SAW Components

SAW RF filter

GPS

Series/type: **B3523**
Ordering code: **B39162-B3523-U410**

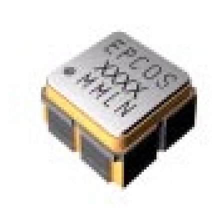
Date: March 18, 2009
Version: 2.0

SAW Components	B3523
SAW RF filter	**1575.42 MHz**

Data sheet

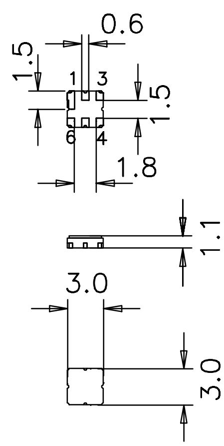
Application

- Low-loss RF filter for GPS receivers
- No matching network required for operation at 50 Ω



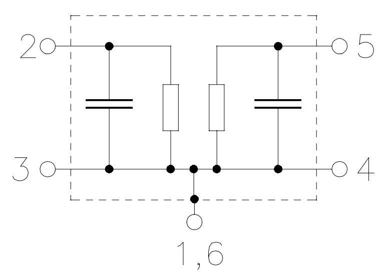
Features

- Package size 3.0 x 3.0 x 1.1 mm^3
- Package code DCC6C
- RoHS compatible
- Approximate weight 0.037 g
- Package for **S**urface **M**ount **T**echnology (**SMT**)
- Ni, gold-plated terminals
- Lead free soldering compatible with J - STD20C
- AEC-Q200 qualified component family
- **E**lectrostatic **S**ensitive **D**evice (**ESD**)



Pin configuration

- 2 Input
- 5 Output
- 1, 3, 4, 6, Ground



Characteristics

Temperature for specification: T = 25 ˚C
Terminating source impedance: Z_S = 50 Ω
Terminating load impedance: Z_L = 50 Ω

		min.	typ.	max.	
Center frequency	f_C	—	1575.42	—	MHz
Maximum insertion attenuation	α_{max}				
1574.397 ... 1576.443 MHz		—	2.1	2.5	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
1574.397 ... 1576.443 MHz		—	0.2	0.6	dB
Input VSWR					
1574.397 ... 1576.443 MHz		—	1.5	2.0	
Output VSWR					
1574.397 ... 1576.443 MHz		—	1.5	2.0	
Attenuation	α				
10.00 ... 1475.42 MHz		32	36	—	dB
1475.42 ... 1525.42 MHz		28	33	—	dB
1525.42 ... 1545.42 MHz		28	34	—	dB
1545.42 ... 1555.42 MHz		13	17	—	dB
1595.42 ... 1605.42 MHz		12	15	—	dB
1605.42 ... 1625.42 MHz		18	21	—	dB
1625.42 ... 1675.42 MHz		29	33	—	dB
1675.42 ... 2100.00 MHz		30	32	—	dB
2100.00 ... 2500.00 MHz		25	30	—	dB

Characteristics

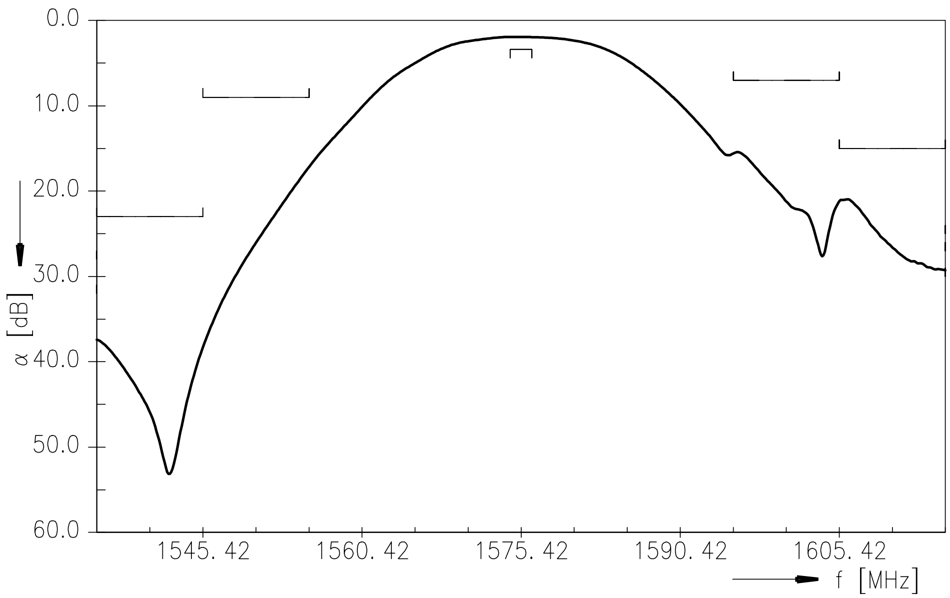
Temperature range for specification: T = –40 ˚C to +100 ˚C
Terminating source impedance: Z_S = 50 Ω
Terminating load impedance: Z_L = 50 Ω

