



## **SAW Components**

**SAW RF filter**

GPS

<b>Series/type:</b>	<b>B3522</b>
<b>Ordering code:</b>	<b>B39162B3522U410</b>
<b>Date:</b>	<b>November 10, 2009</b>
<b>Version:</b>	<b>2.4</b>



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B3522

SAW RF filter

1575.42 MHz

Data sheet



### Application

- Low-loss RF filter for GPS application
- No matching network required for operation at 50  $\Omega$



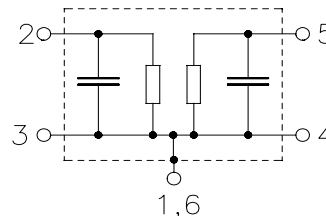
### Features

- Package size 3.0 x 3.0 x 1.1 mm<sup>3</sup>
- Package code DCC6C
- RoHS compatible
- Approximate weight 0.037 g
- Package for **Surface Mount Technology (SMT)**
- Ni, gold-plated terminals
- Lead free soldering compatible with J - STD20C
- AEC-Q200 qualified component family
- **Electrostatic Sensitive Device (ESD)**



### Pin configuration

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



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



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**Characteristics**

Temperature range for specification:  $T = -40\text{ °C to }+85\text{ °C}$   
 Terminating source impedance:  $Z_S = 50\ \Omega$   
 Terminating load impedance:  $Z_L = 50\ \Omega$

		min.	typ. @ 25 °C	max.	
<b>Center frequency</b>	$f_C$	—	1575.42	—	MHz
<b>Maximum insertion attenuation</b>	$\alpha_{\max}$	—	1.6	2.0	dB
1574.397 ... 1576.443 MHz					
<b>Amplitude ripple (p-p)</b>	$\Delta\alpha$	—	0.2	0.8	
1574.397 ... 1576.443 MHz					
<b>Input VSWR</b>		—	1.4	1.8	
1574.397 ... 1576.443 MHz					
<b>Output VSWR</b>		—	1.3	1.8	
1574.397 ... 1576.443 MHz					
<b>Attenuation</b>	$\alpha$				
10.00 ... 1450.00 MHz		40	43	—	dB
1450.00 ... 1500.00 MHz		35	45	—	dB
1625.00 ... 1640.00 MHz		35	50	—	dB
1640.00 ... 1800.00 MHz		44	47	—	dB
1800.00 ... 2000.00 MHz		42	44	—	dB
2000.00 ... 3000.00 MHz		30	35	—	dB



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**Characteristics**

Temperature range for specification:  $T = -40\text{ °C to }+105\text{ °C}$   
 Terminating source impedance:  $Z_S = 50\ \Omega$   
 Terminating load impedance:  $Z_L = 50\ \Omega$

		min.	typ. @ 25 °C	max.	
<b>Center frequency</b>	$f_C$	—	1575.42	—	MHz
<b>Maximum insertion attenuation</b>	$\alpha_{\max}$	—	1.6	2.2	dB
1574.397 ... 1576.443 MHz					
<b>Amplitude ripple (p-p)</b>	$\Delta\alpha$	—	0.2	1.0	
1574.397 ... 1576.443 MHz					
<b>Input VSWR</b>		—	1.4	1.9	
1574.397 ... 1576.443 MHz					
<b>Output VSWR</b>		—	1.3	1.9	
1574.397 ... 1576.443 MHz					
<b>Attenuation</b>	$\alpha$				
10.00 ... 1450.00 MHz		40	43	—	dB
1450.00 ... 1500.00 MHz		33	45	—	dB
1625.00 ... 1640.00 MHz		35	50	—	dB
1640.00 ... 1800.00 MHz		44	47	—	dB
1800.00 ... 2000.00 MHz		42	44	—	dB
2000.00 ... 3000.00 MHz		30	35	—	dB

**Maximum ratings**

Operable temperature range	T	-40/+125	°C	
Storage temperature range	T <sub>stg</sub>	-40/+125	°C	
DC voltage	V <sub>DC</sub>	6	V	
Source power	P <sub>S</sub>	10 20	dBm dBm	source impedance 50 Ω 824 MHz to 915 MHz, 1710 MHz to 1785 MHz, 1850 MHz to 1910 MHz

