



## **SAW Components**

### **SAW GPS filter**

<b>Series/type:</b>	<b>B9037</b>
<b>Ordering code:</b>	<b>B39162-B9037-E910</b>
<b>Date:</b>	<b>April 26, 2007</b>
<b>Version:</b>	<b>2.0</b>



SAW Components

B9037

SAW GPS filter

1575.42 MHz

Data Sheet

SMD

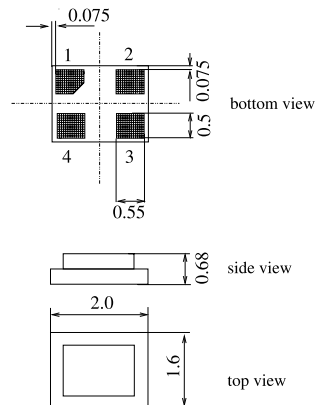
### Application

- Low-loss RF filter GPS filter
- Usable passband: 2 MHz
- Very low insertion attenuation
- Unbalanced to unbalanced operation
- No matching network required for operation at 50  $\Omega$



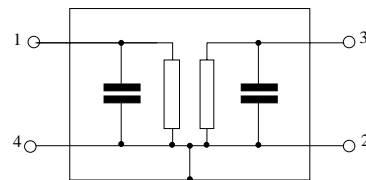
### Features

- Package size 2.0 x 1.6 x 0.68 mm<sup>3</sup>
- Package code DCS4G
- RoHS compatible
- Approximate weight 0.007 g
- Package for **Surface Mount Technology (SMT)**
- Ni, gold-plated terminals
- **Electrostatic Sensitive Device (ESD)**



### Pin configuration

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



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



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**Characteristics of Filter**

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

		B9037 <sup>1)</sup>			DGL <sup>2)</sup>	
		min.	typ. @ 25 °C	max.	min./ max.	
<b>Center frequency</b>	$f_C$	—	1575.42	—		MHz
<b>Maximum insertion attenuation</b>	$\alpha_{max}$					
1574.42 ... 1576.42 MHz		—	0.9	1.4		dB
<b>Amplitude ripple (p-p)</b>	$\Delta\alpha$					
1574.42 ... 1576.42 MHz		—	0.05	0.5		dB
<b>Return loss (Input and Output)</b>						
1574.42 ... 1576.42 MHz		10	18	—		dB
<b>Attenuation</b>	$\alpha$					
0.3 ... 1522.42 MHz		30	35	—		dB
1628.42 ... 1750.0 MHz		30	38	—		dB
1750.0 ... 1990.0 MHz		32	39	—		dB
1990.0 ... 3000.0 MHz		30	38	—		dB
3000.0 ... 4000.0 MHz		20	33	—		dB
4000.0 ... 6000.0 MHz		17	28	—		dB

1) Values in columns min, typ and max indicate the development status of the current version.

2) Values in column DesignGoal (DGL) indicate the target performance.



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**Maximum ratings of Filter**

Operable temperature range	T	-40/+85	°C	
Storage temperature range	T <sub>stg</sub>	-40/+85	°C	
DC voltage	V <sub>DC</sub>	5	V	
ESD voltage	V <sub>ESD</sub>	50 <sup>1)</sup>	V	machine model, 10 pulses
Input power	P <sub>IN</sub>	0	dBm	cw

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



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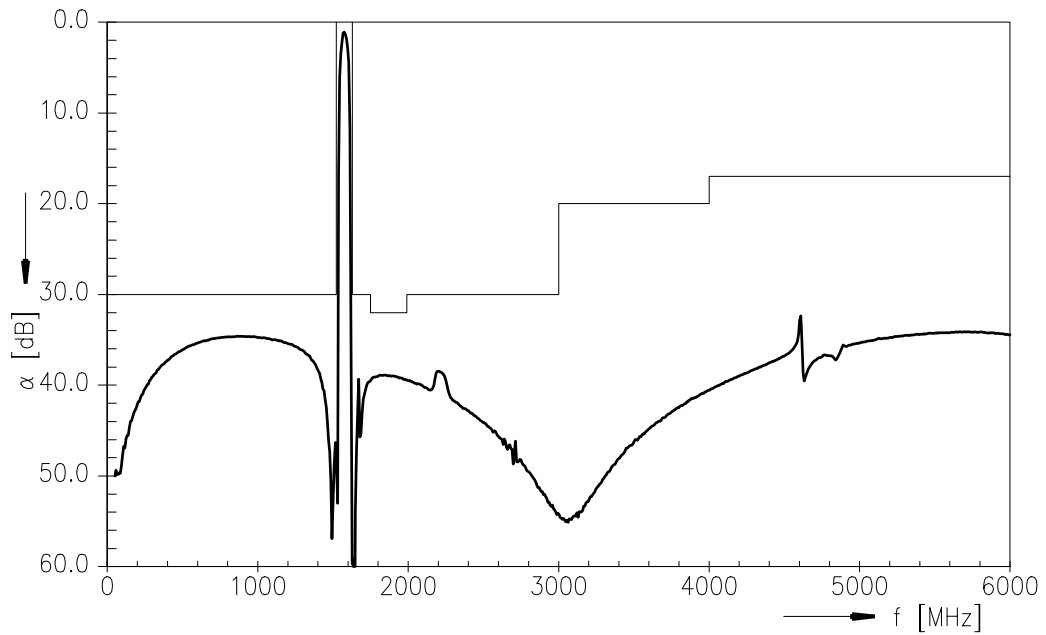
Data Sheet