		min.	typ. @25 ˚C	max.	
Center frequency	f_C	—	1575.42	—	MHz
Maximum insertion attenuation	α_{max}				
1574.397 ... 1576.443 MHz		—	2.1	3.4	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
1574.397 ... 1576.443 MHz		—	0.2	1.5	dB
Input VSWR					
1574.397 ... 1576.443 MHz		—	1.5	2.8	
Output VSWR					
1574.397 ... 1576.443 MHz		—	1.5	2.7	
Attenuation	α				
10.00 ... 1475.42 MHz		32	36	—	dB
1475.42 ... 1525.42 MHz		28	33	—	dB
1525.42 ... 1545.42 MHz		23	34	—	dB
1545.42 ... 1555.42 MHz		9	17	—	dB
1595.42 ... 1605.42 MHz		7	15	—	dB
1605.42 ... 1625.42 MHz		15	21	—	dB
1625.42 ... 1675.42 MHz		27	33	—	dB
1675.42 ... 2100.00 MHz		30	32	—	dB
2100.00 ... 2500.00 MHz		25	30	—	dB

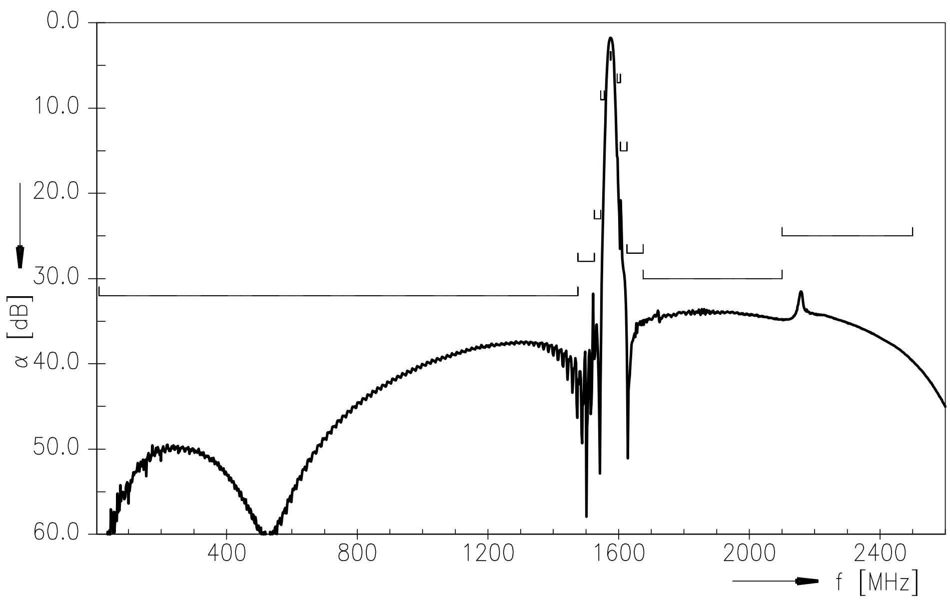
Maximum ratings

Operable temperature range	T	–45/+125	˚C	
Storage temperature range	T_{stg}	–45/+125	˚C	
DC voltage	V_{DC}	6	V	
Source power	P_S	10	dBm	source impedance 50 Ω
		20	dBm	824 MHz to 915 MHz, 1710 MHz to1785 MHz

Transfer function



Transfer function (wideband)



References

Type	B3523
Ordering code	B39162-B3523-U410
Marking and package	C61157-A7-A67
Packaging	F61074-V8168-Z000
Date codes	L_1126
S-parameters	B3523_NB.s2p B3523_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."

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