SAW Components

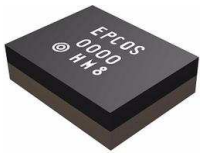
SAW Diversity Rx filter

WCDMA Band I/IV

Series/type:	**B9469**
Ordering code:	**B39212B9469K610**
Date:	November 24, 2010
Version:	2.0

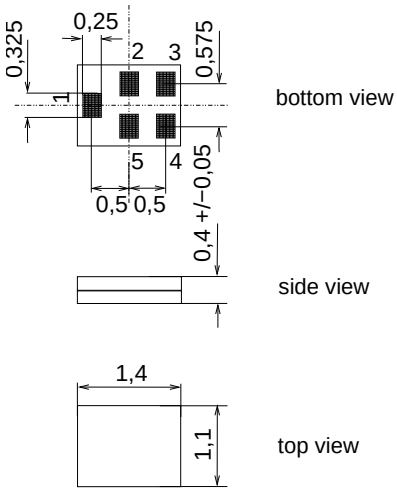
Application

- Low-loss RF filter for mobile telephone WCDMA Band I/IV systems (diversity) receive path (RX)
- Usable for diversity application
- Usable passband 60 MHz
- Unbalanced to balanced operation (50Ω /100Ω)



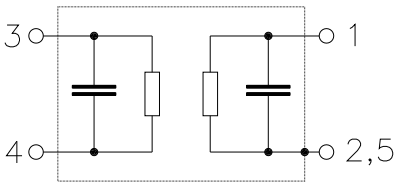
Features

- Package size 1.4 x 1.1 x 0.4 mm³
- RoHS compatible
- Approximate weight 0.003 g
- 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 To be grounded



Characteristics

Temperature range for specification: T = –30 ˚C to +85 ˚C
Terminating source impedance: Z_S = 50 Ω (unbalanced)
Terminating load impedance: Z_L = 100 Ω || 22 nH (balanced)

		min.	typ. @ 25 ˚C	max.	
Center frequency	f_C	—	2140.0	—	MHz
Maximum insertion attenuation					
2110.0 ... 2170.0 MHz	α_{max}	—	2.2	2.5	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
2110.0 ... 2170.0 MHz		—	0.7	1.0	dB
CMRR ($\|S_{21}-S_{31}\| / \|S_{21}+S_{31}\|$)					
2110.0 ... 2170.0 MHz	CMRR[1)]	23	29		dB
Input VSWR					
2110.0 ... 2170.0 MHz		—	1.7	2.0	
Output VSWR					
2110.0 ... 2170.0 MHz		—	1.8	2.0	
Attenuation	α				
0.0 ... 1920.0 MHz		40	49		dB
810.0 ... 849.0 MHz		50	61		dB
898.0 ... 925.0 MHz		50	61		dB
1710.0 ... 1755.0 MHz		46	52		dB
1920.0 ... 1980.0 MHz		46	56		dB
1980.0 ... 2050.0 MHz		25	39		dB
2400.0 ... 2484.0 MHz		30	44		dB
2484.0 ... 3000.0 MHz		35	45		dB
3000.0 ... 6000.0 MHz		40	45		dB

