SAW Components

SAW Filter

TD-LTE Band 40

Series/type:	**B9498**
Ordering code:	**B39242B9498P810**
Date:	April 20, 2012
Version:	2.0

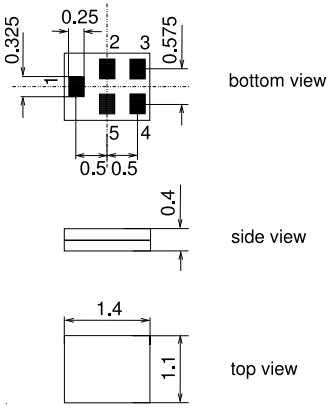
Data sheet SMD

Application

- Low-loss RF filter for mobile telephone TD-LTE Band 40 systems
- Unbalanced to balanced operation
- Low amplitude ripple
- Usable passband: 100 MHz
- Impedance transformation from 50 Ω to 150 Ω

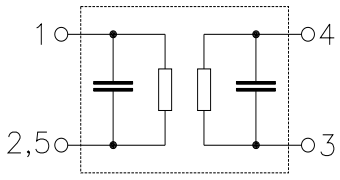
Features

- Package size 1.4 x 1.1 x 0.4 mm³
- RoHS compatible
- Approx. weight 0.003g
- 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 3



Pin configuration

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



Data sheet SMD

Characteristics

Temperature range for specification: T = –30 ˚C to +85 ˚C
Terminating source impedance: Z_S = 50 Ω
Terminating load impedance: Z_L = 150 Ω || 8nH

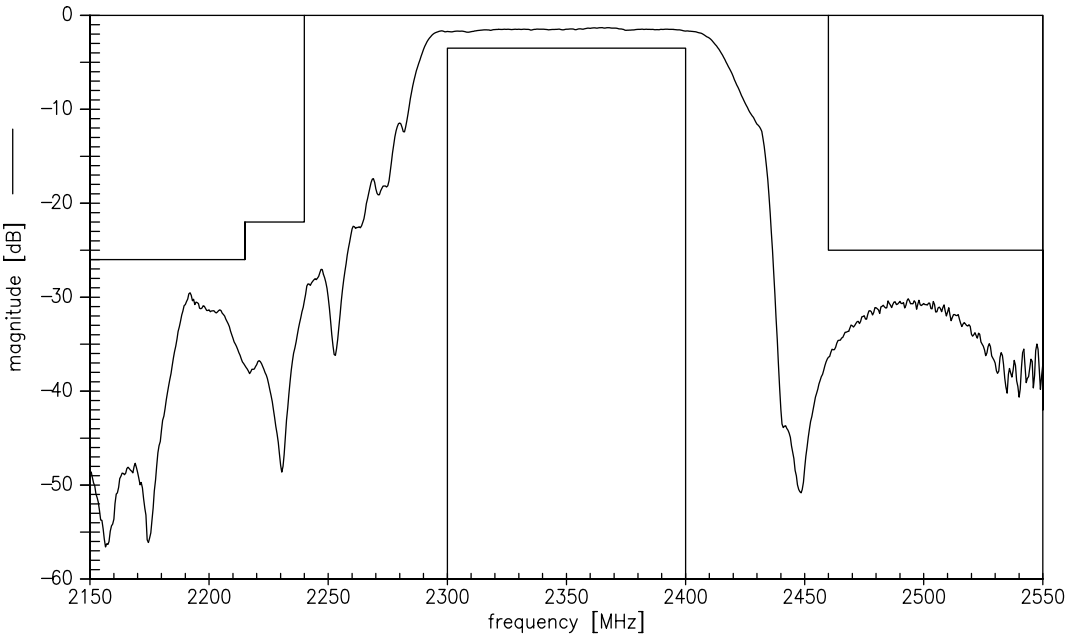
		min.	typ. @ 25˚C	max.	
Center frequency	f_C	—	2350.0	—	MHz
Maximum insertion attenuation	α_{max}				
2300.0 ... 2400.0MHz		—	1.8	3.5	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
2300.0 ... 2400.0MHz		—	0.6	2.2	dB
Input VSWR					
2300.0 ... 2400.0MHz		—	1.9	2.4	
Output VSWR					
2300.0 ... 2400.0MHz		—	1.9	2.3	
CMRR ($\lvert S_{21}-S_{31}\rvert$ / $\lvert S_{21}+S_{31}\rvert$)					
2300.0 ... 2400.0MHz		18	21	—	dB
Attenuation	α				
10.0 ... 1570.0MHz		42	52	—	dB
1570.0 ... 1580.0MHz		42	54	—	dB
1580.0 ... 2000.0MHz		38	45	—	dB
2000.0 ... 2215.0MHz		26	30	—	dB
2215.0 ... 2240.0MHz		22	30	—	dB
2460.0 ... 2485.0MHz		25	30	—	dB
2485.0 ... 3000.0MHz		25	30	—	dB
3000.0 ... 4000.0MHz		28	35	—	dB
4000.0 ... 6000.0MHz		42	52	—	dB

