



SAW Components

SAW Rx Filter

GSM 900

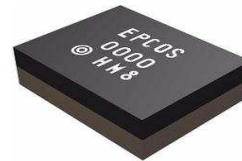
Series/type:	B9858
Ordering code:	B39941B9858P810
Date:	November 20, 2012
Version:	2.0

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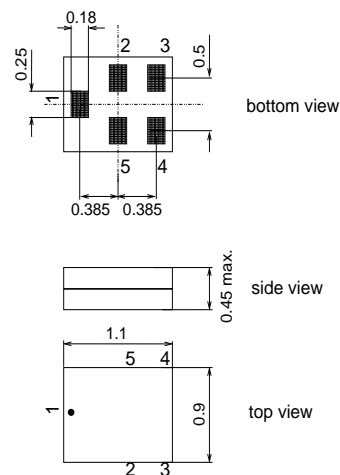
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Application

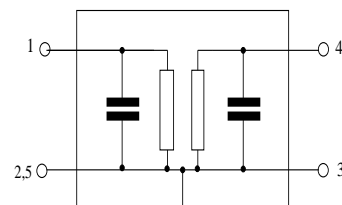
- Low loss RF filter for mobile telephone GSM900 systems, receive path (Rx)
- Usable passband 35 MHz
- Unbalanced to unbalanced operation
- Low amplitude ripple
- Suitable for GPRS class 1 to 12


Features

- Package size 1.1x0.9 mm²
- Max. Package height 0.45 mm
- RoHS compatible
- Approx. weight 0.001g
- Package for Surface Mount Technology (SMT)
- Ni, gold-plated terminals
- **E**lectrostatic **S**ensitive **D**evice (ESD)
- **M**oisture **S**ensitive **L**evel 3


