



SAW Components

SAW Rx Filter

GPS

Series/Type:	B9850
Ordering code:	B39162B9850P810
Date:	Nov 29, 2010
Version:	2.0

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B9850

SAW Rx Filter

1575.42 MHz

Data Sheet



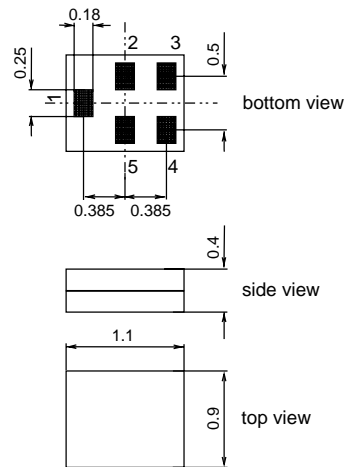
Application

- Low-loss RF filter for mobile telephone GPS systems
- Ultra low insertion attenuation
- Low amplitude ripple
- Usable passband 2.4 MHz
- Unbalanced to unbalanced operation
- Filter impedance 50 Ω



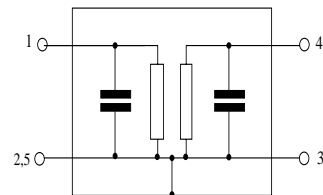
Features

- Package size 1.1 x 0.9 x 0.40 mm³
- RoHS compatible
- Approx. weight 0.001g
- Package for **Surface Mount Technology (SMT)**
- Ni, gold-plated terminals
- **Electrostatic Sensitive Device (ESD)**



Pin configuration

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



Please read *cautions and warnings and important notes* at the end of this document.



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Characteristics

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

		min.	typ. @ 25°C	max.	
Center frequency	f_C	—	1575.42	—	MHz
Maximum insertion attenuation	α_{max}	—	0.5 ¹⁾	0.8	dB
1574.22 ... 1576.62 MHz					
Amplitude ripple (p-p)	$\Delta\alpha$	—	0.1	0.5	dB
1574.22 ... 1576.62 MHz					
Input VSWR		—	1.1	1.7	
1574.22 ... 1576.62 MHz					
Output VSWR		—	1.1	1.7	
1574.22 ... 1576.62 MHz					
Attenuation	α				
824.0 ... 960.0 MHz		20	21	—	dB
1500.0 ... 1525.42 MHz		20	30	—	
1625.42 ... 1650.0 MHz		20	29	—	
1710.0 ... 2170.0 MHz		20	23	—	

¹⁾ Typical value excluding PCB losses of 0.1dB.



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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}	3	V	
ESD voltage	V _{ESD}	50 ¹⁾	V	machine model, 1 pulse
Input Power at 1574.22 ... 1576.62 MHz	P _{IN}	10	dBm	continuous wave
824.0 ... 960.0 MHz	P _{IN}	20	dBm	continuous wave
1710.0 ... 2170.0 MHz	P _{IN}	18	dBm	continuous wave

