



## SAW Components

### SAW filter

DCS 1800 band I

<b>Series/type:</b>	<b>B5125</b>
<b>Ordering code:</b>	<b>B39172B5125U410</b>
Date:	July 26, 2010
Version:	2.0



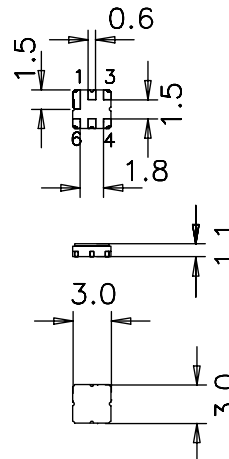
**Application**

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



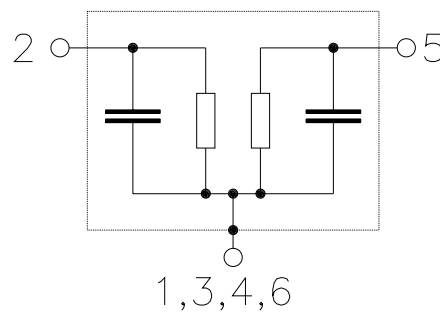
**Features**

- Package size 3.0 x 3.0 x 1.1 mm<sup>3</sup>
- Package code DCC6C
- RoHS compatible
- Approximate weight 0.037 g
- Package for **Surface Mount Technology (SMT)**
- Ni, gold-plated terminals
- **Electrostatic Sensitive Device (ESD)**



**Pin configuration**

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





Data sheet



**Characteristics**

Temperature range for specification: T = -40 °C to +85 °C  
 Terminating source impedance: Z<sub>S</sub> = 50 Ω  
 Terminating load impedance: Z<sub>L</sub> = 50 Ω

		min.	typ. @ 25 °C	max.	
<b>Center frequency</b>	f <sub>N</sub>	—	1740.00	—	MHz
<b>Minimum insertion attenuation</b>	α <sub>min</sub>				
1710.0 ... 1770.0	MHz	—	1.2	—	dB
<b>Maximum insertion attenuation</b>	α <sub>max</sub>				
1710.0 ... 1770.0	MHz	—	2.2	3.2	dB
<b>Amplitude ripple (p-p)</b>	Δα				
1710.0 ... 1770.0	MHz	—	1.1	2.1	dB
<b>Input VSWR</b>					
1710.0 ... 1770.0	MHz	—	1.8:1	2.1:1	
<b>Output VSWR</b>					
1710.0 ... 1770.0	MHz	—	1.8:1	2.1:1	
<b>Relative attenuation (relative to α<sub>min</sub>)</b>	α <sub>rel</sub>				
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



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1740.00 MHz

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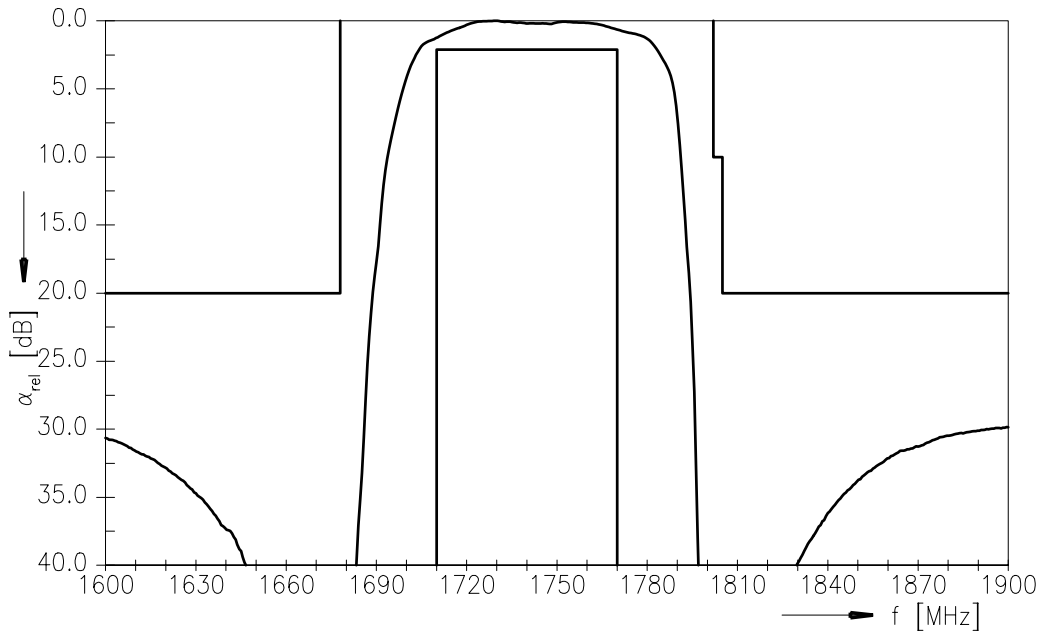
### Maximum ratings

