



SAW Components

SAW Rx Single filter

GSM 900

Series/type:	B9472
Ordering code:	B39941B9472P810
Date:	August 2, 2010
Version:	2.0

Data sheet



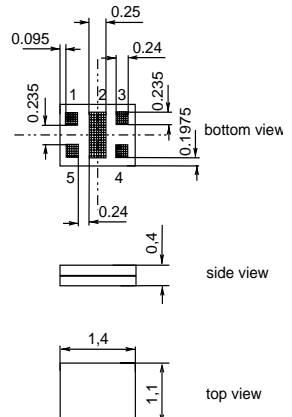
Application

- Low-loss RF filter for mobile telephone GSM 900 systems, receive path (Rx)
- Usable passband 35 MHz
- Unbalanced to balanced operation
- Impedance transformation from 50 Ω to 150 Ω
- Low amplitude ripple
- Suitable for GPRS class 1 to 12



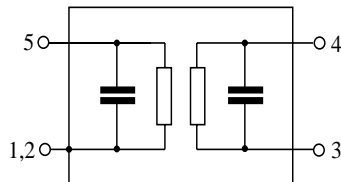
Features

- Package size 1.4 x 1.1 x 0.4 mm³
- RoHS compatible
- Approx. weight 0.003g
- Package for **Surface Mount Technology (SMT)**
- Ni, gold-plated terminals
- **Electrostatic Sensitive Device (ESD)**
- **Moisture Sensitive Level 3**



Pin configuration

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



Data sheet


Characteristics

Temperature range for specification: $T = -20\text{ °C to }+75\text{ °C}$
 Terminating source impedance: $Z_S = 50\ \Omega$
 Terminating load impedance: $Z_L = 150\ \Omega \parallel 72\text{ nH (balanced)}$

				min.	typ. @25°C	max.	
Center frequency	f_c			—	942.5	—	MHz
Maximum insertion attenuation	α_{\max}			—	1.4 ¹⁾	2.3	dB
925.0 ... 960.0	MHz						
Amplitude ripple (p-p)	$\Delta\alpha$			—	0.6	1.5	dB
925.0 ... 960.0	MHz						
Input VSWR				—	1.7	2.0	
925.0 ... 960.0	MHz						
Output VSWR				—	1.7	2.0	
925.0 ... 960.0	MHz						
Common mode rejection ratio				19	28	—	dB
925.0 ... 960.0	MHz						
Attenuation	α			45	58	—	dB
10.0 ... 480.0	MHz			30	35	—	dB
480.0 ... 900.0	MHz			27	30	—	dB
900.0 ... 905.0	MHz			20	31	—	dB
905.0 ... 915.0	MHz			25	29	—	dB
915.0 ... 980.0	MHz			28	32	—	dB
980.0 ... 1000.0	MHz			40	45	—	dB
1000.0 ... 1850.0	MHz			35	39	—	dB
1850.0 ... 1920.0	MHz			33	37	—	dB
1920.0 ... 3700.0	MHz						
3700.0 ... 6000.0	MHz						

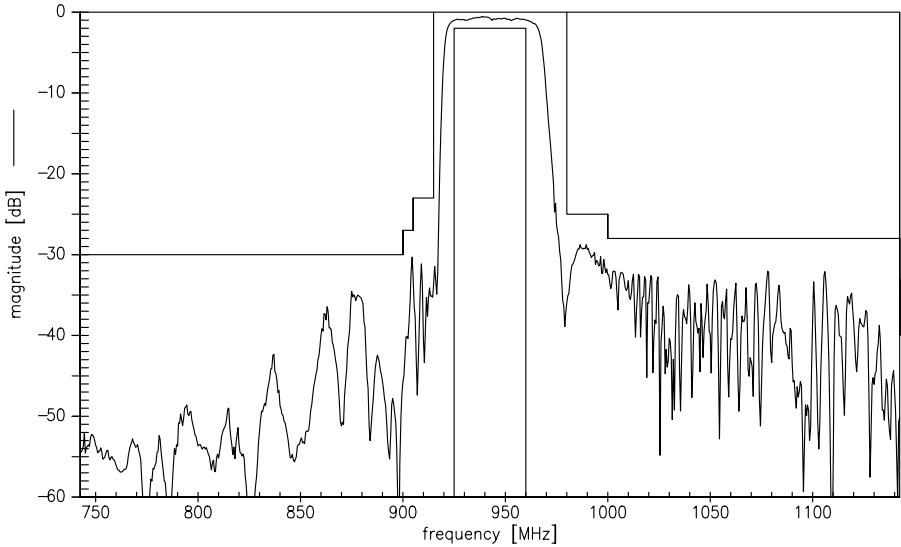
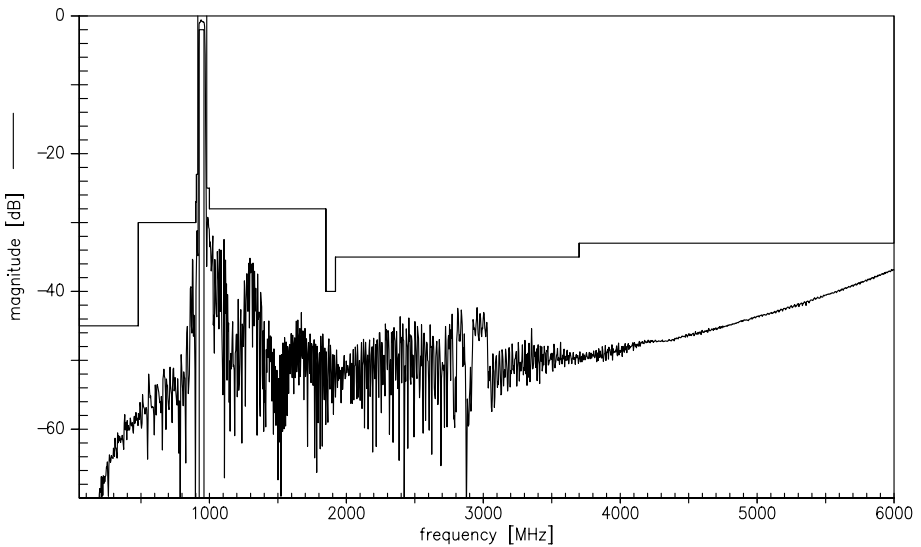
1) Typical value excluding PCB losses.


