

RF360 Europe GmbH

A Qualcomm – TDK Joint Venture

## SAW Components

### SAW filter

DCS 1800 band I

Series/type: B5125  
Ordering code: B39172B5125U410

Date: July 26, 2010  
Version: 2.0

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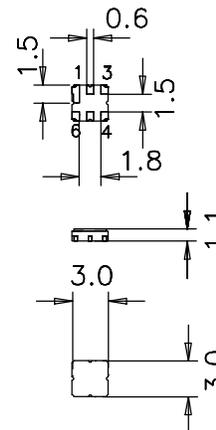
Data sheet


**Application**

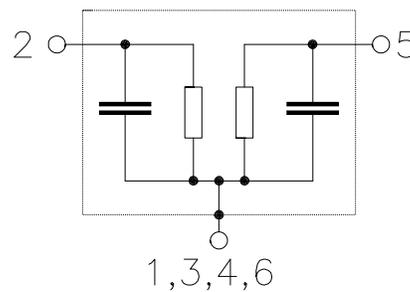
- DCS1800 band I filter
- Unbalanced to Unbalanced operation
- Low amplitude ripple
- Usable passband of 60 MHz
- No matching required for operation at 50 Ω


**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



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

Data sheet



**Characteristics**

Temperature range for specification:  $T = -40\text{ °C to }+85\text{ °C}$   
 Terminating source impedance:  $Z_S = 50\ \Omega$   
 Terminating load impedance:  $Z_L = 50\ \Omega$

		min.	typ. @ 25 °C	max.	
<b>Center frequency</b>	$f_N$	—	1740.00	—	MHz
<b>Minimum insertion attenuation</b> 1710.0 ... 1770.0 MHz	$\alpha_{\min}$	—	1.2	—	dB
<b>Maximum insertion attenuation</b> 1710.0 ... 1770.0 MHz	$\alpha_{\max}$	—	2.2	3.2	dB
<b>Amplitude ripple (p-p)</b> 1710.0 ... 1770.0 MHz	$\Delta\alpha$	—	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 <math>\alpha_{\min}</math>)</b>	$\alpha_{\text{rel}}$				
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

**SAW Components** **B5125**

**SAW filter** **1740.00 MHz**

Data sheet



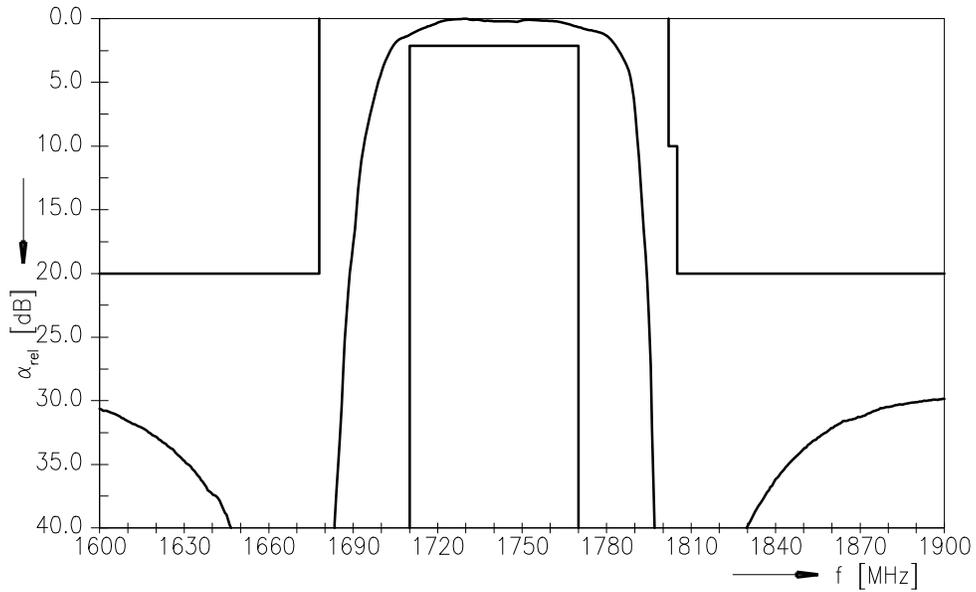
**Maximum ratings**

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)

