



SAW Components

SAW RF filter

Automotive telematics

Series/type:	B3520
Ordering code:	B39162B3520U410
Date:	February 22, 2010
Version:	2.3



SAW Components

B3520

SAW RF filter

1575.42 MHz

Data sheet



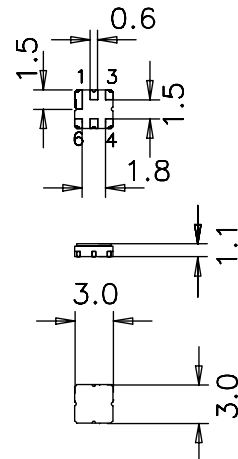
Application

- Low-loss RF filter for GPS application
- No matching network required for operation at 50 Ω
- Additional passband characteristics for Galileo



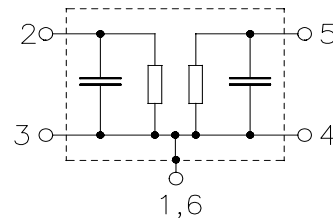
Features

- Package size 3.0 x 3.0 x 1.1 mm³
- 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





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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.	
Center frequency	f_C	—	1575.42	—	MHz
Maximum insertion attenuation	$\alpha_{\max}$	—	1.3	1.8	dB
1574.22 ... 1576.62 MHz					
Amplitude ripple (p-p)	$\Delta\alpha$	—	0.1	1.0	dB
1574.22 ... 1576.62 MHz					
VSWR		—	1.5	2.0	
1574.22 ... 1576.62 MHz					
Relative attenuation (relative to $\alpha_{\max}$)	α				
100.00 ... 1450.00 MHz		40	44	—	dB
1450.00 ... 1520.00 MHz		30	34	—	dB
1640.00 ... 1710.00 MHz		25	30	—	dB
1710.00 ... 1750.00 MHz		35	43	—	dB
1750.00 ... 1910.00 MHz		42	44	—	dB
1910.00 ... 2000.00 MHz		40	45	—	dB
Temperature coefficient of frequency	TC_f	—	−30	—	ppm/K



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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.	
Center frequency	f_C	—	1575.42	—	MHz
Maximum insertion attenuation	$\alpha_{\max}$	—	1.3	2.0	dB
1574.22 ... 1576.62 MHz					
Amplitude ripple (p-p)	$\Delta\alpha$	—	0.1	1.0	dB
1574.22 ... 1576.62 MHz					
VSWR		—	1.5	2.0	
1574.22 ... 1576.62 MHz					
Relative attenuation (relative to $\alpha_{\max}$)	α				
100.00 ... 1450.00 MHz		40	44	—	dB
1450.00 ... 1520.00 MHz		30	34	—	dB
1640.00 ... 1710.00 MHz		25	30	—	dB
1710.00 ... 1750.00 MHz		35	43	—	dB
1750.00 ... 1910.00 MHz		42	44	—	dB
1910.00 ... 2000.00 MHz		40	45	—	dB
Temperature coefficient of frequency	TC_f	—	−30	—	ppm/K



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Additional Passband Characteristics for Galileo

Temperature range for specification:	T	=	−40 °C to +105 °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}	—	1.6	2.7	dB
1572.42 ... 1578.42 MHz					
Amplitude ripple (p-p)	Δα	—	0.6	1.6	dB
1572.42 ... 1578.42 MHz					
VSWR		—	1.8	2.6	
1572.42 ... 1578.42 MHz					