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}	100 ¹⁾	V	machine model, 1 pulse
Input power at				
GSM 850, GSM 900	P _{IN}	15	dBm	effective power in the on-state, duty cycle 4:8
GSM 1800, GSM 1900	P _{IN}	15	dBm	
Tx bands				

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

Data sheet

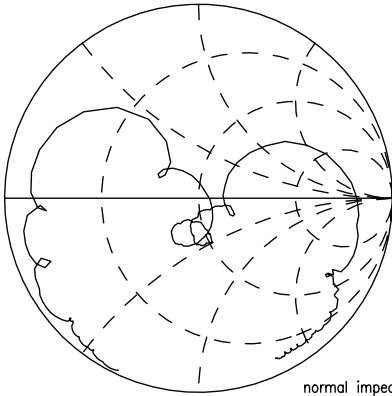
**Transfer function - narrowband****Transfer function - wideband**

Data sheet

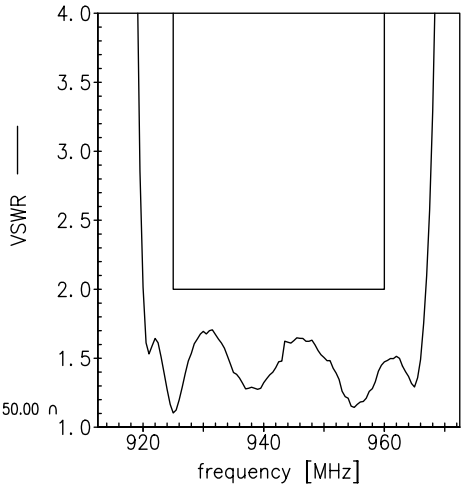


Smith Charts

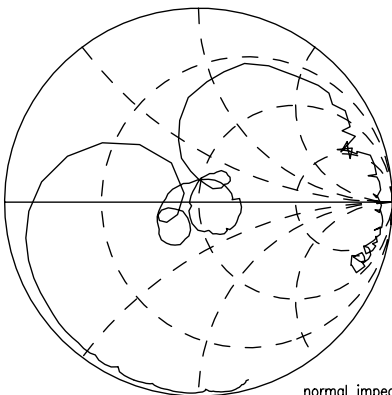
S₁₁ function



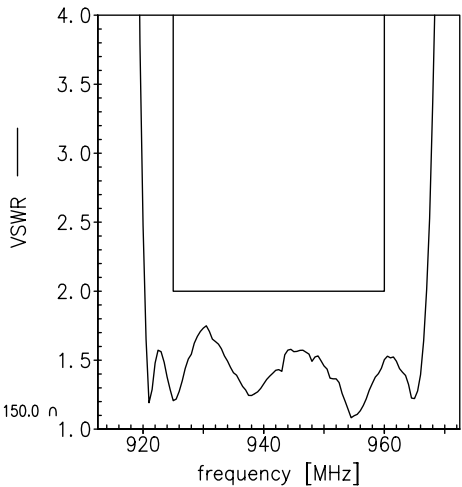
normal impedance: 50.00 n



S₂₂ function



normal impedance: 150.0 n



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SAW Rx Single filter	942.5 MHz

Data sheet



References

Type	B9472
Ordering code	B39941B9472P810
Marking and package	C61157-A8-A34
Packaging	F61074-V8212-Z000
Date codes	L_1126
S-parameters	B9472_NB.s3p B9472_WB.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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