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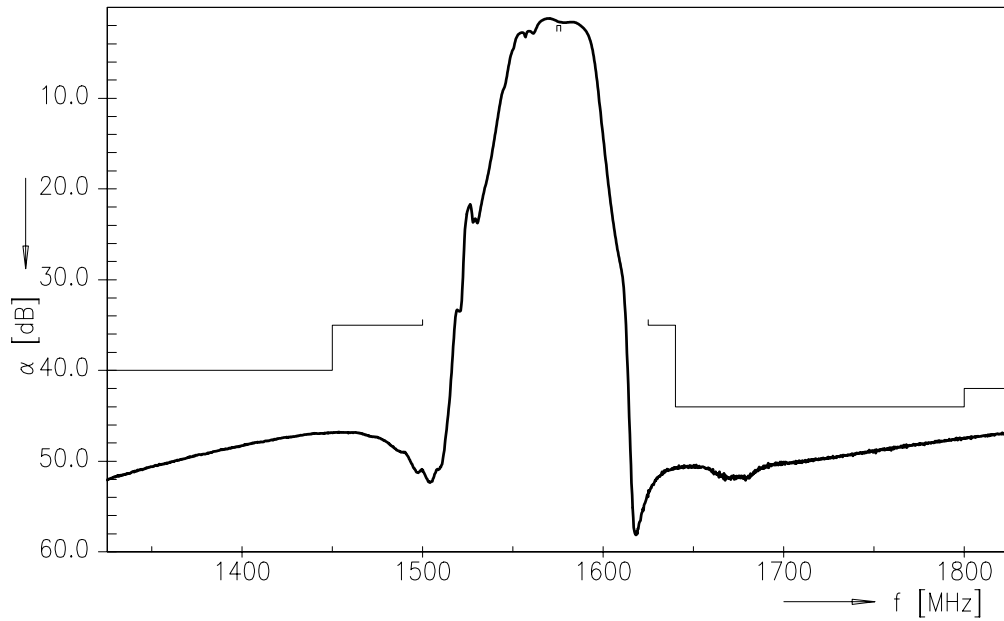
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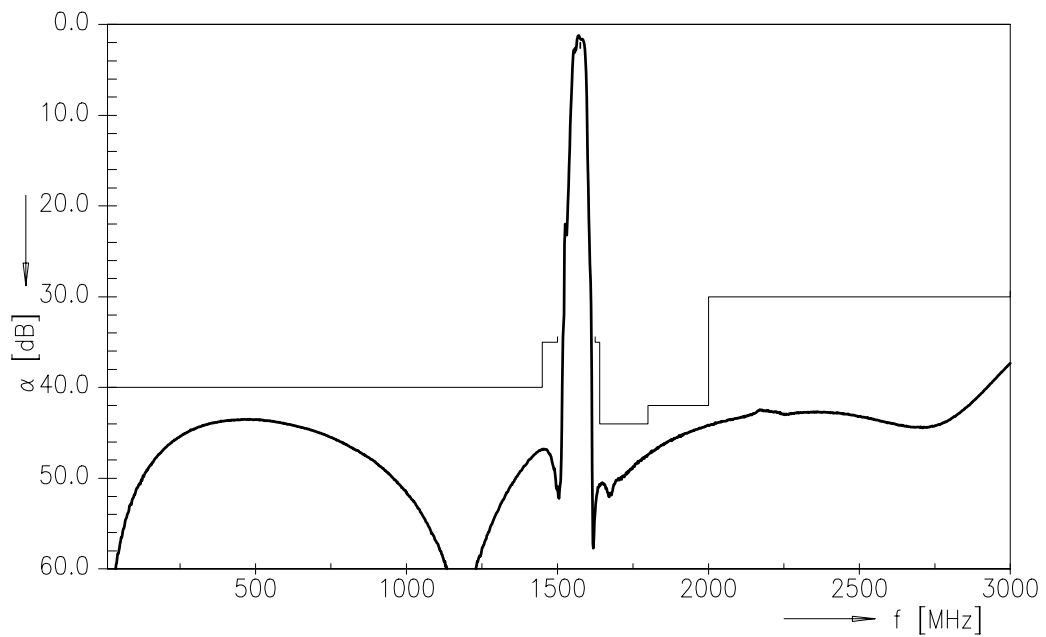
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Transfer function



Transfer function (wideband)



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## References

Type	B3522
Ordering code	B39162B3522U410
Marking and package	C61157-A7-A67
Packaging	F61074-V8168-Z000
Date codes	L_1126
S-parameters	B3522_NB.s2p B3522_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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