SAW Components

SAW filter

DCS 1800 band I

Series/type: **B5125**
Ordering code: **B39172B5125U410**

Date: July 26, 2010
Version: 2.0

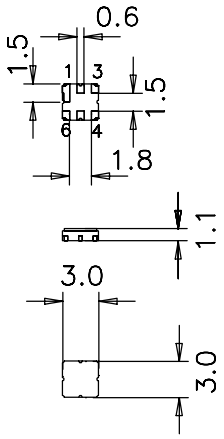
Data sheet SMD

Application

- DCS1800 band I filter
- Unbalanced to Unbalanced operation
- Low amplitude ripple
- Usable passband of 60 MHz
- No matching required for operation at 50 Ω

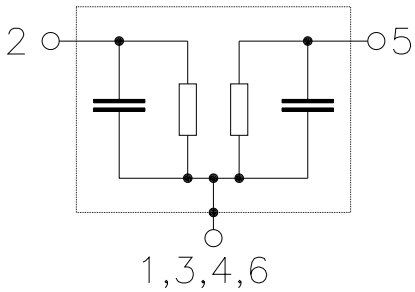
Features

- Package size 3.0 x 3.0 x 1.1 mm³
- Package code DCC6C
- 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

2	Input
5	Output
1,3,4,6	Case grounded



Data sheet SMD

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

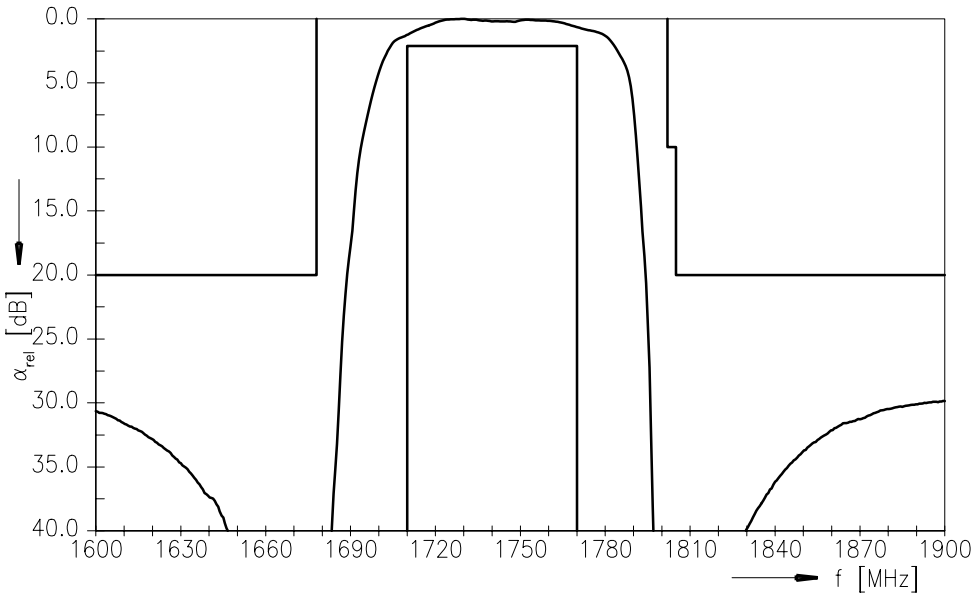
		min.	typ. @ 25 ˚C	max.	
Center frequency	f_N	—	1740.00	—	MHz
Minimum insertion attenuation	α_{min}				
1710.0 ... 1770.0 MHz		—	1.2	—	dB
Maximum insertion attenuation	α_{max}				
1710.0 ... 1770.0 MHz		—	2.2	3.2	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
1710.0 ... 1770.0 MHz		—	1.1	2.1	dB
Input VSWR					
1710.0 ... 1770.0 MHz		—	1.8:1	2.1:1	
Output VSWR					
1710.0 ... 1770.0 MHz		—	1.8:1	2.1:1	
Relative attenuation (relative to α_{min})	α_{rel}				
10.0 ... 1678.0 MHz		20.0	24.0	—	dB
1802.0 ... 1805.0 MHz		10.0	40.0	—	dB
1805.0 ... 1880.0 MHz		20.0	29.0	—	dB
1880.0 ... 3200.0 MHz		20.0	29.0	—	dB
3200.0 ... 5200.0 MHz		15.5	23.0	—	dB

