SAW Components

SAW RF filter

Satellite communication

Series/type:	**B5153**
Ordering code:	**B39162B5153U410**
Date:	January 24, 2011
Version:	2.0

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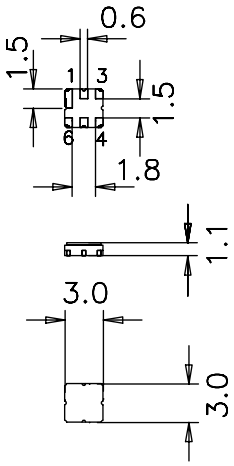
Application

- RF filter for satellite communication
- Low amplitude ripple
- Usable band width 34 MHz
- No matching required for operation at 50 Ω

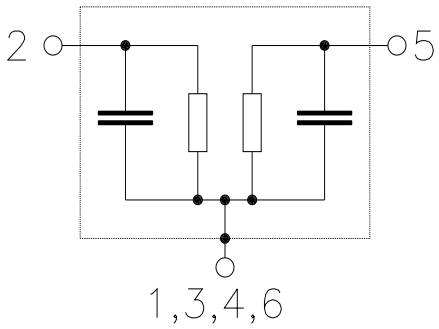
Features

- Package size 3.0 x3.0 x 1.10 mm³
- Package code DCC6C
- RoHS compatible
- Approximate weight 0.037 g
- Ceramic package for **S**urface **M**ount **T**echnology (**SMT**)
- Ni, gold-plated terminals
- **E**lectrostatic **S**ensitive **D**evice (**ESD**)
- Filter surface passivated



Pin configuration

- 2 Input
- 5 Output
- 1, 3, 4, 6 To be grounded



Characteristics

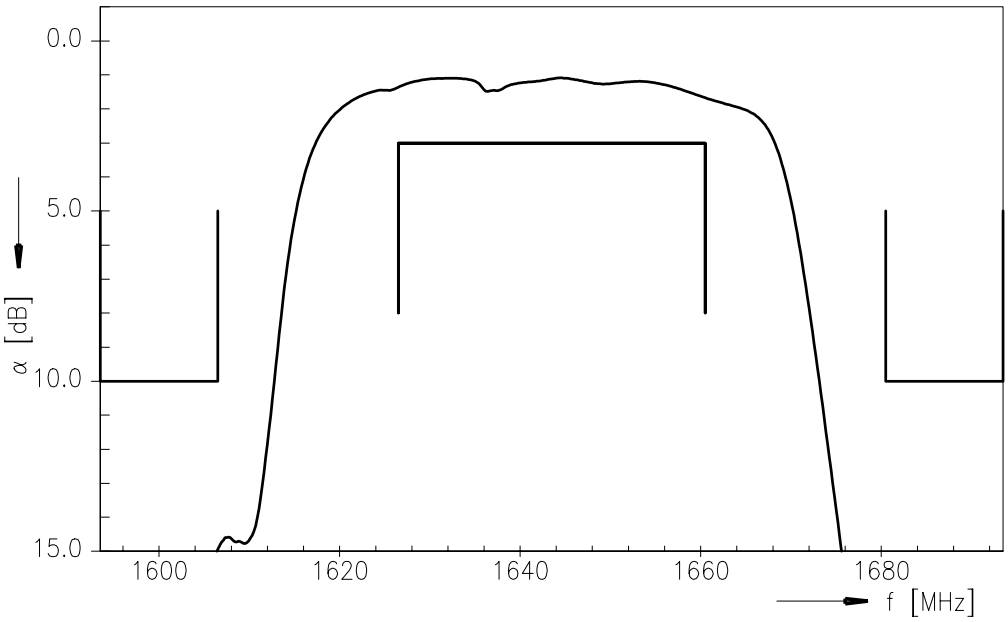
Temperature range for specification: T = –40 ˚C to +85 ˚C
Terminating source impedance: Z_S = 50 Ω
Terminating load impedance: Z_L = 50 Ω