Maximum ratings

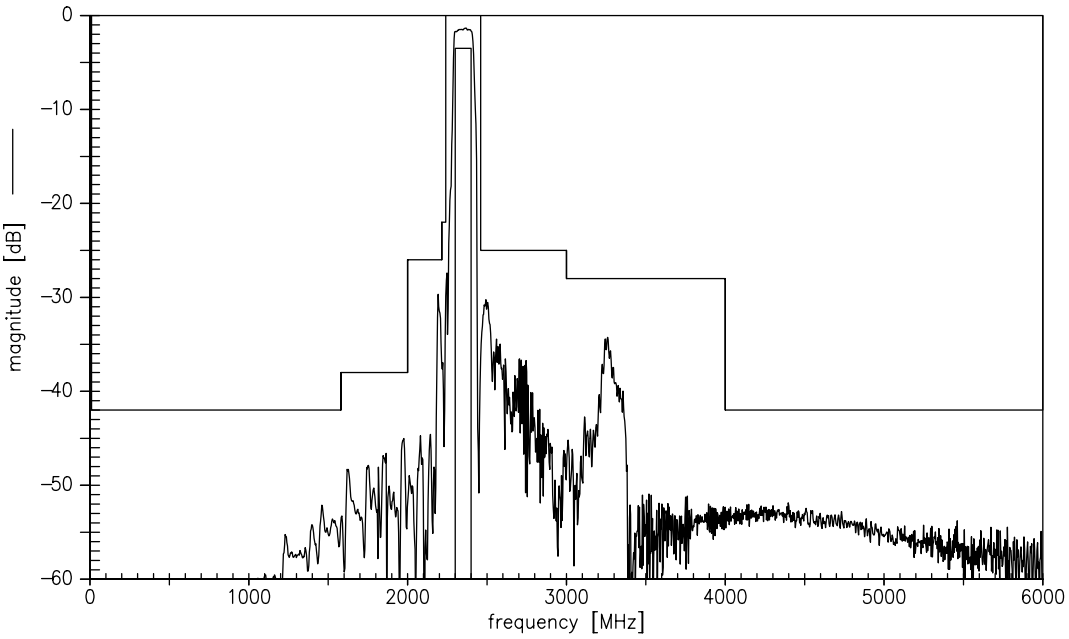
Operable temperature range	T	–40/+85	˚C	
Storage temperature range	T_{stg}	–40/+85	˚C	
DC voltage	V_{DC}	5	V	
ESD voltage	V_{ESD}	50[1)]	V	machine model, 1 pulse
Input Power at				
2300.0 ... 2400.0 MHz	P_{IN}	17	dBm	effective power in the on-state duty cycle 4:8 for 2000h at T=55 ˚C

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

Transfer function (narrowband)

