SAW Components

SAW Rx filter

LTE Diversity
Band XXI Rx

Series/type: **B8807**
Ordering code: **B39152B8807P810**

Date: April 26, 2013
Version: 2.0

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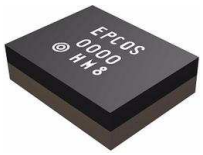
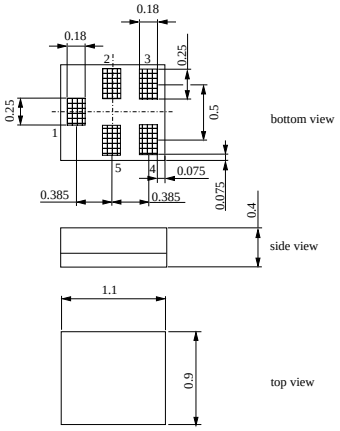
Application

- Low-loss RF filter for mobile telephone
  LTE Band XXI systems (diversity) receive path (Rx)
- Unbalanced to balanced operation
- Low amplitude ripple
- Usable passband: 15 MHz
- Impedance transformation from 50ohm to 100ohm



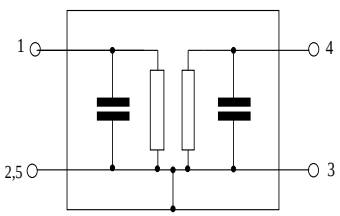
Features

- Package size 1.1 x 0.9 x 0.4 mm^3
- RoHS compatible
- Approx. weight 0.001g
- Package for **S**urface **M**ount **T**echnology (**SMT**)
- Ni, gold-plated terminals
- **E**lectrostatic **S**ensitive **D**evice (**ESD**)
- **M**oisture **S**ensitive **L**evel (**MSL**) 3



Pin configuration

- 1 Input, unbalanced
- 3,4 Output, balanced
- 2,5 Case-ground



Data Sheet SMD

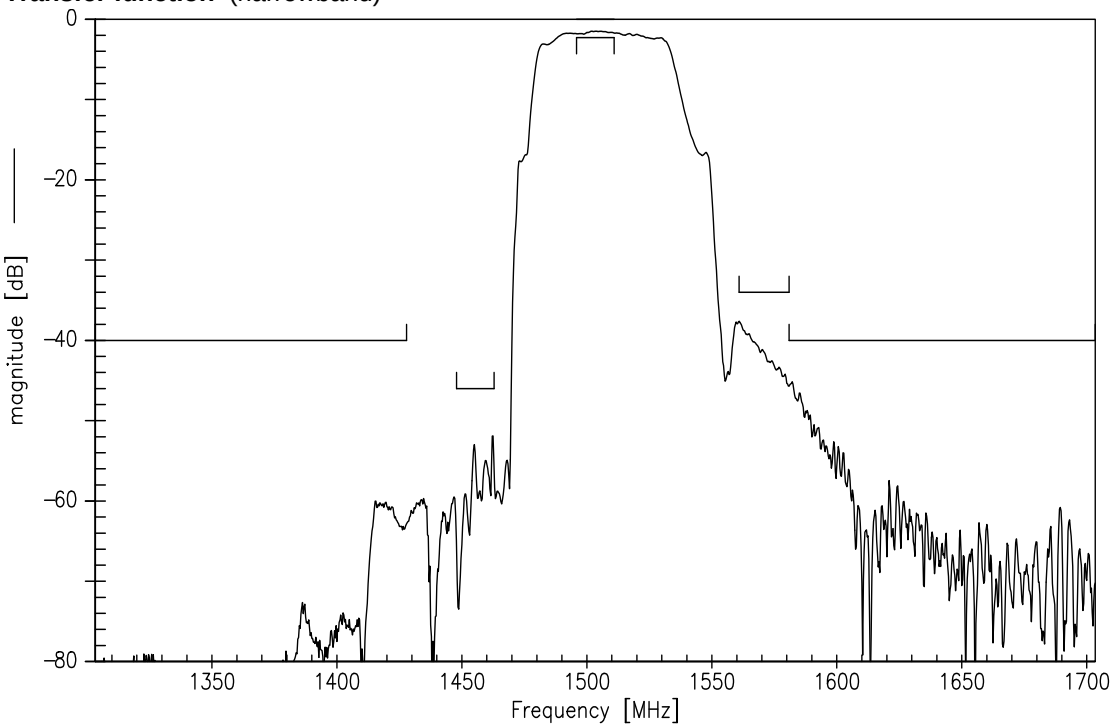
Characteristics

Temperature range for specification: T = –20 ˚C to +85 ˚C
Terminating source impedance: Z_S = 50 Ω
Terminating load impedance: Z_L = 100 Ω (Balanced)