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

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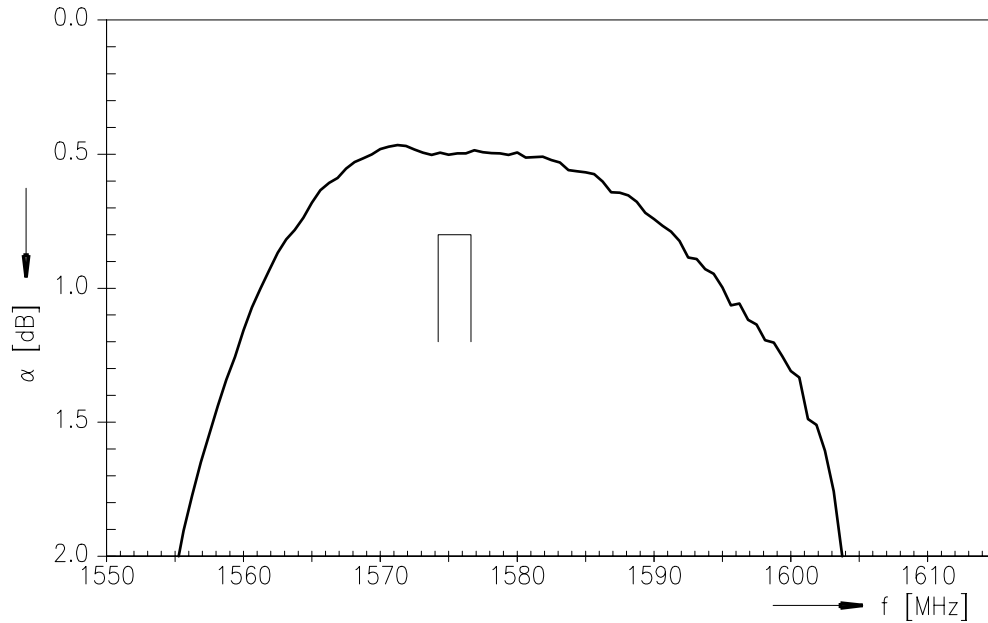
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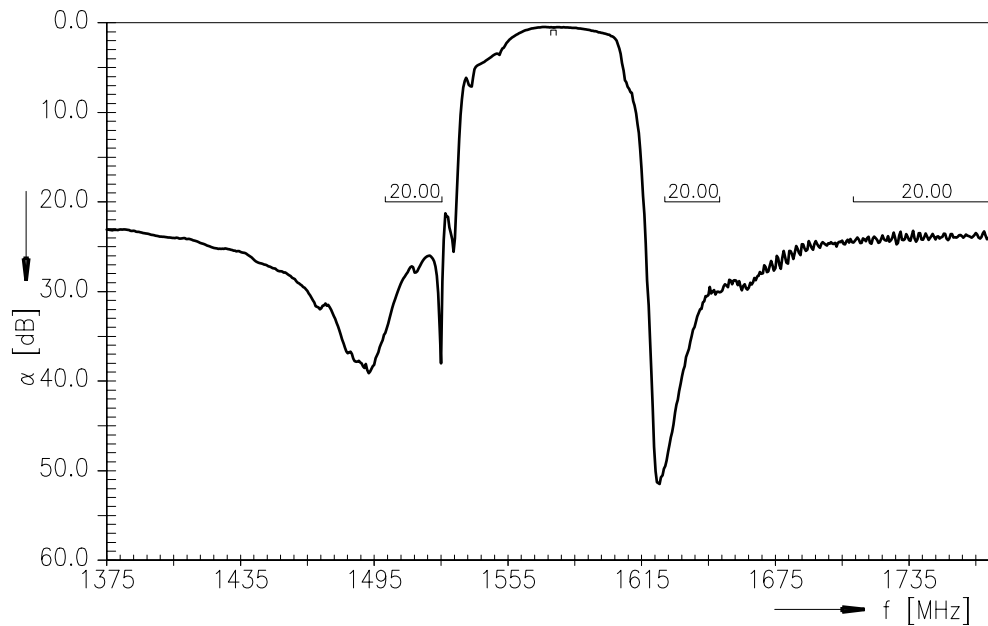
Data Sheet



Transfer function (passband)



Transfer function (narrowband)



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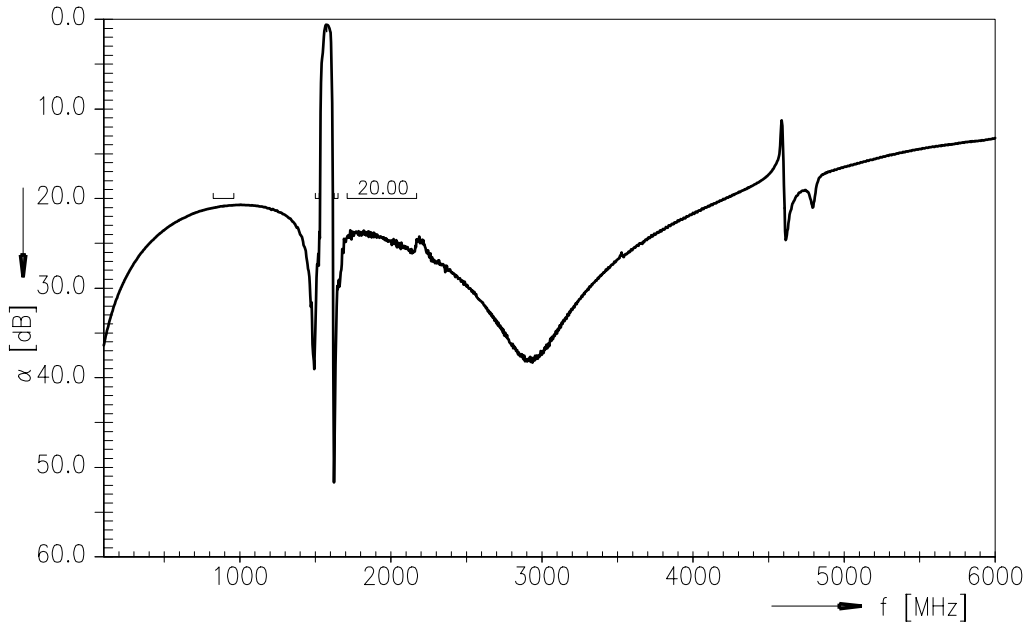
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Transfer function (wideband)



