RF360 Europe GmbH

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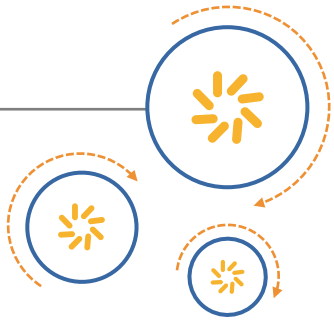

SAW Components

SAW RF low loss filter

Satellite CSS

Series/type:	B1677
Ordering code:	B39122B1677B510
Date:	June 10, 2013
Version:	2.0

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Satellite CSS

Series/type:	**B1677**
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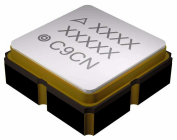
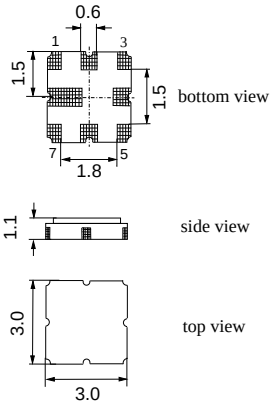
Application

- Low loss RF filter for satellite CSS
- Usable passband 60.0 MHz
- Balanced to balanced operation



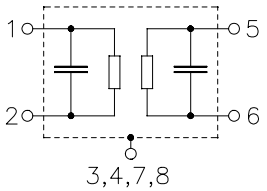
Features

- Package size 3.0 x 3.0 x 1.1 mm^3
- Maximum height of 1.225 mm
- Package code QCC8F
- RoHS compatible
- Approximate weight 0.037 g
- Package for **S**urface **M**ount **T**echnology (**SMT**)
- Ni, gold-plated terminals
- **E**lectrostatic **S**ensitive **D**evice (**ESD**)



Pin configuration

1	Input
2	Input
5	Output
6	Output
3,7	To be grounded
4,8	Case ground, to be grounded



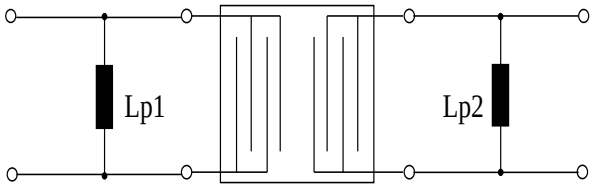
Datasheet SMD

Characteristics

Temperature range for specification: T = –40 ˚C to +85 ˚C
Terminating source impedance: Z_S = 150 Ω (balanced) and matching network
Terminating load impedance: Z_L = 150 Ω (balanced) and matching network

		min.	typ. @ 25 ˚C	max.	
Nominal frequency	f_N	—	1210.0	—	MHz
Maximum insertion attenuation	α_{max}				
1180.0 ... 1240.0 MHz		—	4.2	5.5	dB
Pass bandwidth					
$\alpha_{rel} \leq 1.5$ dB	$B_{1.5\ dB}$	—	77.0	—	MHz
Amplitude ripple (p-p)	$\Delta\alpha$				
1180.0 ... 1240.0 MHz		—	1.3	2.5	dB
Input return loss		6.0	8.0	—	dB
Output return loss		7.5	10.0	—	dB
Group delay ripple (p-p)	$\Delta\tau$				
1180.0 ... 1240.0 MHz		—	20.0	40.0	ns
CMDR					
1180.0 ... 1240.0 MHz		22.0	30.0	—	dB
Deviation from linear phase (rms)					
in any 30 MHz band					
1180.0 ... 1240.0 MHz		—	4.0	6.0	°
Attenuation	α				
50.0 ... 960.0 MHz		45	50	—	dB
960.0 ... 1120.0 MHz		40	47	—	dB
1315.0 ... 2500.0 MHz		38	43	—	dB
2500.0 ... 3200.0 MHz		38	42	—	dB
3200.0 ... 6000.0 MHz		22	27	—	dB

Matching network (element values depend on PCB layout)



