



SAW Components

SAW Tx Filter

WCDMA Band I

Series/Type:	B9872
Ordering code:	B39202B9872P810
Date:	October 17, 2012
Version:	2.0



Data Sheet



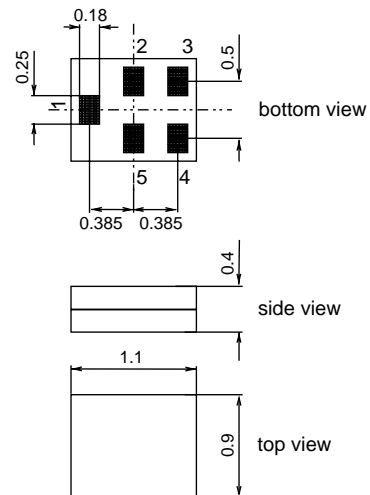
Application

- Low-loss RF filter for mobile telephone WCDMA Band I systems
- Impedance transform from 50 Ω to 50 Ω
- Unbalanced to unbalanced operation
- Low amplitude ripple
- High Rx-suppression
- Usable passband: 60 MHz



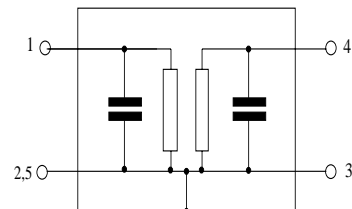
Features

- Package size 1.1 x 0.9 x 0.4 mm³
- RoHS compatible
- Approx. weight 0.001 g
- Package for Surface Mount Technology (SMT)
- Ni, gold-plated terminals
- Electrostatic Sensitive Device (ESD)
- Moisture Sensitive Level 3



Pin configuration

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





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Characteristics

Operating temperature range: $T = -30\text{ °C to }+85\text{ °C}$
 Terminating source impedance: $Z_S = 50\ \Omega$
 Terminating load impedance: $Z_L = 50\ \Omega$

		min.	typ. @ 25°C	max.	
Center frequency	f_C	—	1950.0	—	MHz
Maximum insertion attenuation	α_{max}				
1920.0 ... 1980.0 MHz		—	1.7	3.3	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
1920.0 ... 1980.0 MHz		—	1.0	2.5	dB
Input VSWR					
1920.0 ... 1980.0 MHz		—	1.6	2.2	
Output VSWR					
1920.0 ... 1980.0 MHz		—	1.6	2.2	
Attenuation	α				
50.0 ... 960.0 MHz		35	40	—	dB
960.0 ... 1575.0 MHz		32	41	—	dB
1575.0 ... 1576.0 MHz		37	44	—	dB
1576.0 ... 1700.0 MHz		30	40	—	dB
1700.0 ... 1880.0 MHz		25	30	—	dB
2025.0 ... 2110.0 MHz		20	24	—	dB
2110.0 ... 2170.0 MHz		30	40	—	dB
2170.0 ... 2400.0 MHz		30	38	—	dB
2400.0 ... 2500.0 MHz		32	40	—	dB
2500.0 ... 6000.0 MHz		26	31	—	dB



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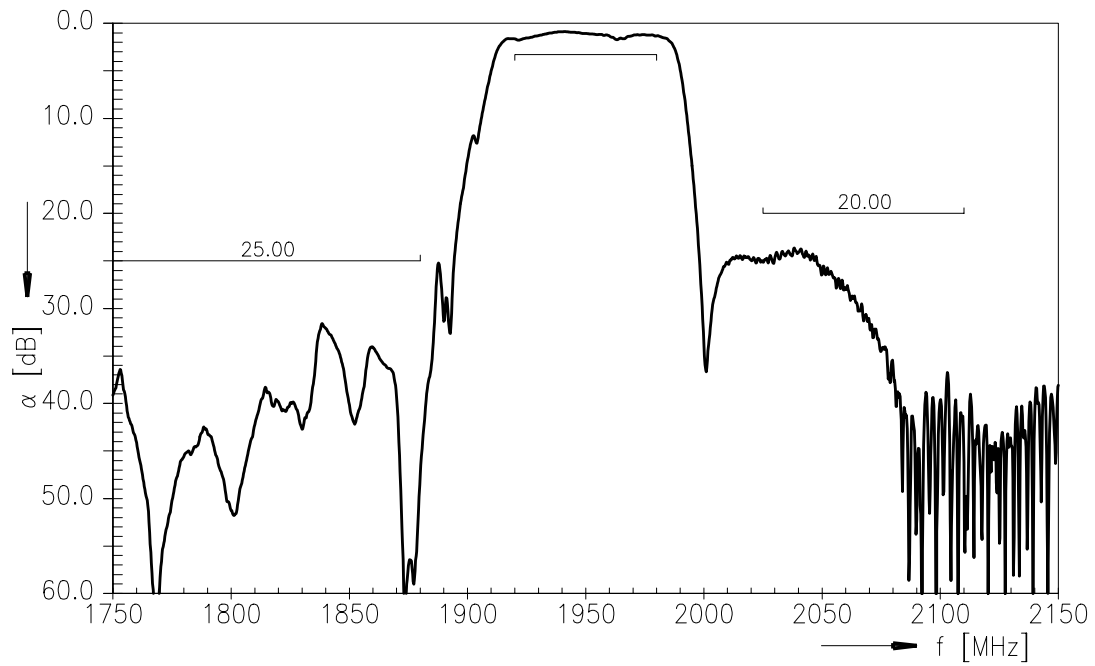
Maximum ratings

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
Input Power at 1920.0 ...1980.0 MHz	P _{IN}	10	dBm	continuous wave

