SAW Components

SAW GPS filter

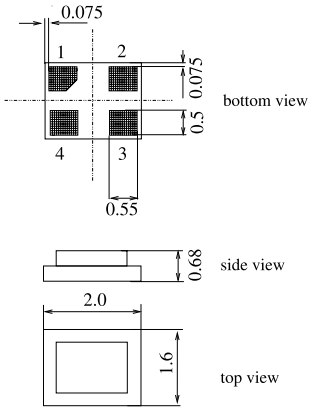
Series/type:	**B9037**
Ordering code:	**B39162-B9037-E910**
Date:	April 26, 2007
Version:	2.0

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 Ω

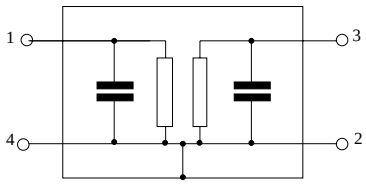
Features

- Package size 2.0 x 1.6 x 0.68 mm^3
- Package code DCS4G
- RoHS compatible
- Approximate weight 0.007 g
- Package for **S**urface **M**ount **T**echnology (**SMT**)
- Ni, gold-plated terminals
- **E**lectrostatic **S**ensitive **D**evice (**ESD**)



Pin configuration

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



Characteristics of Filter

Temperature range for specification: T = –30 ˚C to +85˚C
Terminating source impedance: Z_S = 50 Ω
Terminating load impedance: Z_L = 50 Ω

		B9037[1]			DGL[2]	
		min.	**typ. @ 25 ˚C**	**max.**	**min./ max.**	
Center frequency	f_C	—	1575.42	—		MHz
Maximum insertion attenuation	α_{max}					
1574.42 ... 1576.42 MHz		—	0.9	1.4		dB
Amplitude ripple (p-p)	$\Delta\alpha$					
1574.42 ... 1576.42 MHz		—	0.05	0.5		dB
Return loss (Input and Output)						
1574.42 ... 1576.42 MHz		10	18	—		dB
Attenuation	α					
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.

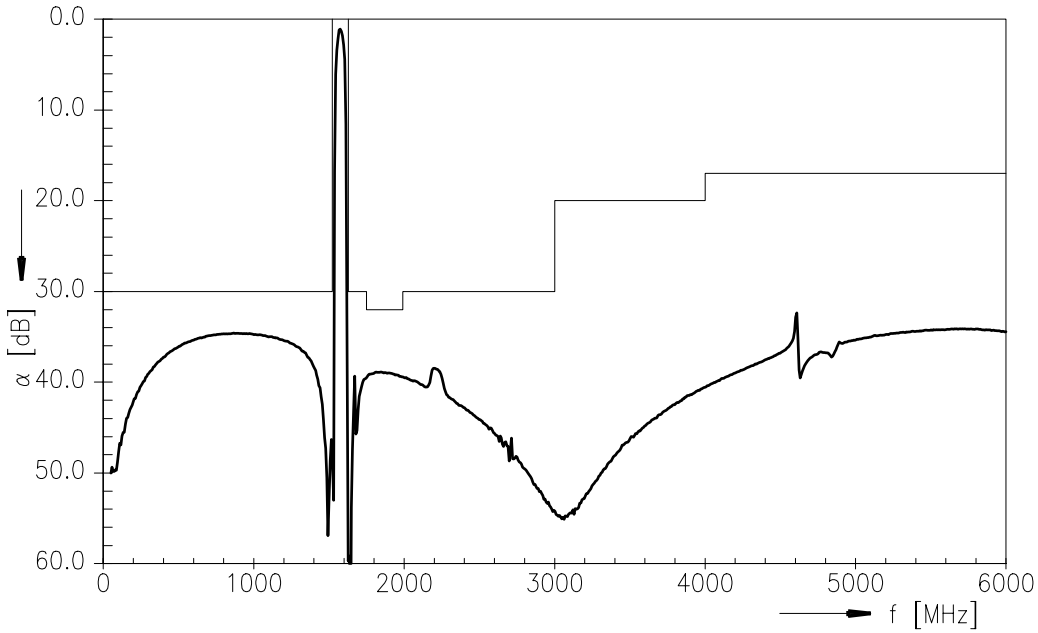
Maximum ratings of Filter

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, 10 pulses
Input power	P_{IN}	0	dBm	cw