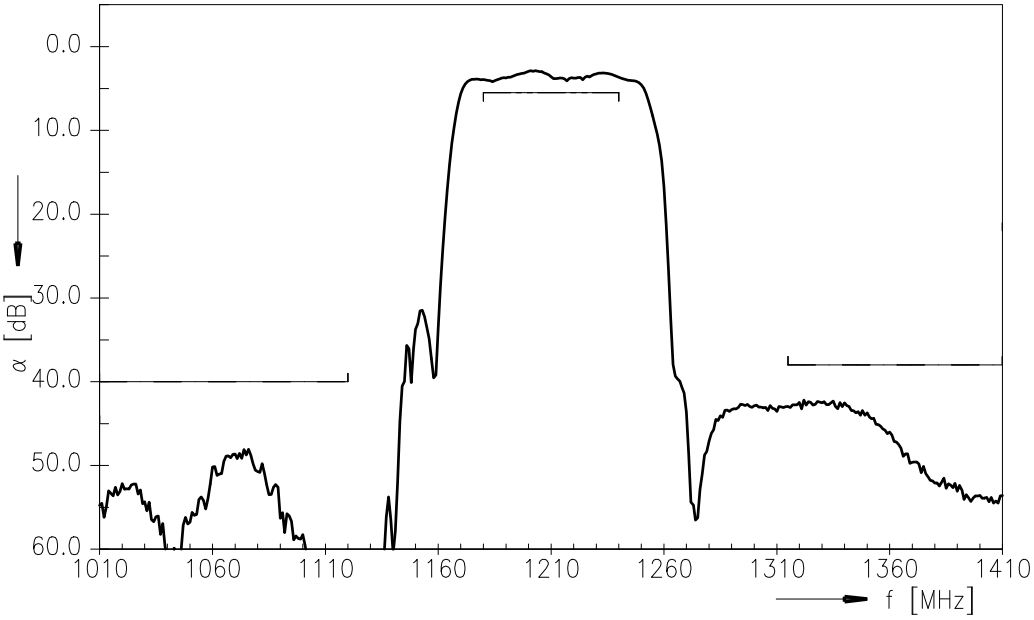
L_{p1} = 15 nH
L_{p2} = 12 nH

Maximum ratings

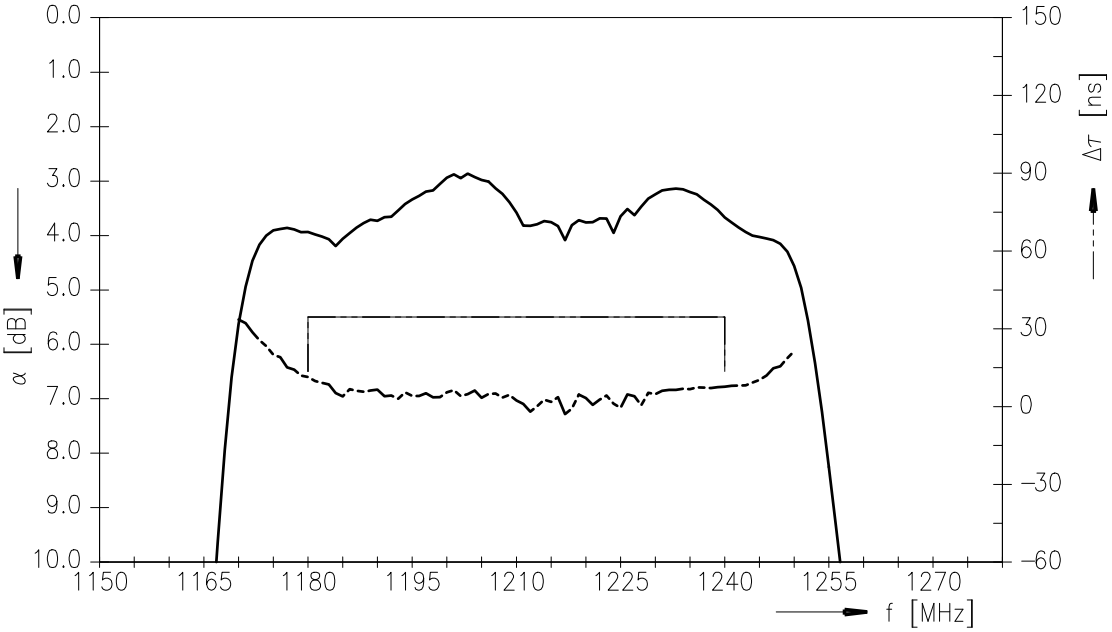
Operable temperature range	T	–40/+85	°C	
Storage temperature range	T_{stg}	–40/+85	°C	
DC voltage	V_{DC}	0	V	
ESD voltage	V_{ESD}	50[1)]	V	machine model, 1 pulse
Input power at				
1180.0... 1240.0 MHz	P_{IN}	0	dBm	source impedance 150 Ω

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

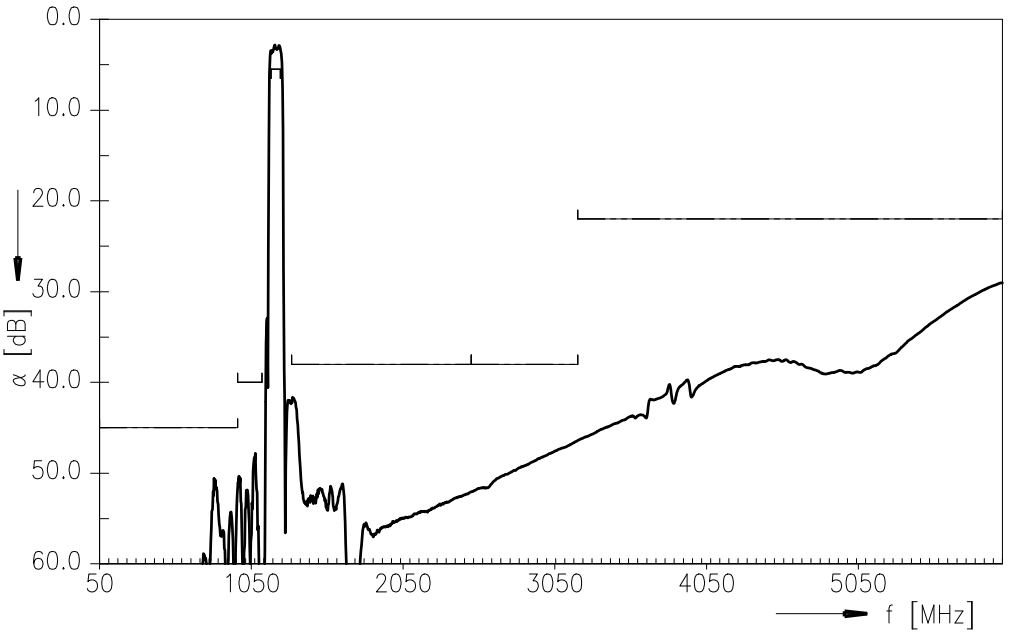
Transfer function S_{dd21}



Transfer function S_{dd21} (passband)



Transfer function S_{dd21} (wideband)



References

Type	B1677
Ordering code	B39122B1677B510
Marking and package	C61157-A7-A72
Packaging	F61074-V8168-Z000
Date codes	L_1126
S-parameters	B1677_NB.s4p 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."
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

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