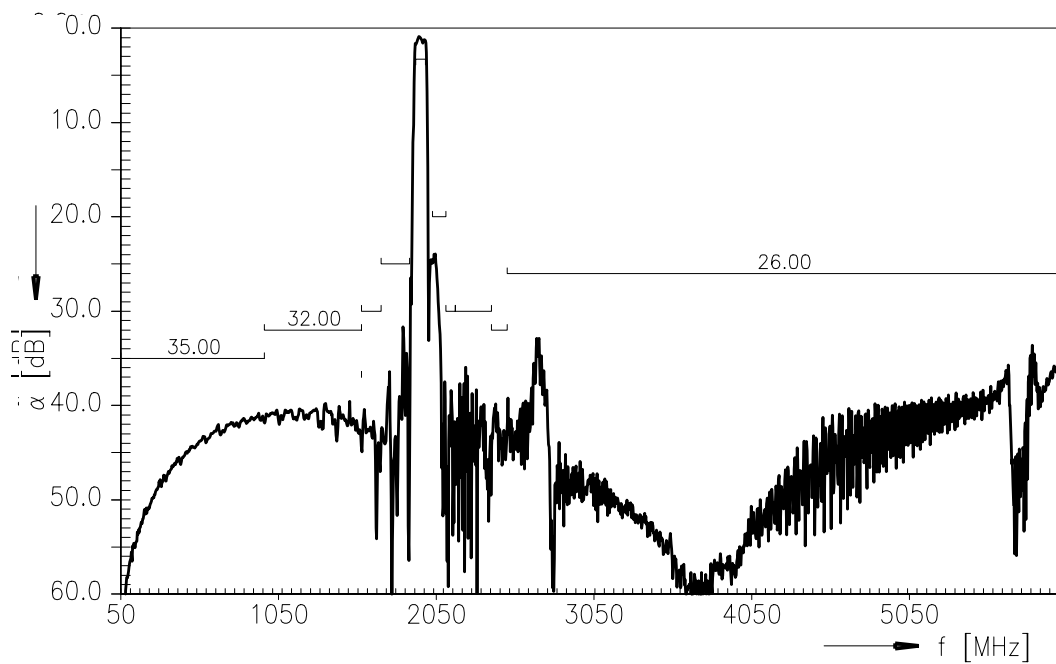
1) acc. to JESD22-A115A (machine model), 1 negative & 1 positive pulse.



Transfer function

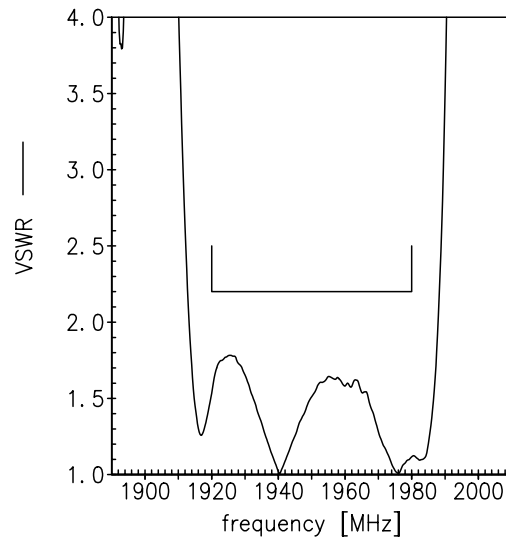
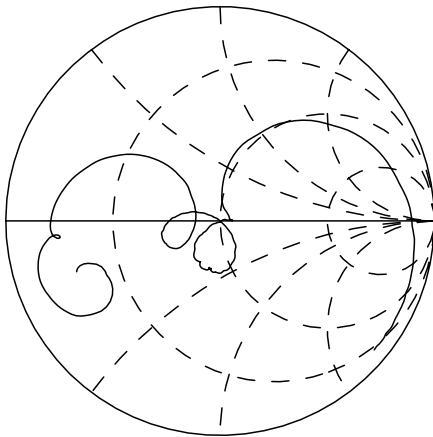


Transfer function (wideband)

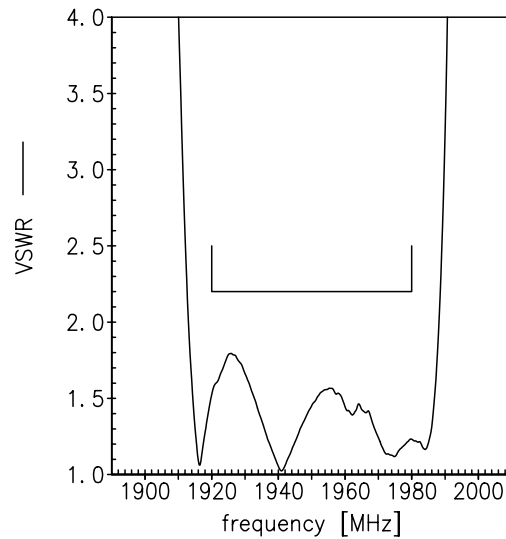
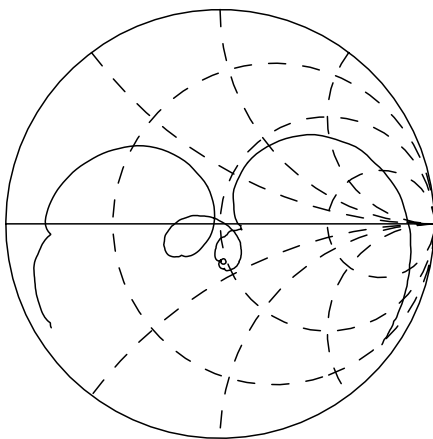


Smith charts

S_{11} function



S_{22} function





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References

Type	B9872
Ordering code	B39202B9872P810
Marking and package	C61157-A8-A56
Packaging	F61074-V8255-Z000
Date codes	L_1126
S-parameters	B9872_NB.s2p, B9872_WB.s2p 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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