Operable temperature range	T	-40/+85	°C	
Storage temperature range	T <sub>stg</sub>	-40/+85	°C	
DC voltage	V <sub>DC</sub>	0	V	
ESD voltage	V <sub>ESD</sub>	50 <sup>1)</sup>	V	machine model, 1 pulse
Input power at 1710 ... 1770.0	P <sub>IN</sub>	10	dBm	Continuous wave (10000 hours)

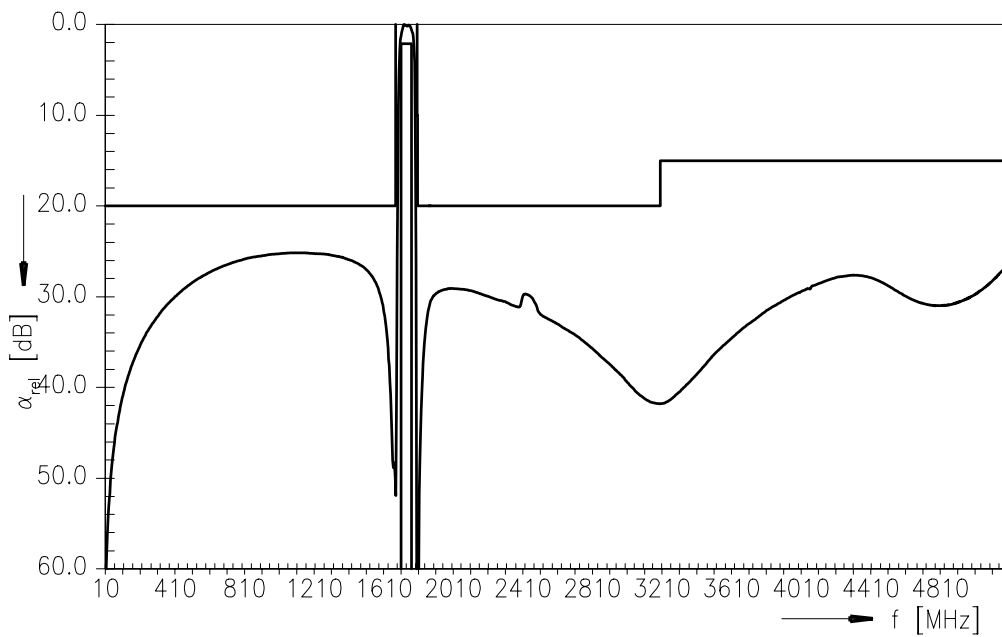
<sup>1)</sup> acc. to JESD22-A115A (machine model), 1 negative & 1 positive pulse.



