



## **SAW Components**

### **SAW filter**

RF Base Station

<b>Series/type:</b>	<b>B5116</b>
<b>Ordering code:</b>	<b>B39751B5116U410</b>
<b>Date:</b>	<b>May 18, 2009</b>
<b>Version:</b>	<b>2.0</b>



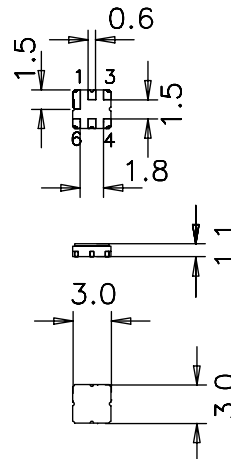
**Application**

- RF filter for base-station
- Unbalanced to unbalanced operation
- Low amplitude ripple
- Usable passband 11 MHz
- No matching required for operation at 50 Ω



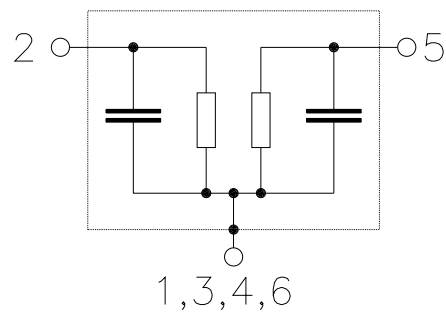
**Features**

- 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:  $T = -25$  to  $85\text{ }^{\circ}\text{C}$   
 Terminating source impedance:  $Z_S = 50\ \Omega$   
 Terminating load impedance:  $Z_L = 50\ \Omega$

		min.	typ. @ 25 °C	max.	
<b>Center frequency</b>	$f_C$	—	751.50	—	MHz
<b>Maximum insertion attenuation</b>	$\alpha_{\max}$				
	$f_C \pm 5.5\text{ MHz}$	—	1.5	2.2	dB
<b>Amplitude ripple (p-p)</b>	$\Delta\alpha$				
	$f_C \pm 5.5\text{ MHz}$	—	0.5	1.2	dB
<b>Group delay ripple (p-p)</b>	$\Delta\tau$				
	$f_C \pm 5.5\text{ MHz}$	—	48	70	ns
<b>Mean value of absolute group delay</b>	$\bar{\tau}$				
	$f_C \pm 5.5\text{ MHz}$	0	35	70	ns
<b>Return loss</b>					
	$f_C \pm 5.5\text{ MHz}$	10	13	—	dB
<b>Attenuation</b>	$\alpha$				
	776 MHz ... 787 MHz	15	30	—	dB
	788 MHz ... 805 MHz	25	30	—	dB
	806 MHz ... 849 MHz	25	38	—	dB



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**B5116**

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**751.50 MHz**

Data sheet



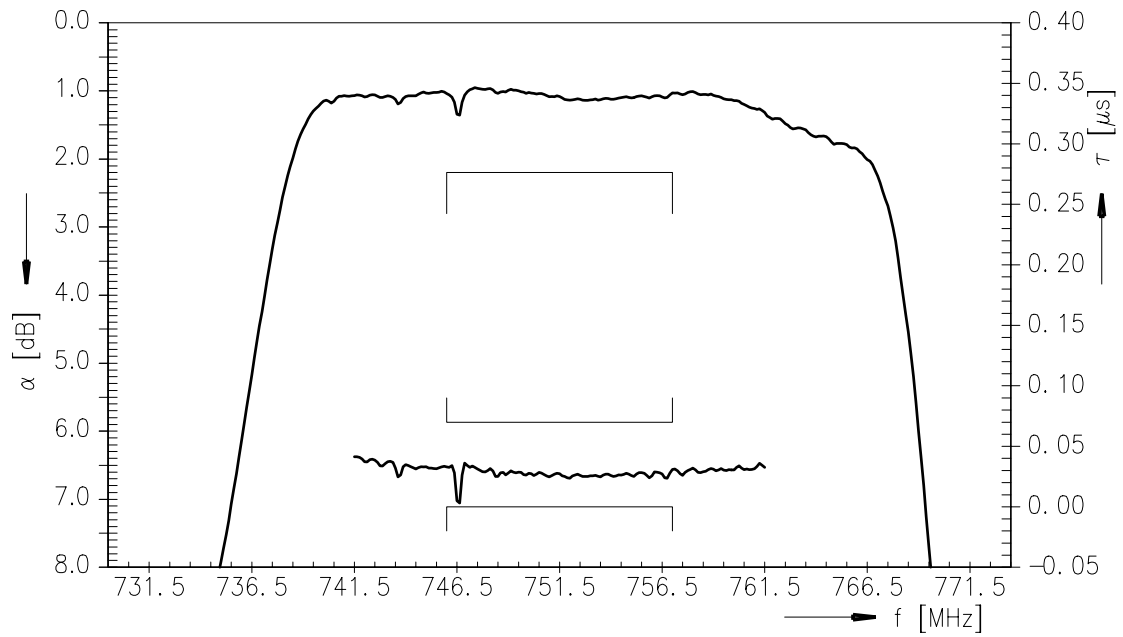
**Maximum ratings**

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>	100 <sup>1)</sup>	V	machine model, 1 pulse
Input power 746.0 ... 757.0	P <sub>IN</sub>	15	dBm	CW