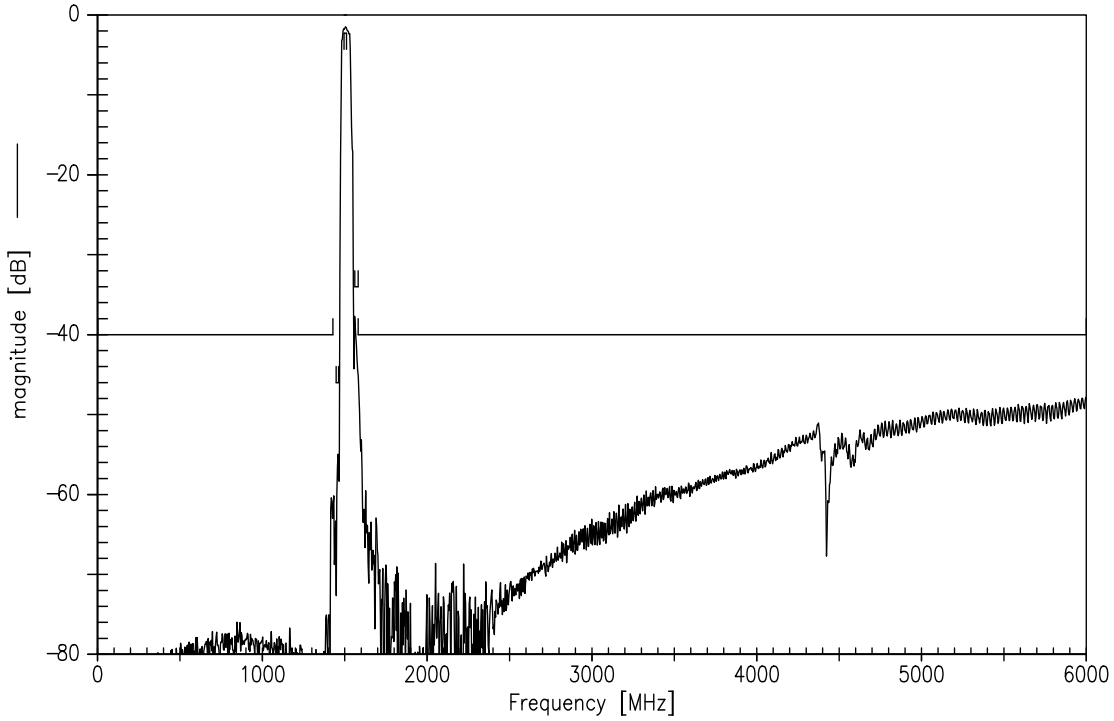
		min.	typ. @ 25˚C	max.	
Center frequency	f_C	—	1503.4	—	MHz
Maximum insertion attenuation					
1495.9 ... 1510.9 MHz			1.7	2.3	dB
Amplitude ripple (p-p)					
1495.9 ... 1510.9 MHz			0.4	1.5	dB
Input VSWR					
1495.9 ... 1510.9 MHz			1.5	2.0	
Output VSWR					
1495.9 ... 1510.9 MHz			1.5	2.0	
Common Mode Rejection Ratio CMRR					
1495.9 ... 1510.9 MHz		23 [1)]	28		dB
Attenuation	α				
10.0 ... 1427.9 MHz		40	59		dB
1447.9 ... 1462.9 MHz		46	52		dB
1560.9 ... 1580.9 MHz		34	38		dB
1580.9 ... 6000.0 MHz		40	45		dB

1) A combination of 10° phase balance and 1dB amplitude balance corresponds to 19.6 dB CMRR.