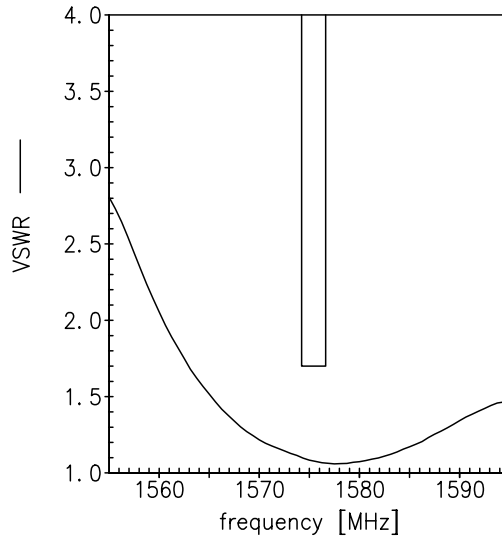
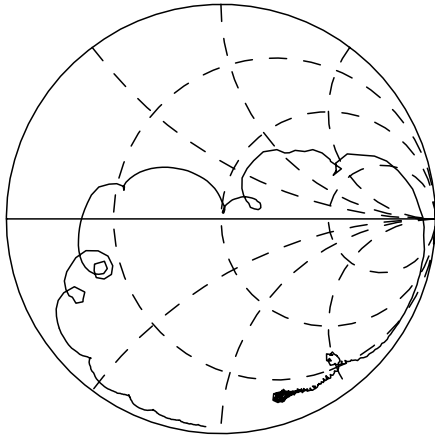
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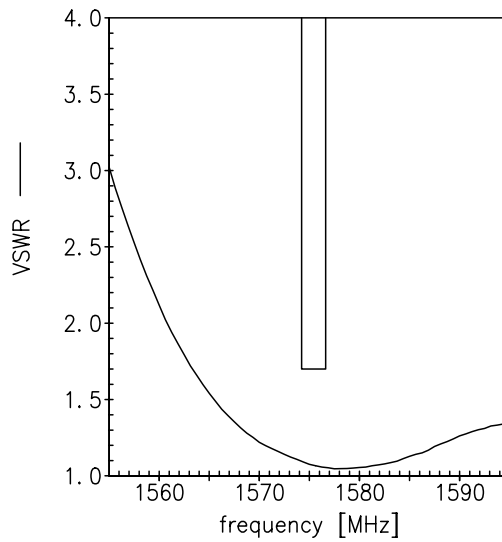
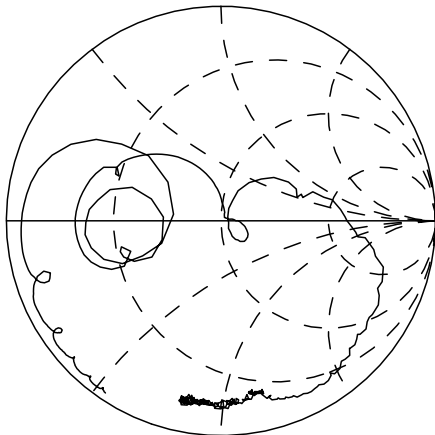


Smith charts

S_{11} function



S_{22} function



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References

Type	B9850
Ordering code	B39162B9850P810
Marking and package	C61157-A8-A30
Packaging	F61074-V8255-Z000
Date codes	L_1126
S-parameters	B9850_NB.s2p B9850_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.

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