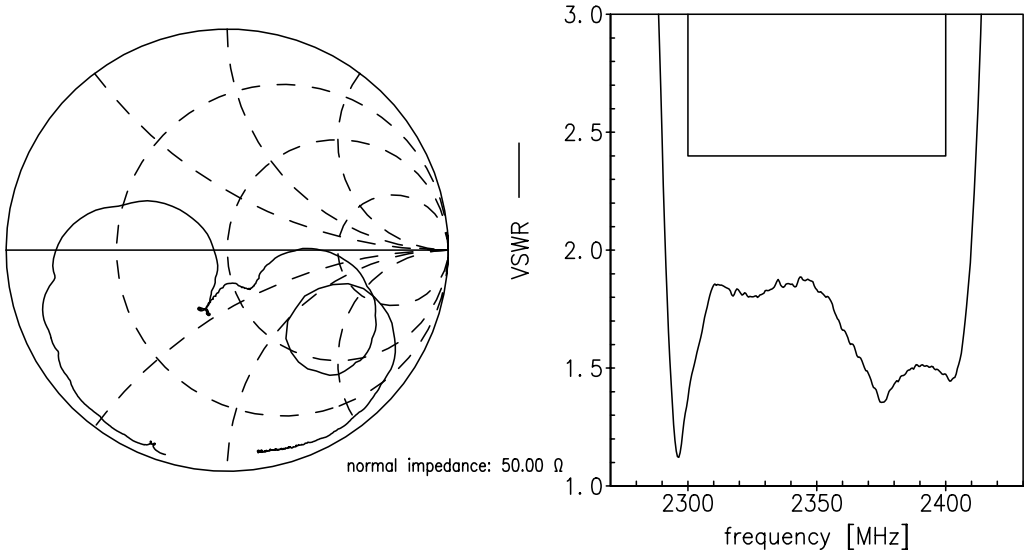


Transfer function (wideband)

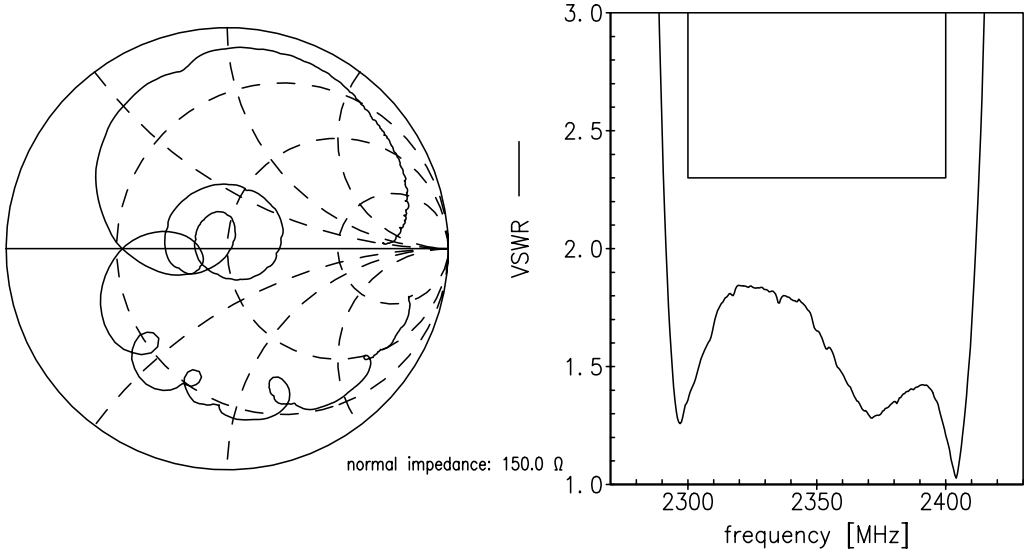


Smith Charts

S_{11} function



S_{22} function



References

Type	B9498
Ordering code	B39242B9498P810
Marking and package	C61157-A8-A14
Packaging	F61074-V8237-Z000
Date codes	L_1126
S-parameters	B9498_NB_UN.s3p, B9498_WB_UN.s3p see file header for port/pin assignment table
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.
Matching coils	See http://www.tdk.co.jp/tefe02/coil.htm#aname1 http://www.tdk.co.jp/etvcl/index.htm for a large variety of matching coils.

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

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