Transfer function (normalized)



Transfer function (wideband)



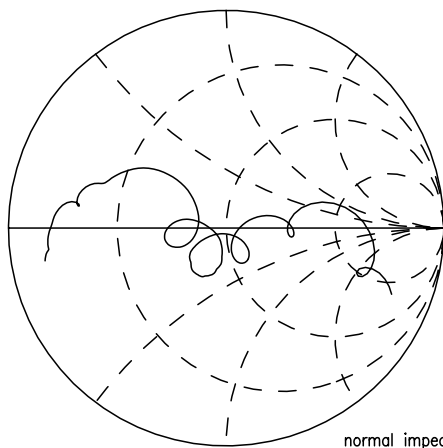


Data sheet

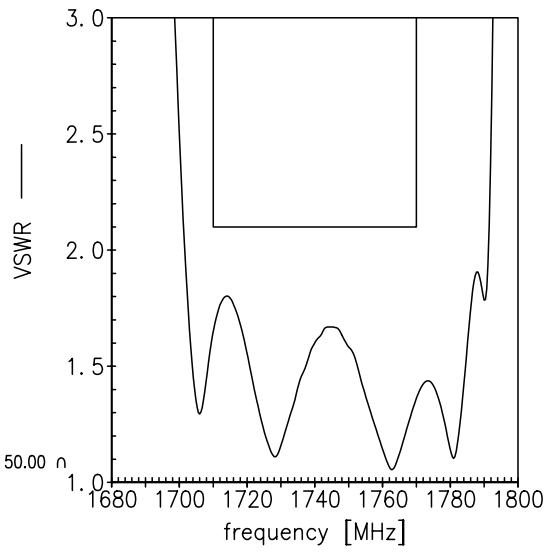


Smith charts

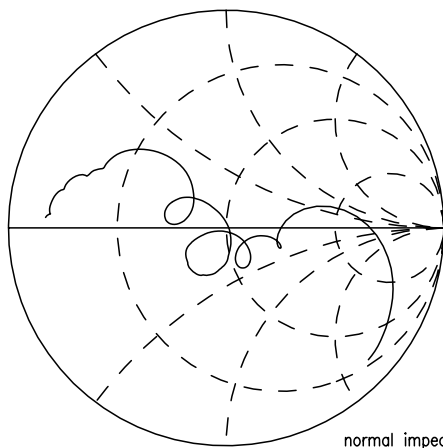
S<sub>11</sub> function



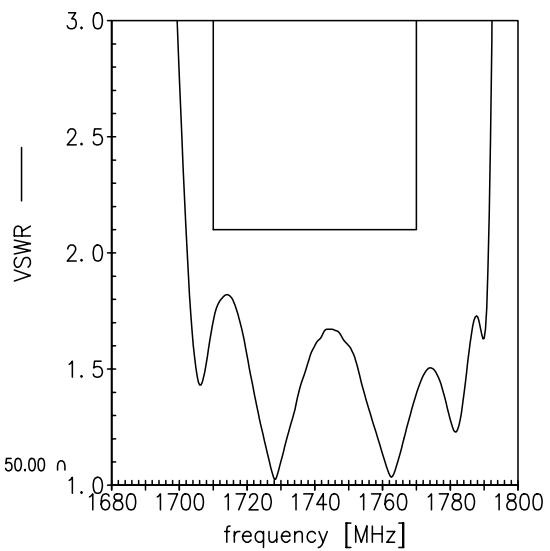
normal impedance: 50.00  $\Omega$



S<sub>22</sub> function



normal impedance: 50.00  $\Omega$





<b>SAW Components</b>	<b>B5125</b>
<b>SAW filter</b>	<b>1740.00 MHz</b>

Data sheet



#### References

<b>Type</b>	B5125
<b>Ordering code</b>	B39172B5125U410
<b>Marking and package</b>	C61157-A7-A67
<b>Packaging</b>	F61074-V8168-Z000
<b>Date codes</b>	L_1126
<b>S-parameters</b>	B5125_NB.s2p, B5125_WB.s2p see file header for port/pin assignment table
<b>Soldering profile</b>	S_6001
<b>RoHS compatible</b>	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."
<b>Matching coils</b>	See <a href="http://www.tdk.co.jp/tefe02/coil.htm#aname1">http://www.tdk.co.jp/tefe02/coil.htm#aname1</a> <a href="http://www.tdk.co.jp/etvcl/index.htm">http://www.tdk.co.jp/etvcl/index.htm</a> 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](http://www.epcos.com).

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