SAW Components

SAW RF filter

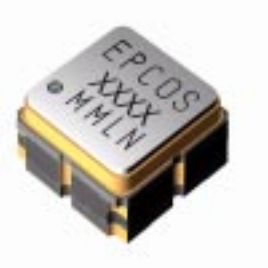
Automotive telematics

Series/type:	**B3525**
Ordering code:	**B39162B3525U510**
Date:	May 05, 2010
Version:	2.0

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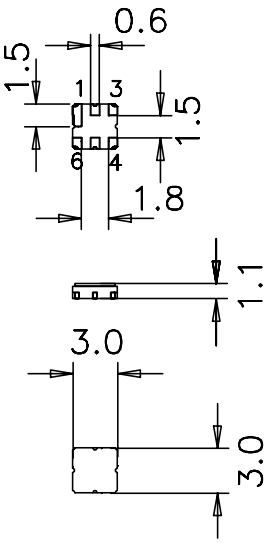
Application

- Low-loss RF filter for GPS applications
- Impedance transformation from 50 Ω to 100 Ω
- Unbalanced to balanced operation
- Low insertion attenuation
- Low amplitude ripple
- Usable passband 2.0 MHz



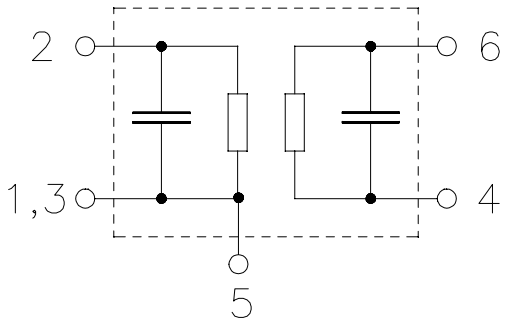
Features

- Package size 3.0 x 3.0 x 1.1 mm³
- Package code DCC6D
- 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
- **E**lectrostatic **S**ensitive **D**evice (**ESD**)



Pin configuration

- 2 Input unbalanced
- 4,6 Output balanced
- 1,3,5 Case ground (to be grounded)



Characteristics

Temperature range for specification: T = –40 ˚C to +85 ˚C
Terminating source impedance: Z_S = 50 Ω
Terminating load impedance: Z_L = 100 Ω (balanced)

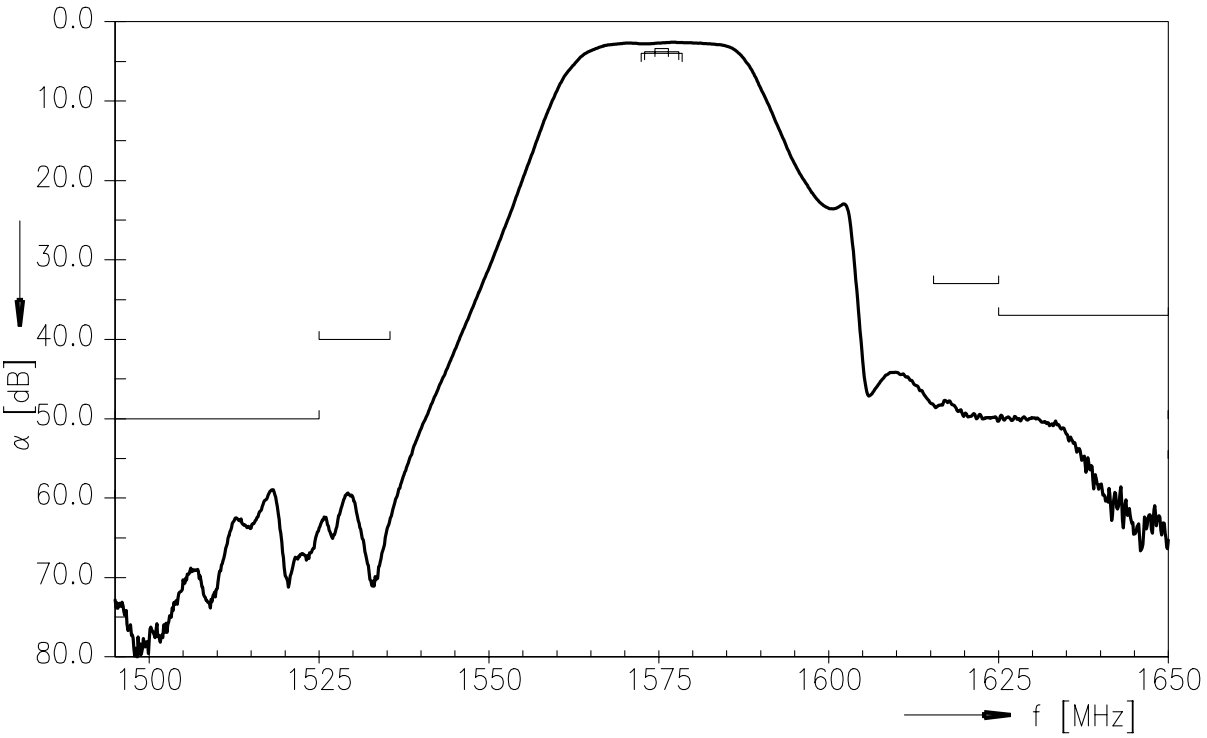
		min.	typ. @ 25 ˚C	max.	
Center frequency	f_C	—	1575.42	—	MHz
Maximum insertion attenuation	α_{max}				
1574.42 ... 1576.42 MHz		—	2.8	3.4	dB
1572.92 ... 1577.92 MHz		—	2.8	3.8	dB
1572.42 ... 1578.42 MHz		—	2.8	4.0	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
1574.42 ... 1576.42 MHz		—	0.2	1.0	dB
1572.92 ... 1577.92 MHz		—	0.3	1.4	dB
1572.42 ... 1578.42 MHz		—	0.3	1.6	dB
Input VSWR					
1574.42 ... 1576.42 MHz		—	1.5	1.9	
1572.92 ... 1577.92 MHz		—	1.5	2.2	
1572.42 ... 1578.42 MHz		—	1.5	2.4	
Output VSWR					
1574.42 ... 1576.42 MHz		—	1.4	1.8	
1572.92 ... 1577.92 MHz		—	1.4	2.1	
1572.42 ... 1578.42 MHz		—	1.4	2.3	
Attenuation	α				
10.00 ... 1425.00 MHz		60	70	—	dB
1425.00 ... 1525.00 MHz		50	55	—	dB
1525.00 ... 1535.42 MHz		40	55	—	dB
1615.42 ... 1625.00 MHz		33	43	—	dB
1625.00 ... 1675.00 MHz		37	47	—	dB
1675.00 ... 2000.00 MHz		55	65	—	dB
2000.00 ... 2500.00 MHz		50	60	—	dB