Transfer function (passband)



Transfer function



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

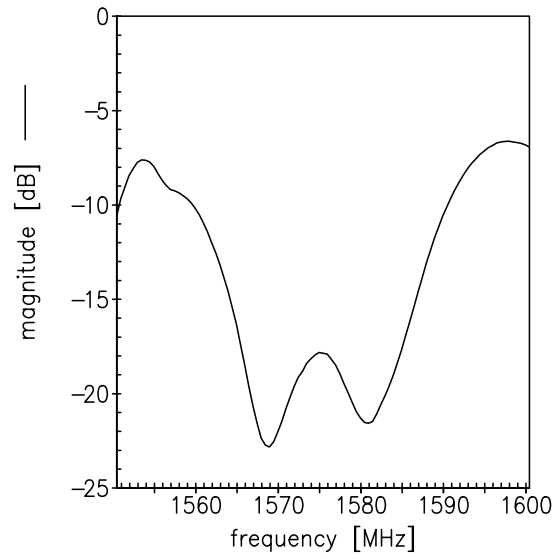
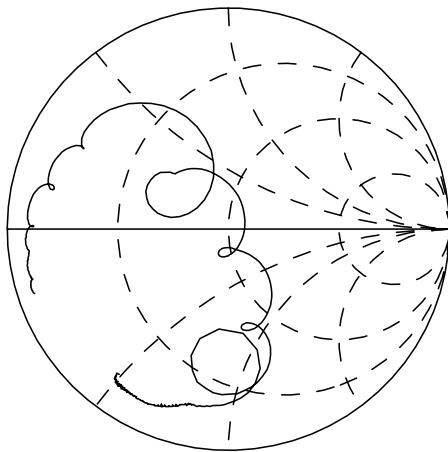


Data Sheet

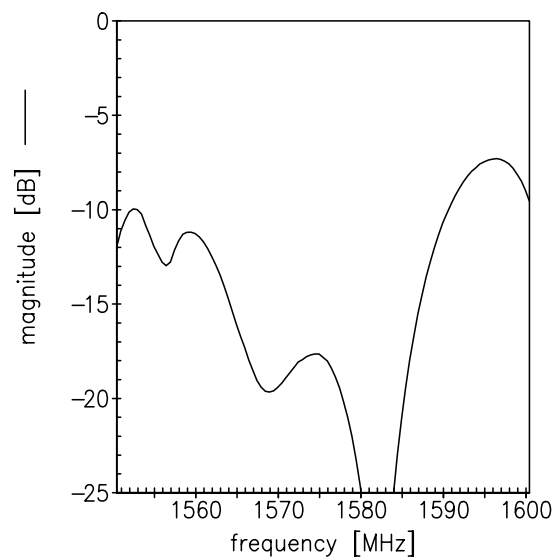
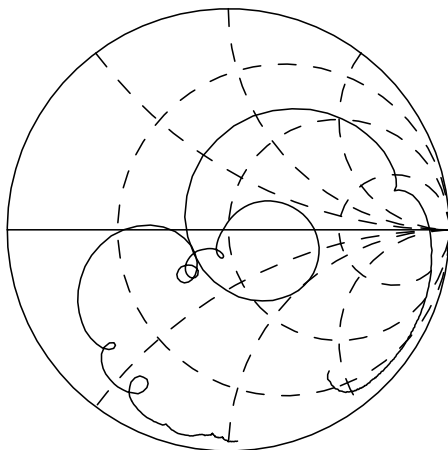


Smith chart / Return loss

$S_{11}$  function



$S_{22}$  function



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## References

Type	B9037
Ordering code	B39162-B9037-E910
Marking and package	C61157-A7-A105
Packaging	F61074-V8152-Z000
Date codes	L_1126
S-parameters	B9037_NB.s2p B9037_WB.s2p
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."

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



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