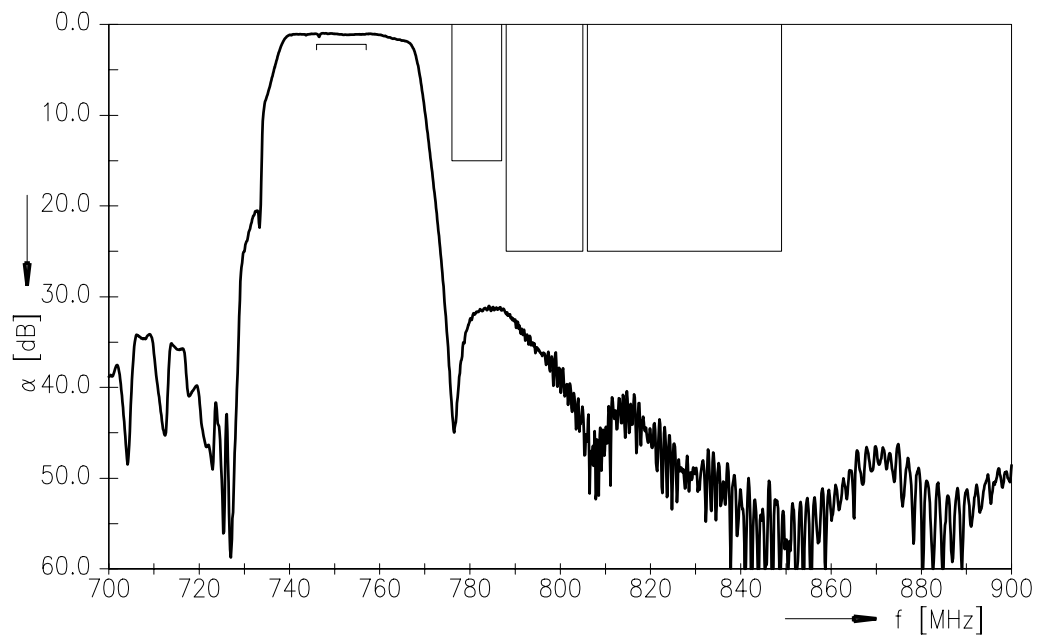
<sup>1)</sup> acc. to J-STD22A-0115A (machine model, 1 pulse +/-).



Transfer function



Transfer function (wideband)



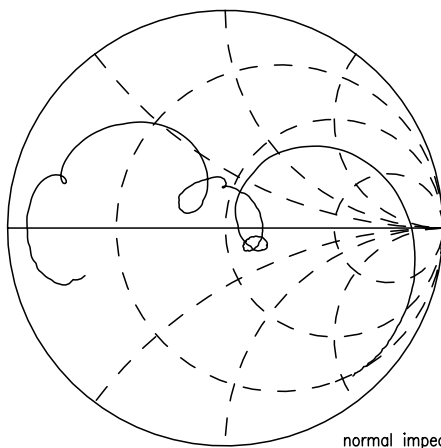


Data sheet

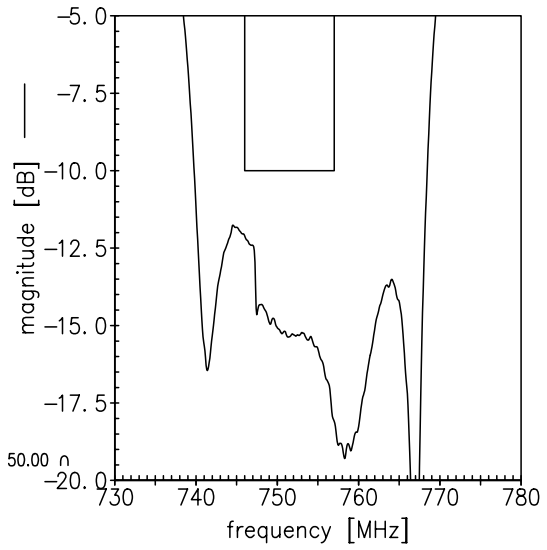


Smith charts

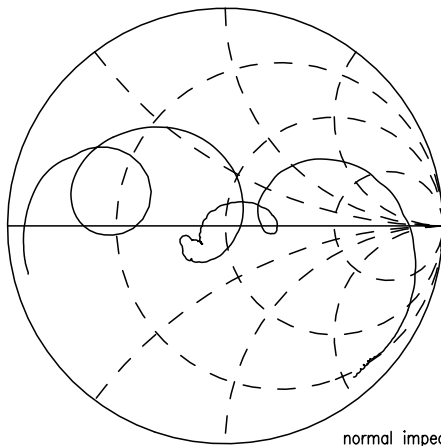
S<sub>11</sub> function



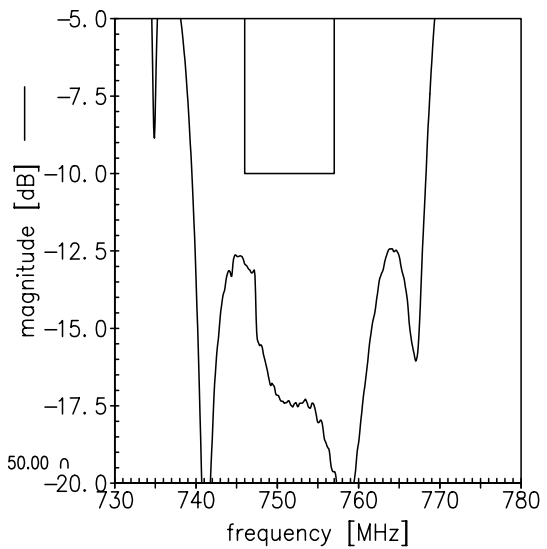
normal impedance: 50.00  $\Omega$



S<sub>22</sub> function



normal impedance: 50.00  $\Omega$





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B5116

SAW filter

751.50 MHz

Data sheet



## References

Type	B5116
Ordering code	B39751B5116U410
Marking and package	C61157-A7-A67
Packaging	F61074-V8168-Z000
Date codes	L_1126
S-parameters	B5116_NB.s2p B5116_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."

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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