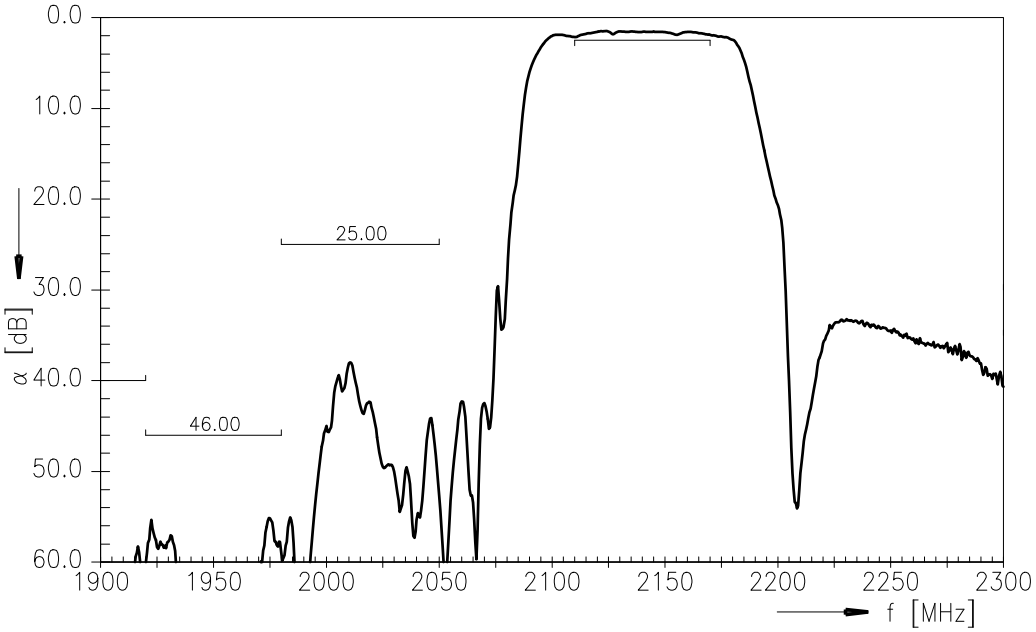
1) A combination of 5˚ phase balance and 1 dB amplitude balance corresponds to 23 dB CMRR

Maximum ratings

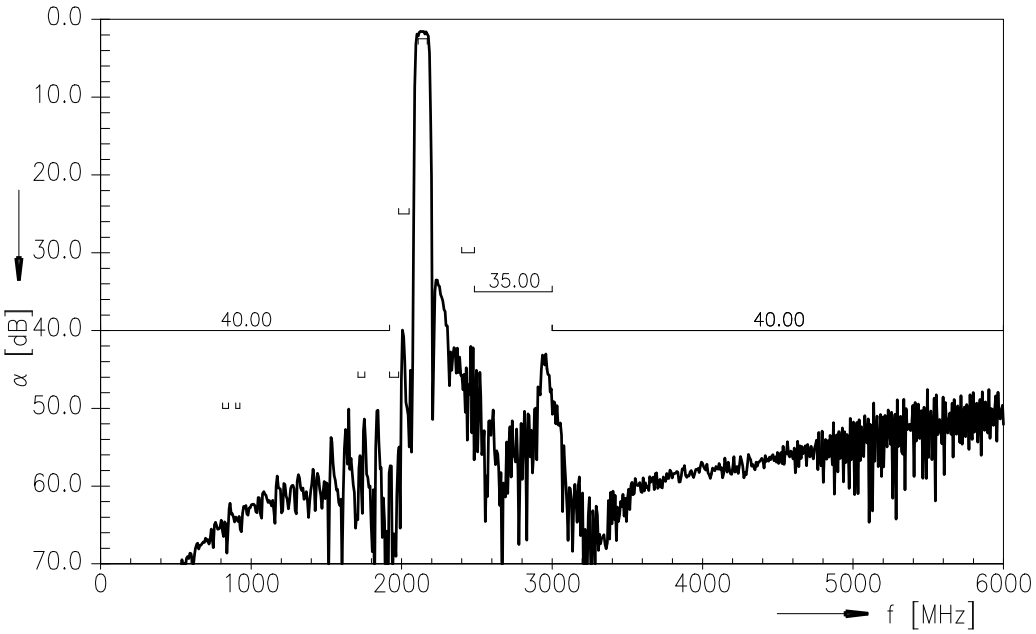
Operable temperature range	T	–30/+85	˚C	
Storage temperature range	T_{stg}	–40/+85	˚C	
DC voltage	V_{DC}	3	V	
ESD voltage	V_{ESD}	50[1)]	V	machine model, 10 pulses
Input power at				
824.0 ... 849.0 MHz				
880.0 ... 915.0 MHz				
1710.0 ... 1755.0 MHz				
1920.0 ... 1980.0 MHz		15	dBm	
else where	P_{IN}	10	dBm	