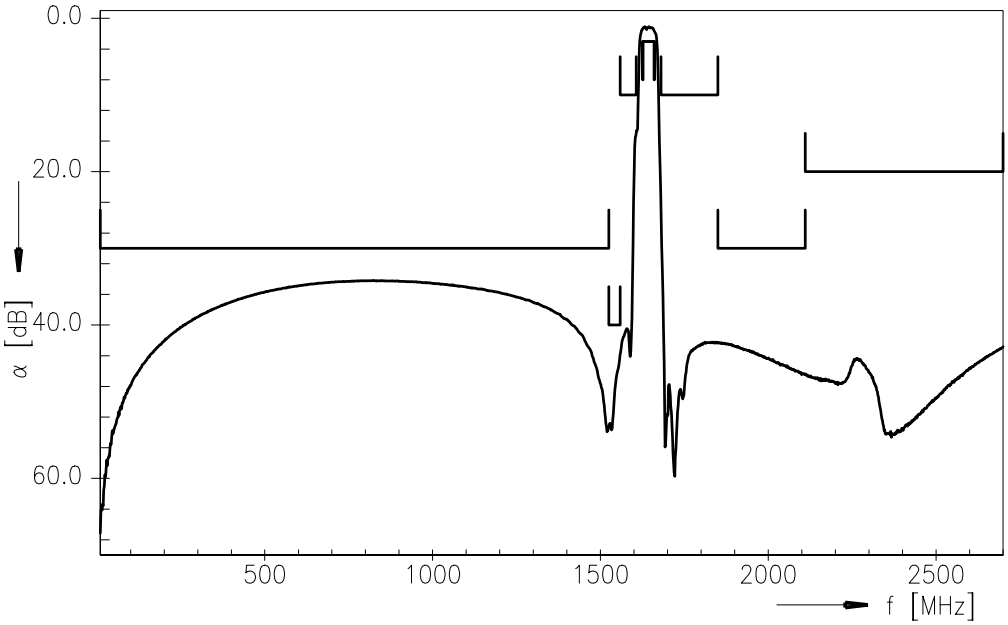
		min.	typ. @ 25 ˚C	max.	
Nominal frequency	f_N	—	1643.5	—	MHz
Maximum insertion attenuation	α_{max}				
1626.5 ... 1660.5 MHz		—	1.8	3.0	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
1626.5 ... 1660.5 MHz		—	0.9	1.8	dB
Return loss (input / output)					
1626.5 ... 1660.5 MHz		9.0	12.5	—	dB
Absolute attenuation	α				
10 .0 ... 1525.0 MHz		30	35	—	dB
1525.0 ... 1559.0 MHz		40	44	—	dB
1559.0 ... 1606.5 MHz		10	15	—	dB
1680.5 ... 1850.0 MHz		10	16	—	dB
1850.0 ... 2110.0 MHz		30	45	—	dB
2110.0 ... 2700.0 MHz		20	43	—	dB

Maximum ratings

Operable temperature range	T	–40/+85	˚C	
Storage temperature range	T_{stg}	–40/+85	˚C	
DC voltage	V_{DC}	0	V	
ESD voltage	V_{ESD}	50[1)]	V	machine model, 1 pulse
Input power at 1626.5 -1660.5 MHz	P_{IN}	10	dBm	CW

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


0.0
5.0
10.0
15.0
α [dB]
1600
1620
1640
1660
1680
f [MHz]


0.0
20.0
40.0
60.0
α [dB]
500
1000
1500
2000
2500
f [MHz]

References

Type	B5153
Ordering code	B39162-B5153-U410
Marking and package	C61157-A7-A67
Packaging	F61074-V8168-Z000
Date codes	L_1126
S-parameters	B5153_NB.s2p B5153_WB.s2p See file header for port/pin assignement 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."
Matching coils	See Inductor pdf-catalog http://www.tdk.co.jp/tefe02/coil.htm#aname1 and Data Library for circuit simulation http://www.tdk.co.jp/etvcl/index.htm

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

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