Pin configuration

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



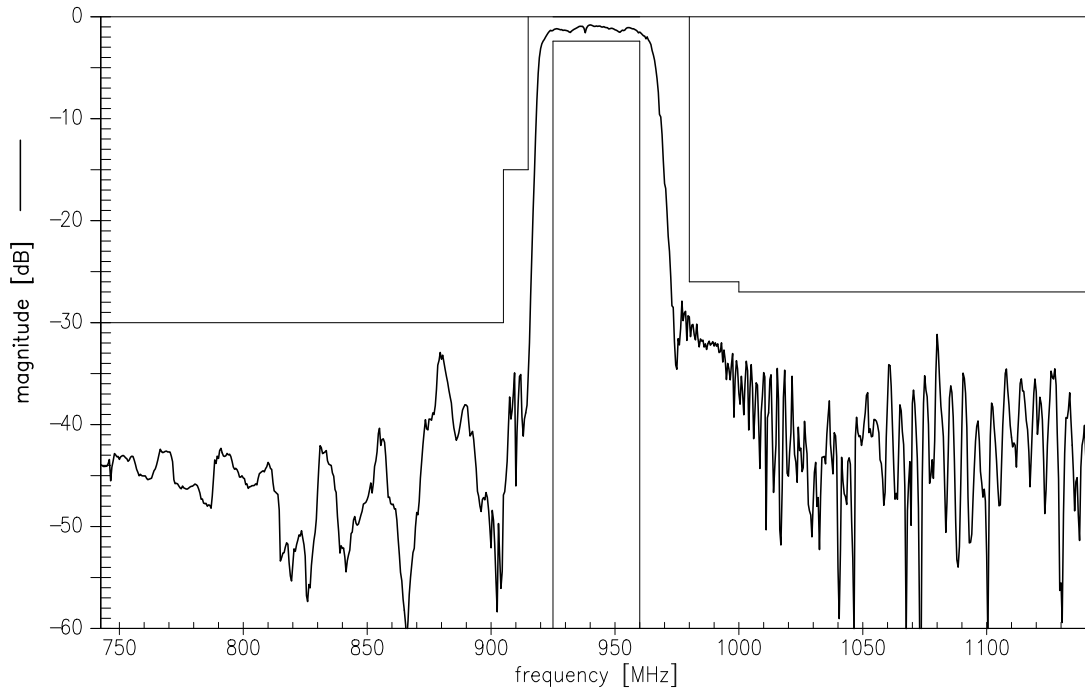
Data Sheet

Characteristics of Filter

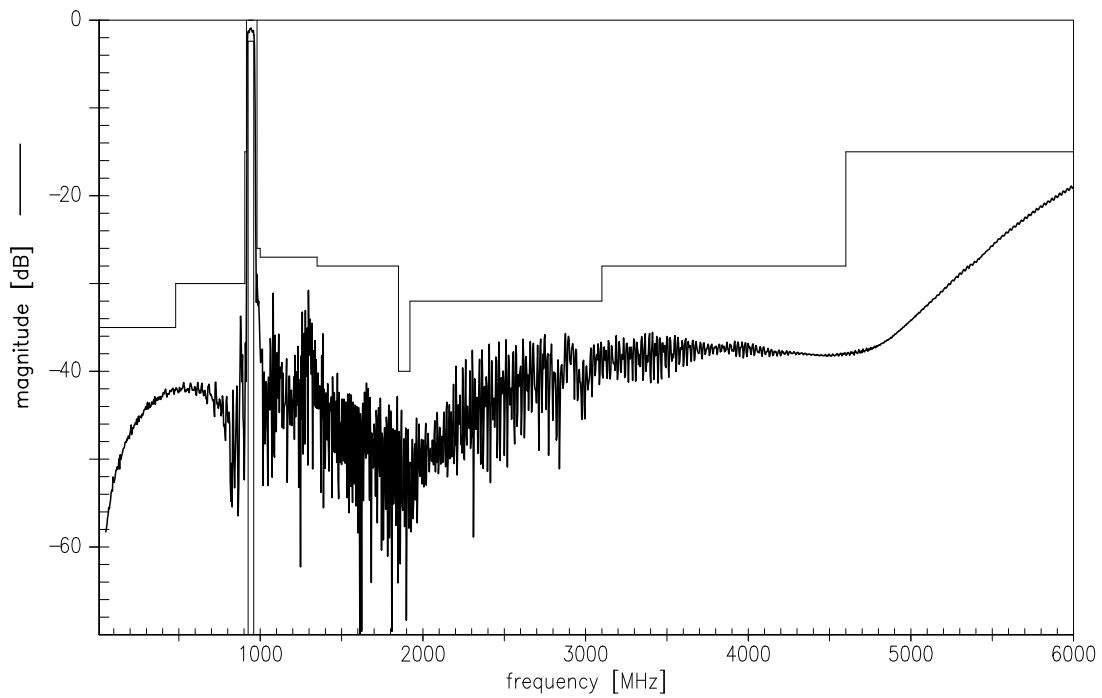
Temperature range for specification: $T = -20\text{ °C to }+85\text{ °C}$
 Terminating source impedance: $Z_S = 50\ \Omega$
 Terminating load impedance: $Z_L = 50\ \Omega$

				min.	typ. @ 25 °C	max.	
Center frequency	f_c			—	942.5	—	MHz
Maximum insertion attenuation	α_{\max}			—	1.6	2.4	dB
		925.0 ... 960.0	MHz				
Amplitude ripple (p-p)	$\Delta\alpha$			—	0.6	1.6	dB
		925.0 ... 960.0	MHz				
Input VSWR				—	1.9	2.1	
		925.0 ... 960.0	MHz				
Output VSWR				—	2.0	2.1	
		925.0 ... 960.0	MHz				
Attenuation	α						
		10.0 ... 480.0	MHz	38	41	—	dB
		480.0 ... 905.0	MHz	30	33	—	dB
		905.0 ... 915.0	MHz	15	23	—	dB
		980.0 ... 1000.0	MHz	26	29	—	dB
		1000.0 ... 1350.0	MHz	27	30	—	dB
		1350.0 ... 1850.0	MHz	32	35	—	dB
		1850.0 ... 1920.0	MHz	41	44	—	dB
		1920.0 ... 3100.0	MHz	32	35	—	dB
		3100.0 ... 4600.0	MHz	31	35	—	dB
		4600.0 ... 6000.0	MHz	15	18	—	dB

Transfer function (narrowband)



Transfer function (wideband)