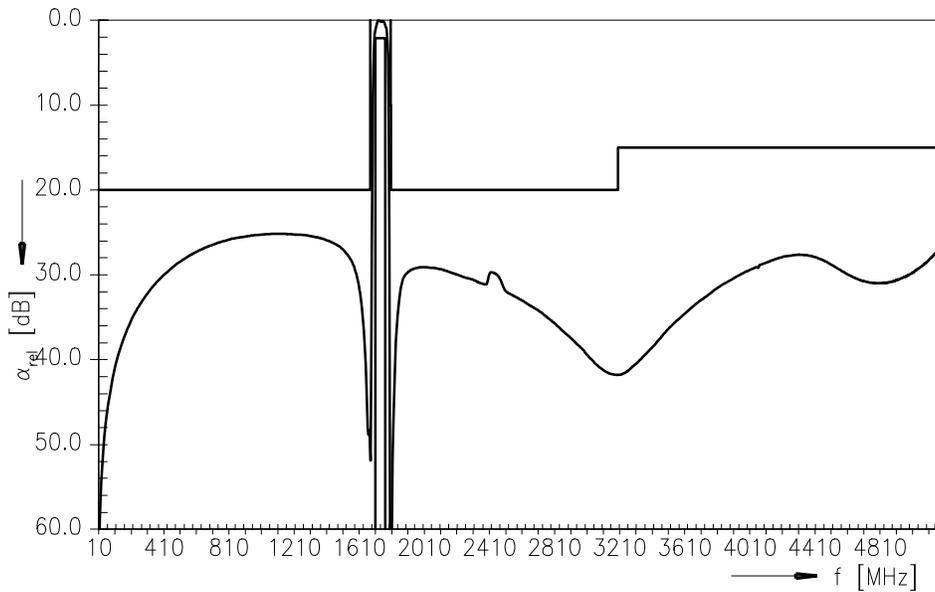
<sup>1)</sup> acc. to JESD22-A115A (machine model), 1 negative & 1 positive pulse.



Transfer function (normalized)



Transfer function (wideband)

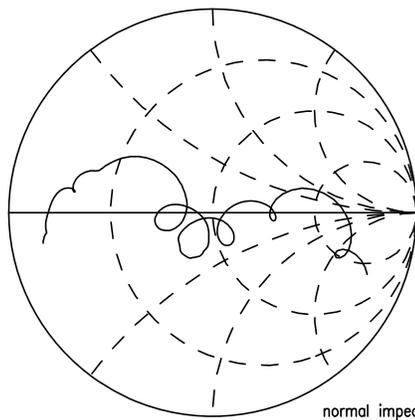


Data sheet

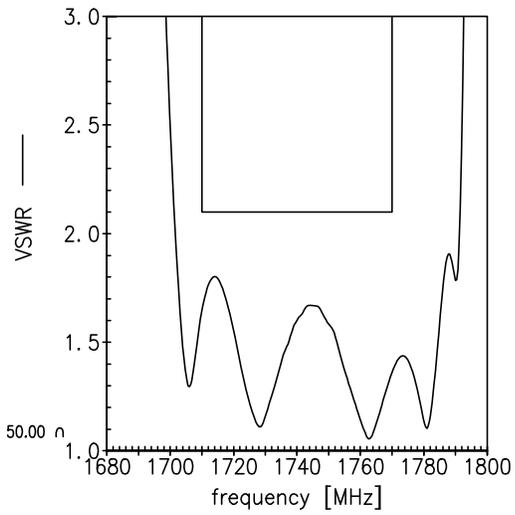


Smith charts

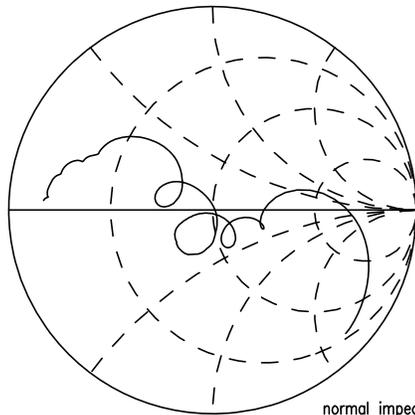
**S<sub>11</sub> function**



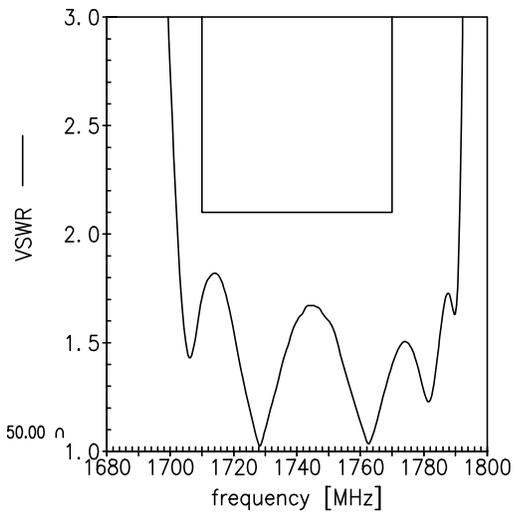
normal impedance: 50.00  $\Omega$



**S<sub>22</sub> function**



normal impedance: 50.00  $\Omega$



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