SAW Components

SAW filter

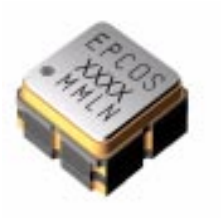
Satellite radio

Series/type:	**B1647**
Ordering code:	**B39152-B1647-U510**
Date:	May 11, 2010
Version:	2.0

Datasheet SMD

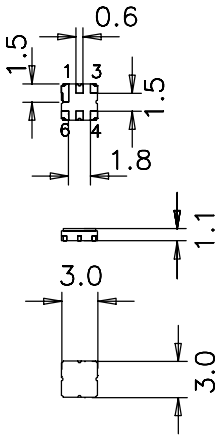
Application

- Low-loss RF filter for satellite radio
- Impedance transformation from 50 Ω to 100 Ω
- Unbalanced to balanced operation
- Usable passband 40 MHz



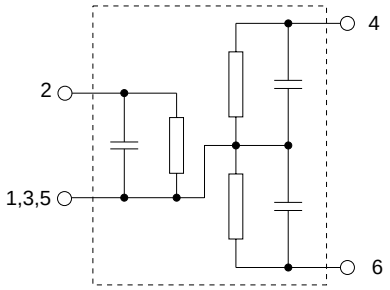
Features

- Package size 3.0 x 3.0 x 1.1 mm³
- Package code DCC6D
- Maximum package height of 1.225 mm
- RoHS compatible
- Approximate weight 0.037 g
- Package for **S**urface **M**ount **T**echnology (**SMT**)
- Ni, gold-plated terminals
- AEC-Q200 qualified component family
- **E**lectrostatic **S**ensitive **D**evice (**ESD**)



Pin configuration

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



Datasheet SMD

Characteristics

Temperature range for specification: T = –10 ˚C to +70 ˚C
Terminating source impedance: Z_S = 50 Ω
Terminating load impedance: Z_L = 100 Ω (balanced)

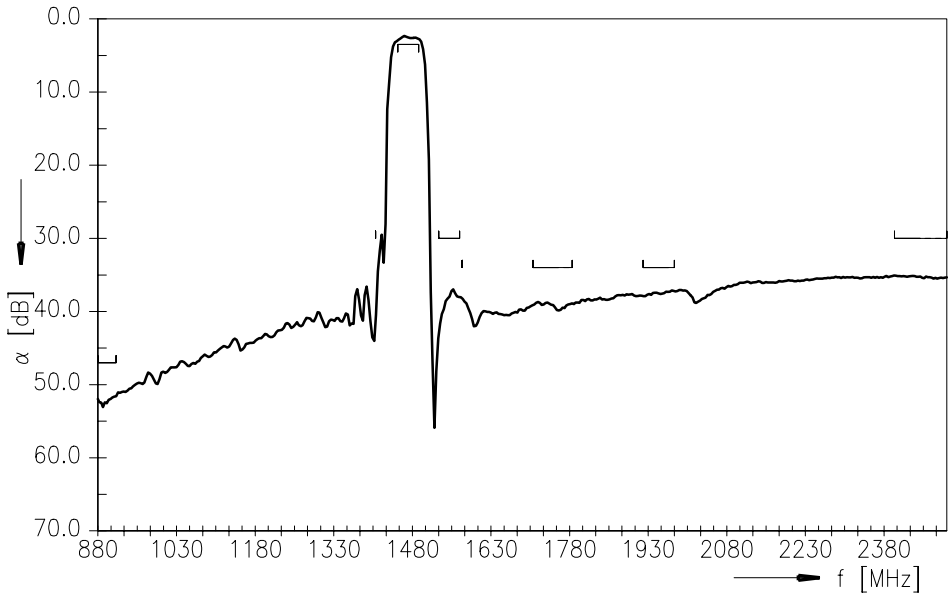
		min.	typ. @ 25 ˚C	max.	
Nominal frequency	f_N	—	1472.00	—	MHz
Maximum insertion attenuation	α_{max}				
1452.0 ... 1492.0 MHz		—	3.0	3.5	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
1452.0 ... 1492.0 MHz		—	0.7	1.8	dB
Input return loss		10	13	—	dB
Output return loss		9	12	—	dB
Attenuation	α				
880.0 ... 915.0 MHz		47	51	—	dB
1410.0 MHz		30	38	—	dB
1530.0 ... 1570.0 MHz		30	36	—	dB
1575.0 MHz		34	38	—	dB
1710.0 ... 1785.0 MHz		34	38	—	dB
1920.0 ... 1980.0 MHz		34	38	—	dB
2400.0 ... 2500.0 MHz		30	34	—	dB
Group delay ripple (p-p)					
1452.0 ... 1492.0 MHz		—	12	25	ns

Maximum ratings

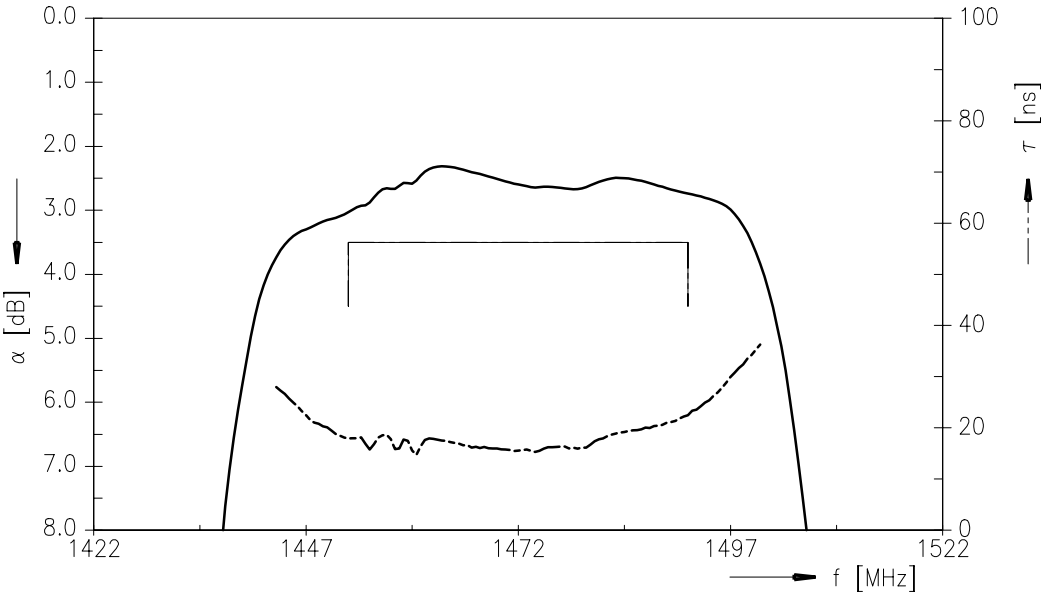
Operable temperature range	T	–40/+85	˚C	
Storage temperature range	T_{stg}	–40/+85	˚C	
DC voltage	V_{DC}	4	V	
ESD voltage	V_{ESD}	50[1)]	V	machine model, 1 pulse
Input power at				
1452 MHz ... 1492 MHz	P_{IN}	0	dBm	source impedance 50 Ω

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

Transfer function (wideband)



Transfer function (narrowband)



References

Type	B1647
Ordering code	B39152-B1647-U510
Marking and package	C61157-A7-A68
Packaging	F61074-V8168-Z000
Date codes	L_1126
S-parameters	B1647_NB.s3p B1647_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."

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