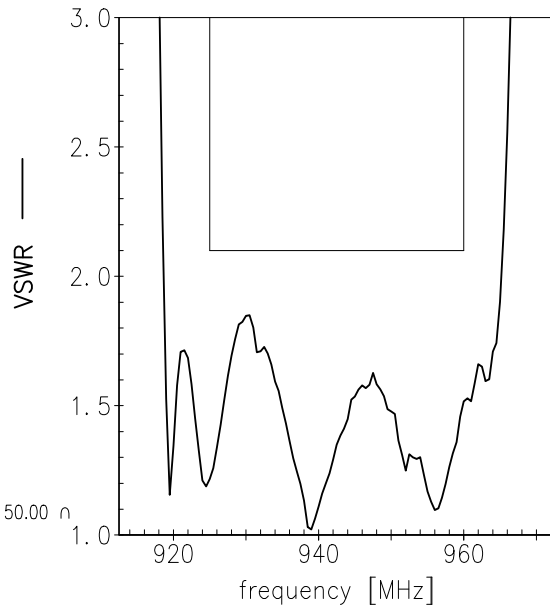
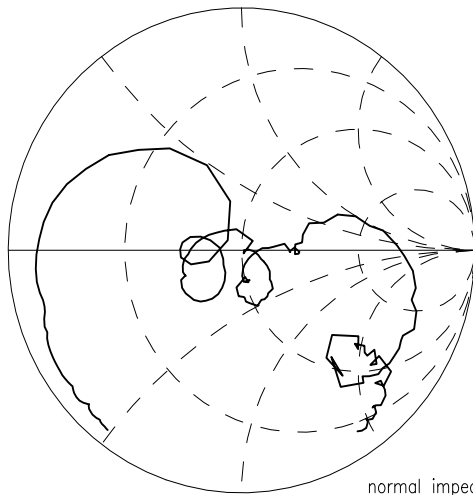


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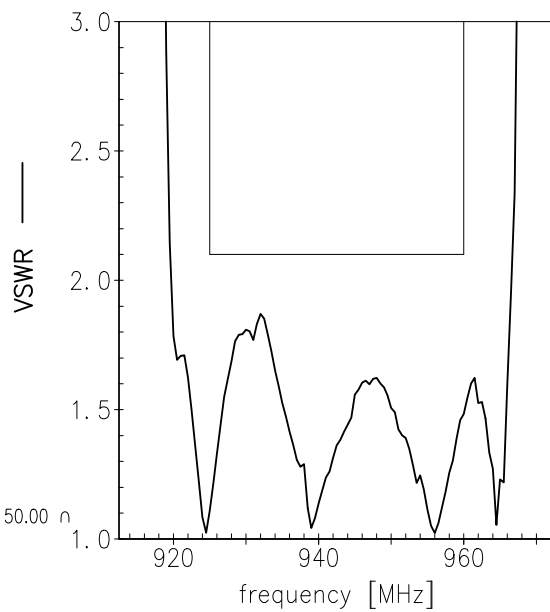
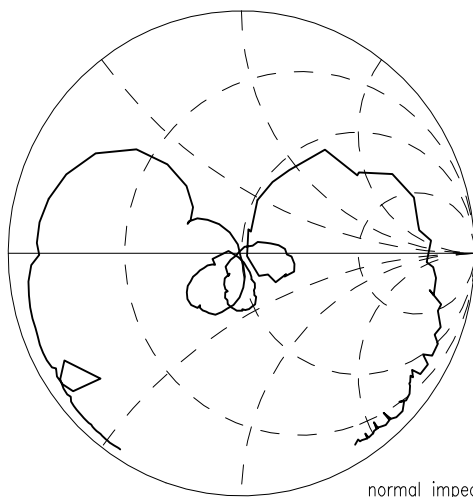


Smith Charts

S_{11} function



S_{22} function



SAW Components	B9858
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SAW Rx Filter	942.5 MHz
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SMD

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, 10 pulses
Input Power at				
GSM850, GSM900	P _{IN}	15	dBm	effective power in the on-state, duty cycle 4:8
GSM1800, GSM1900	P _{IN}	15	dBm	
Tx bands				

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

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SAW Rx Filter	942.5 MHz
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References

Type	B9858
Ordering code	B39941B9858P810
Marking and package	C61157-Z8-C29
Packaging	F61074-V8255-Z000
Date codes	L_1126
S-parameters	B9858_NB.s2p B9858_WB.s2p 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 8 th , 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 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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