Transfer function (narrowband)

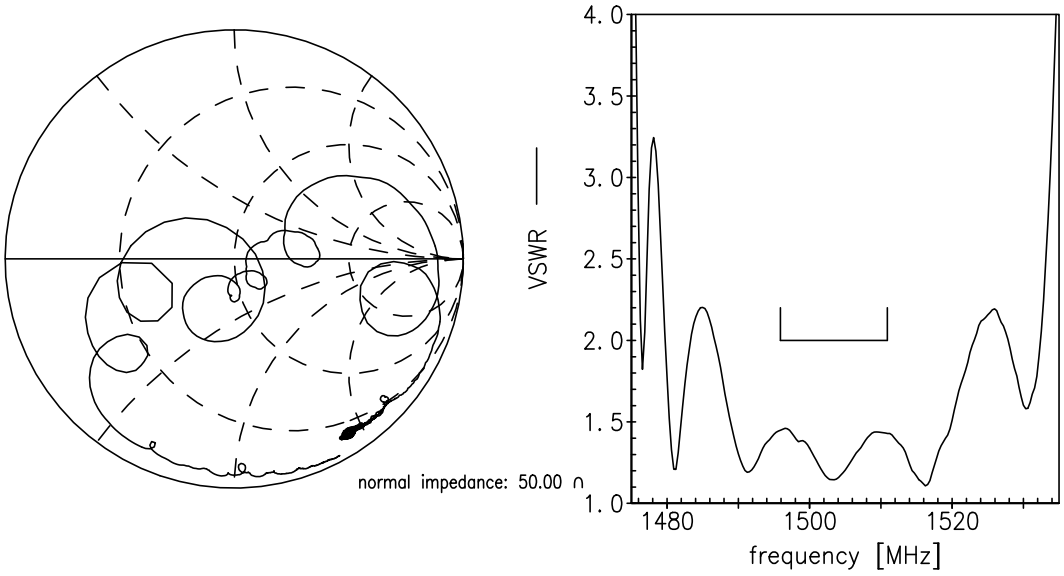


Transfer function (wideband)

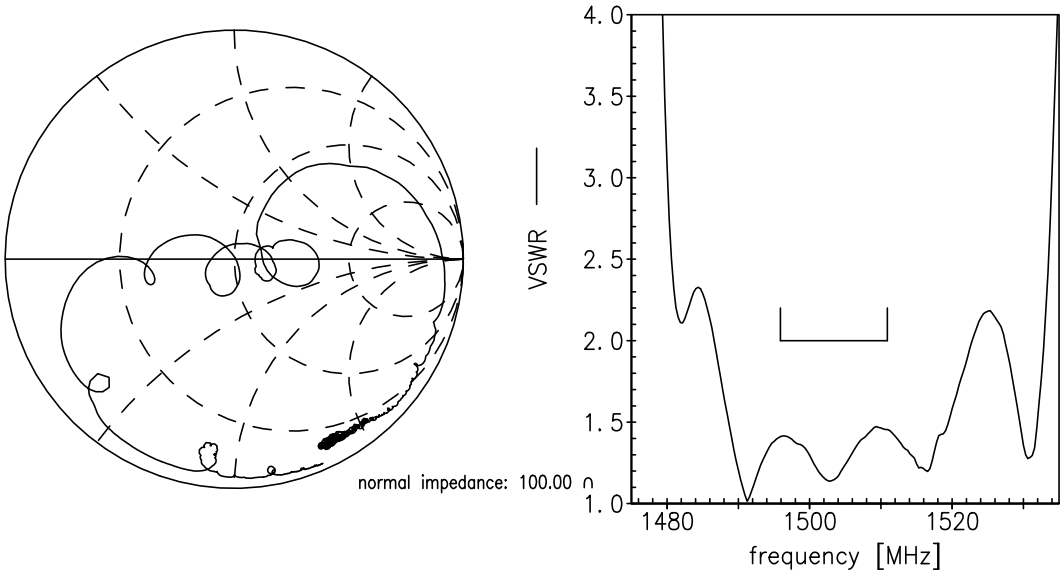


Smith Charts

S_{11} function



S_{22} function



Maximum ratings

Storage temperature range	T_{stg}	–40/+85	˚C	
DC voltage	V_{DC}	5	V	
ESD voltage	V_{ESD}	50 [1)]	V	machine model, 10 pulse
Input Power at 1447.9 - 1462.9 MHz Tx band	P_{IN}	15	dBm	continuous wave T=50 ˚C, 2000 hours

1) acc. to JESD22-A115B (machine model), 10 negative & 10 positive pulses.

References

Type	B8807
Ordering code	B39152B8807P810
Marking and package	C61157-A8-A30
Packaging	F61074-V8255-Z000
Date codes	L_1126
S-parameters	B8807_NB.s3p, B8807_WB.s3p 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 8th, 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

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