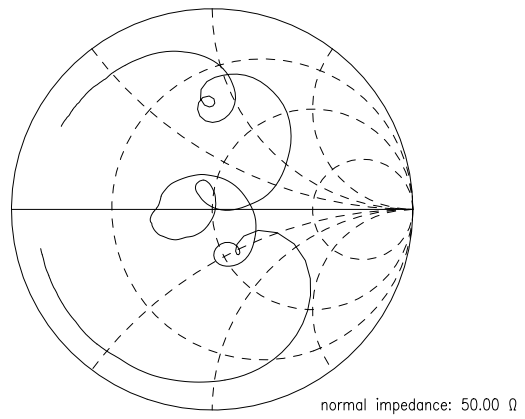
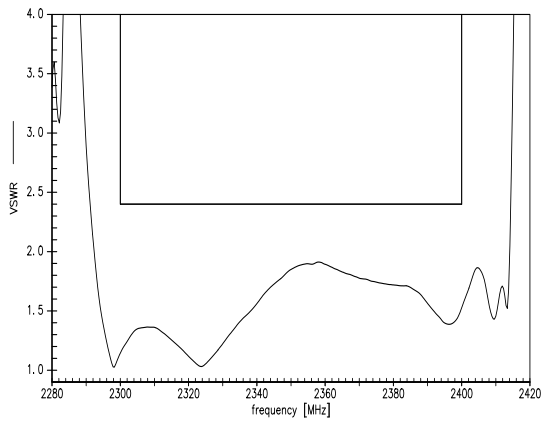
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S11 VSWR



S22 VSWR



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References

Type	B9609
Ordering code	B39232B9609P810
Marking and package	C61157-A8-A80
Packaging	F61074-V8212-Z000
Date codes	L_1126
S-parameters	B9609_NB.s2p, B9609_WB.s2p See file header for port/pin assignment table.
Soldering profile	S_6001
RoHS compatible	RoHS-compatible means that products are compatible with the requirements according to Art. 4 (substance restrictions) of Directive 2011/65/EU of the European Parliament and of the Council of June 8 th , 2011, on the restriction of the use of certain hazardous substances in electrical and electronic equipment ("Directive") with due regard to the application of exemptions as per Annex III of the Directive in certain cases.
Moldability	Before using in overmolding environment, please contact your EPCOS sales office.
Matching coils	See Inductor pdf-catalog http://www.tdk.co.jp/tefe02/coil.htm#aname1 and Data Library for circuit simulation http://www.tdk.co.jp/etvcl/index.htm

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

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