Maximum ratings

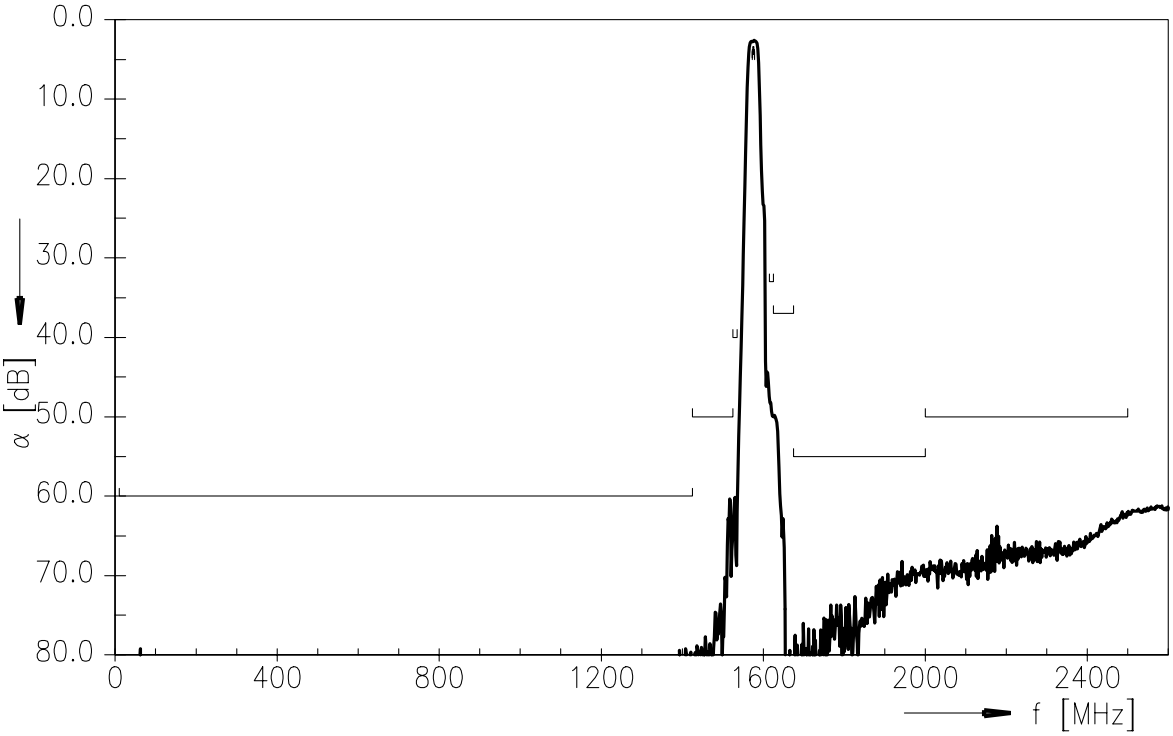
Operable temperature range	T	–45/+125	˚C	
Storage temperature range	T_{stg}	–45/+125	˚C	
DC voltage	V_{DC}	3	V	
ESD voltage	V_{ESD}	50[1)]	V	machine model, 10 pulses
Input power at				source 50Ω, load100Ω
1574.42 ... 1576.42 MHz	P_{IN}	5	dBm	cw
2400 ... 2483.5 MHz	P_{IN}	20	dBm	cw
824...960, 1710...2170 MHz	P_{IN}	25	dBm	cw
960...1525 MHz	P_{IN}	10	dBm	cw

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

Transfer function



Transfer function (wideband)



References

Type	B3525
Ordering code	B39162B3525U510
Marking and package	C61157-A7-A68
Packaging	F61074-V8228-Z000
Date codes	L_1126
S-parameters	B3525_NB.s3p B3525_WB.s3p 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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