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

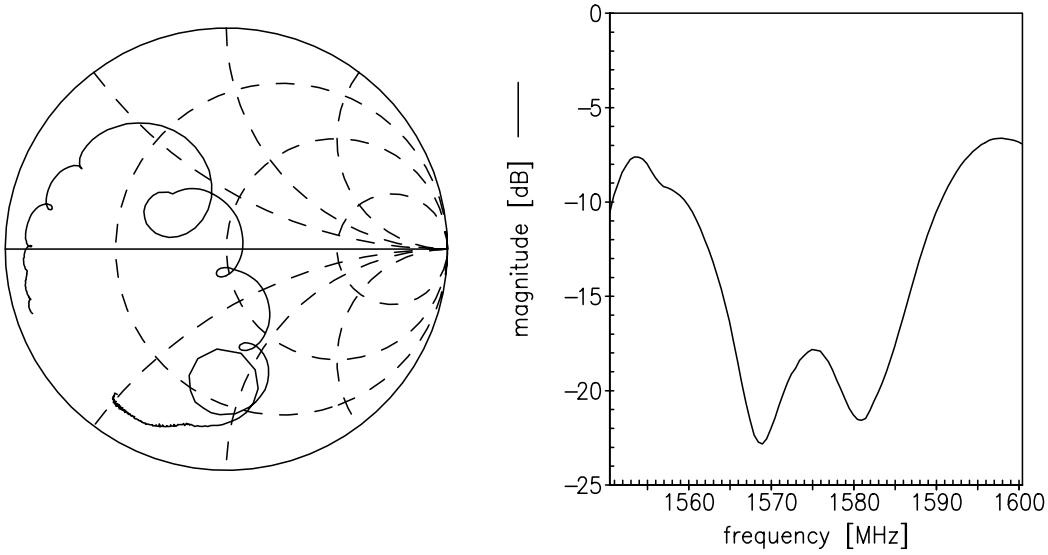
Transfer function (passband)

Transfer function

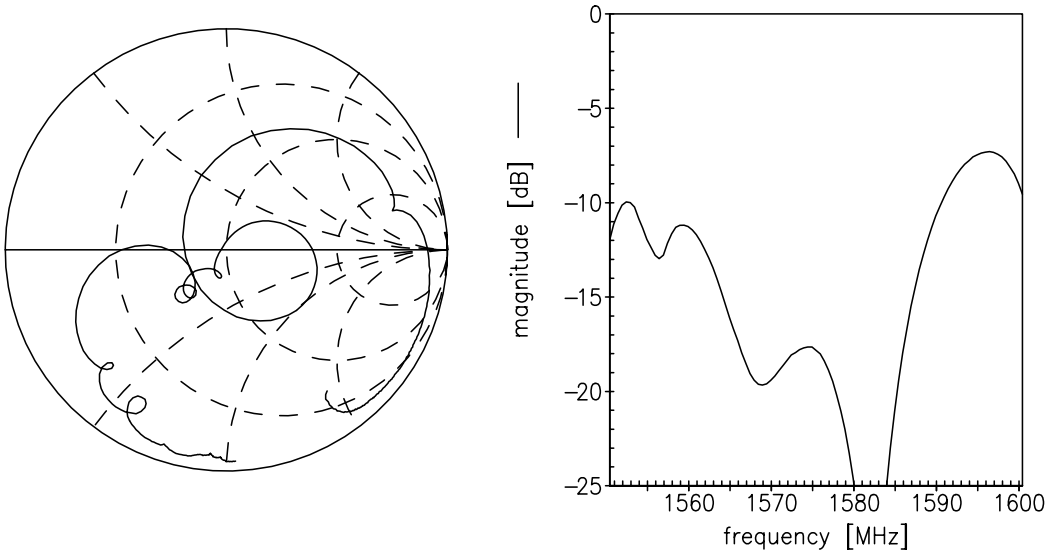


Smith chart / Return loss

S_{11} function



S_{22} function



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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