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 to 1785 MHz

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



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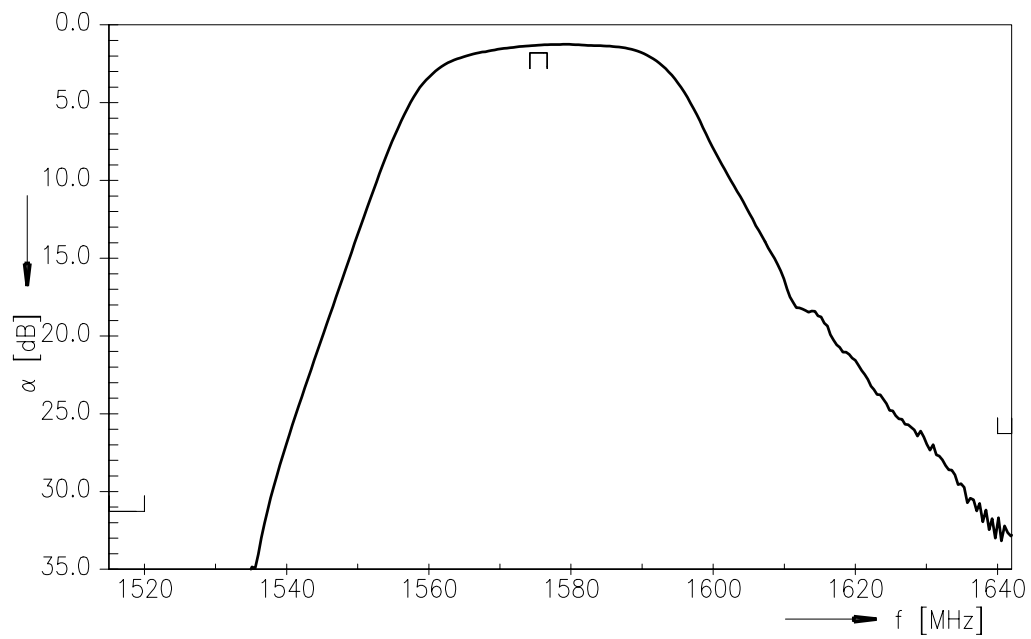
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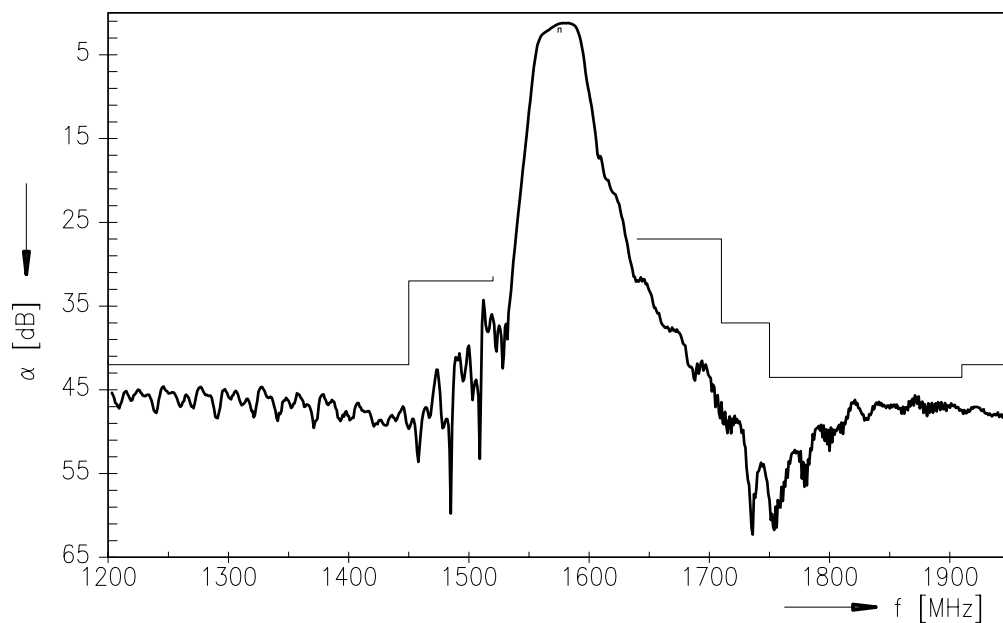
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Transfer function



Transfer function (wideband)



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Data sheet

**References**

Type	B3520
Ordering code	B39162B3520U410
Marking and package	C61157-A7-A67
Packaging	F61074-V8168-Z000
Date codes	L_1126
S-parameters	B3520_NB.s2p B3520_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."

For further information please contact your local EPCOS sales office or visit our webpage at www.epcos.com.

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