



SAW Components

SAW RF low loss filter

Satellite CSS

Series/type:	B1638
Ordering code:	B39192B1638U510
Date:	October 16, 2008
Version:	2.1



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1864.0 MHz

Data Sheet

SMD

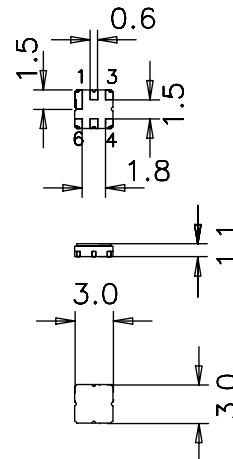
Application

- Low loss RF filter for satellite CSS
- Usable passband 40.5 MHz
- High rejection
- 200 Ω balanced to 75 Ω unbalanced operation



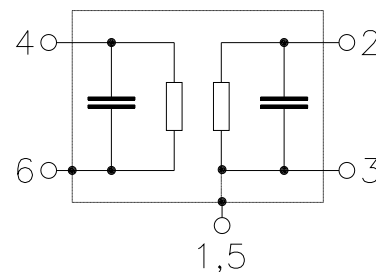
Features

- Package size 3.0 x 3.0 x 1.1 mm³
- Maximum height of 1.225 mm
- Package code DCC6D
- RoHS compatible
- Approximate weight 0.037 g
- Package for **Surface Mount Technology (SMT)**
- Ni, gold-plated terminals
- **Electrostatic Sensitive Device (ESD)**



Pin configuration

- 4 Input
- 6 Input
- 2 Output
- 1, 3, 5 Case ground



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



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Characteristics

Temperature range for specification:

$$T = +25\text{ °C} \pm 2\text{ °C}$$

Terminating source impedance:

$$Z_S = 200\ \Omega \text{ and matching network}$$

Terminating load impedance:

$$Z_L = 75\ \Omega$$

		min.	typ. @ 25 °C	max.	
Nominal frequency	f_N	—	1864.0	—	MHz
Insertion attenuation at 1864.0 MHz	α_0	—	2.9	3.2	dB
Pass bandwidth $\alpha_{rel} \leq 1.0\text{ dB}$	$B_{1\text{ dB}}$	—	65.2	—	MHz
Amplitude ripple (p-p) 1840.5 ... 1887.4 MHz	$\Delta\alpha$	—	0.6	1.0	dB
Group delay ripple (p-p) 1845.8 ... 1882.1 MHz	$\Delta\tau$	—	5.0	10.0	ns
Relative attenuation (relative to α_0)	α_{rel}				
0.3 ... 862.0 MHz		60.0	65.0	—	dB
862.0 ... 1655.5 MHz		45.0	50.0	—	dB
1655.5 ... 1771.3 MHz		33.0	47.0	—	dB
1956.3 ... 2072.1 MHz		33.0	37.0	—	dB
2072.1 ... 2500.0 MHz		40.0	46.0	—	dB
2500.0 ... 3500.0 MHz		30.0	38.0	—	dB
Common Mode Rejection Ratio (CMRR) 1840.5 ... 1887.4 MHz		20.0	33.0	—	dB
Input VSWR 1840.5 ... 1887.4 MHz		—	1.8	2.1	
Output VSWR 1840.5 ... 1887.4 MHz		—	2.0	2.1	



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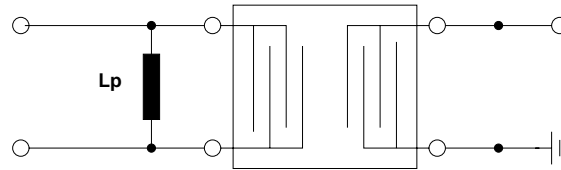
1864.0 MHz

Data Sheet



Matching network (element value depends on PCB layout)

$L_p = 14 \text{ nH}$



Maximum ratings

Operable temperature range	T	-30/+80	°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 1840.5... 1887.4 MHz	P _{IN}	0	dBm	source impedance 200 Ω

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



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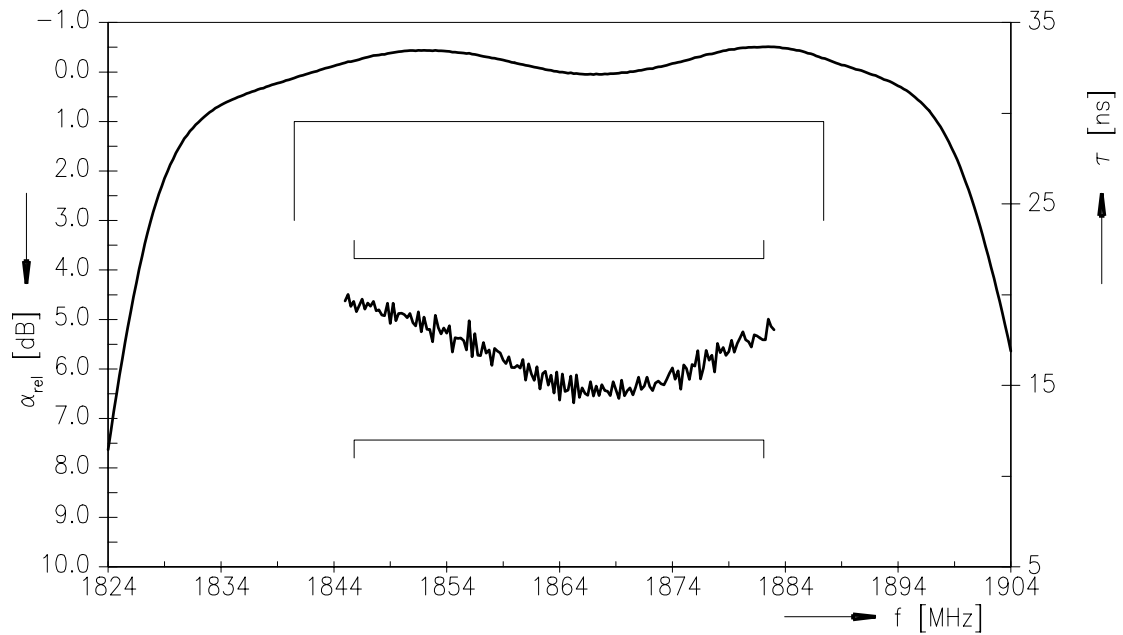
Data Sheet



Transfer function S_{21} with matching network



Transfer function S_{21} (passband) with matching network



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



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Data Sheet



References

Type	B1638
Ordering code	B39192B1638U510
Marking and package	C61157-A7-A68
Packaging	F61074-V8168-Z000
Date codes	L_1126
S-parameters	LI20A_NB_UN.s3p
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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