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

Transfer function

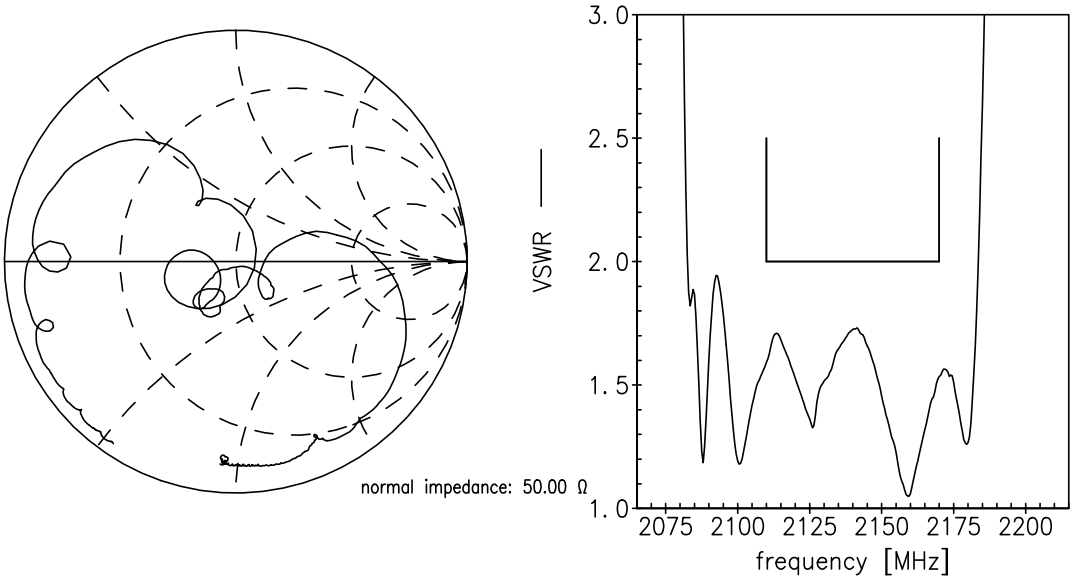


Transfer function (wideband)

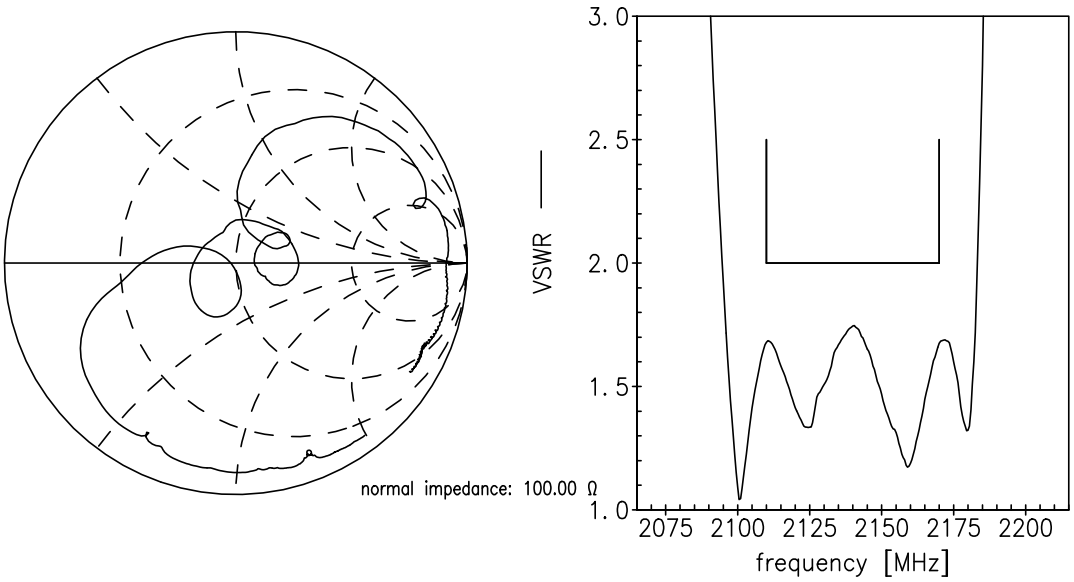


Smith chart

S_{11} function



S_{22} function



References

Type	B9469
Ordering code	B39212B9469K610
Marking and package	C61157-A8-A1
Packaging	F61074-V8212-Z000
Date codes	L_1126
S-parameters	B9469_UN_NB.s3p, B9469_UN_WB.s3p See file header for port/pin assignment table.
Soldering profile	S_6001
RoHS compatible	defined as compatible with the following documents: CTIVE 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 enviroment, 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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