Maximum ratings

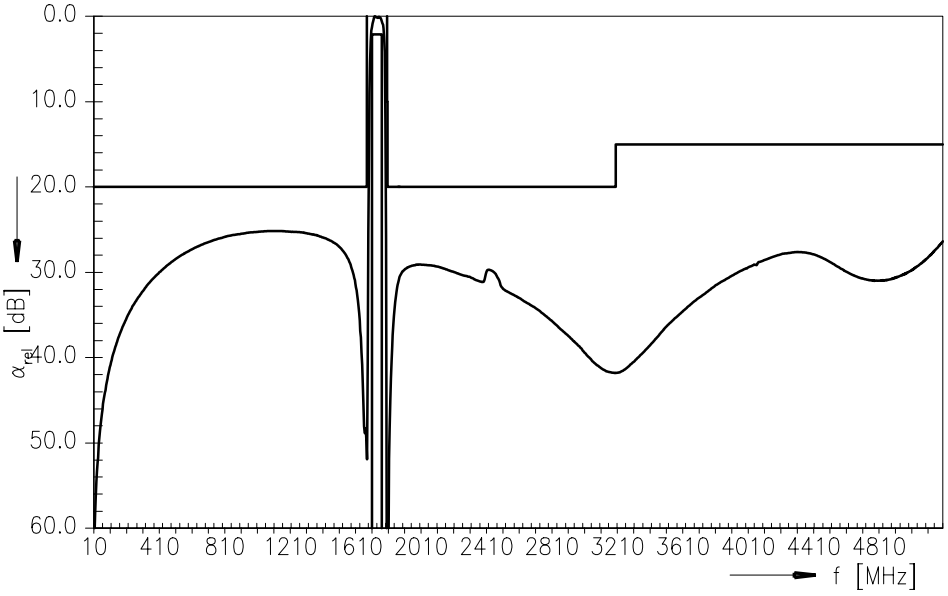
Operable temperature range	T	–40/+85	˚C	
Storage temperature range	T_{stg}	–40/+85	˚C	
DC voltage	V_{DC}	0	V	
ESD voltage	V_{ESD}	50[1)]	V	machine model, 1 pulse
Input power at				
1710 ... 1770.0	P_{IN}	10	dBm	Continuous wave (10000 hours)

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

Transfer function (normalized)

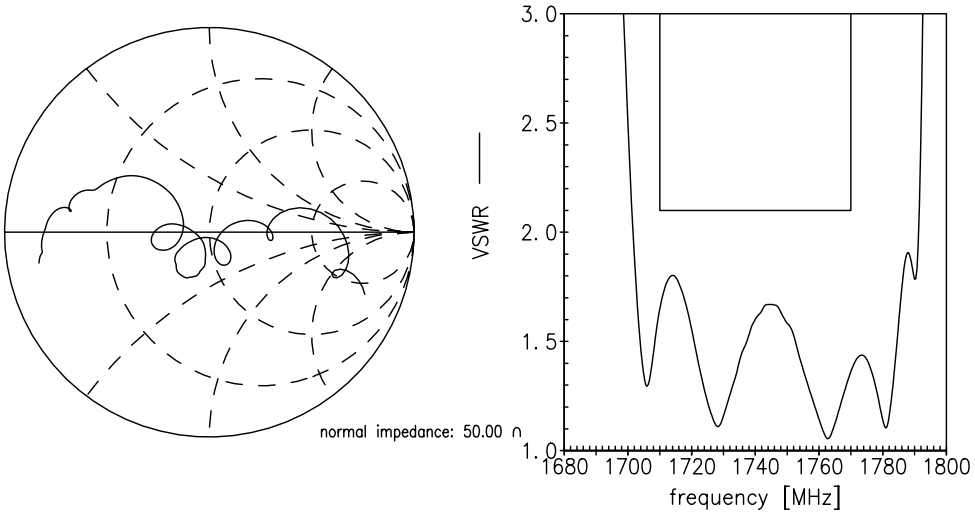


Transfer function (wideband)

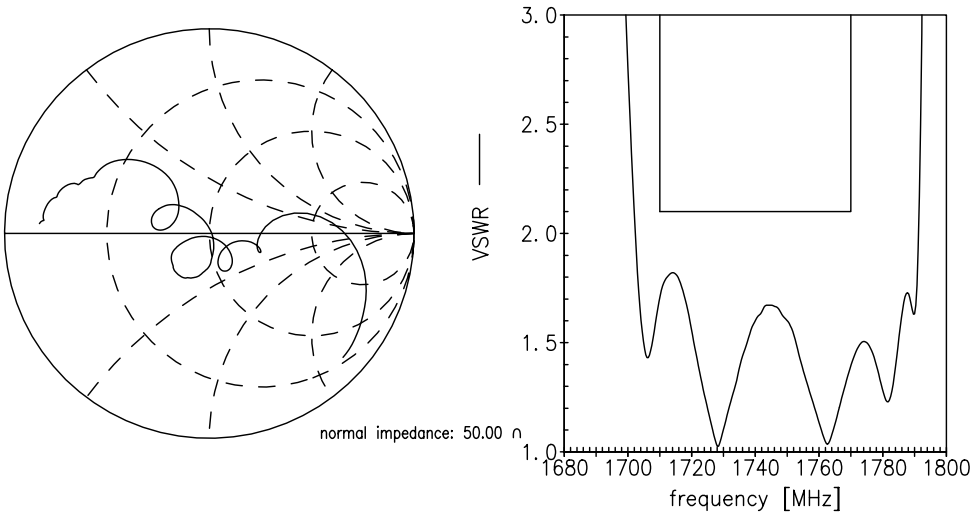


Smith charts

S_{11} function



S_{22} function



References

Type	B5125
Ordering code	B39172B5125U410
Marking and package	C61157-A7-A67
Packaging	F61074-V8168-Z000
Date codes	L_1126
S-parameters	B5125_NB.s2p, B5125_WB.s2p 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 http://www.tdk.co.jp/tefe02/coil.htm#aname1 http://www.tdk.co.jp/etvcl/index.htm for a large variety of matching coils.

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

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