



## **SAW Components**

### **SAW filter**

WiMax

<b>Series/type:</b>	<b>B5094</b>
<b>Ordering code:</b>	<b>B39811B5094U410</b>
<b>Date:</b>	<b>January 09, 2009</b>
<b>Version:</b>	<b>2.0</b>



Data sheet



**Application**

- Low-loss IF filter for WiMax systems
- Low amplitude ripple
- No matching required for operation at 50 Ω
- Usable passband 20 MHz



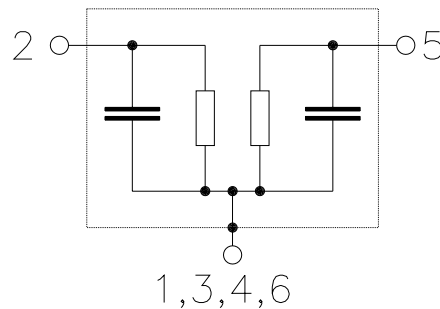
**Features**

- 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 unbalanced
- 5 Output unbalanced
- 1,3,4,6 Case grounded





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>	$f_C$	—	810.0	—	MHz
<b>Maximum insertion attenuation</b>	$\alpha_{max}$				
800.0 ... 820.0 MHz		—	2.1	3.0	dB
<b>Amplitude ripple (p-p)</b>	$\Delta\alpha$				
800.0 ... 820.0 MHz		—	0.6	1.0	dB
<b>Return loss</b>					
800.0 ... 820.0 MHz		10.0	12.0	—	dB
<b>Attenuation</b>	$\alpha$				
300.0 ... 750.0 MHz		30	55	—	dB
750.0 ... 776.0 MHz		40	45	—	dB
776.0 ... 780.0 MHz		40	45	—	dB
840.0 ... 860.0 MHz		40	43	—	dB
860.0 ... 2000.0 MHz		30	40	—	dB



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B5094

SAW filter

810.00 MHz

Data sheet



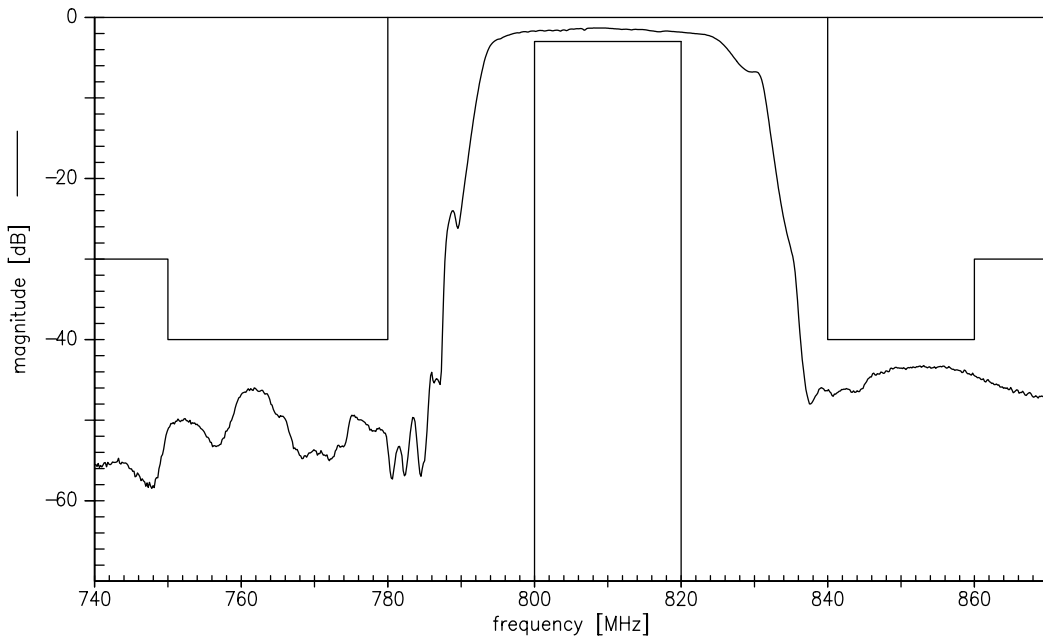
### Maximum ratings

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>	100 <sup>1)</sup>	V	machine model, 1 pulse
Input power at 800.0 ... 820.0	P <sub>IN</sub>	10	dBm	CW

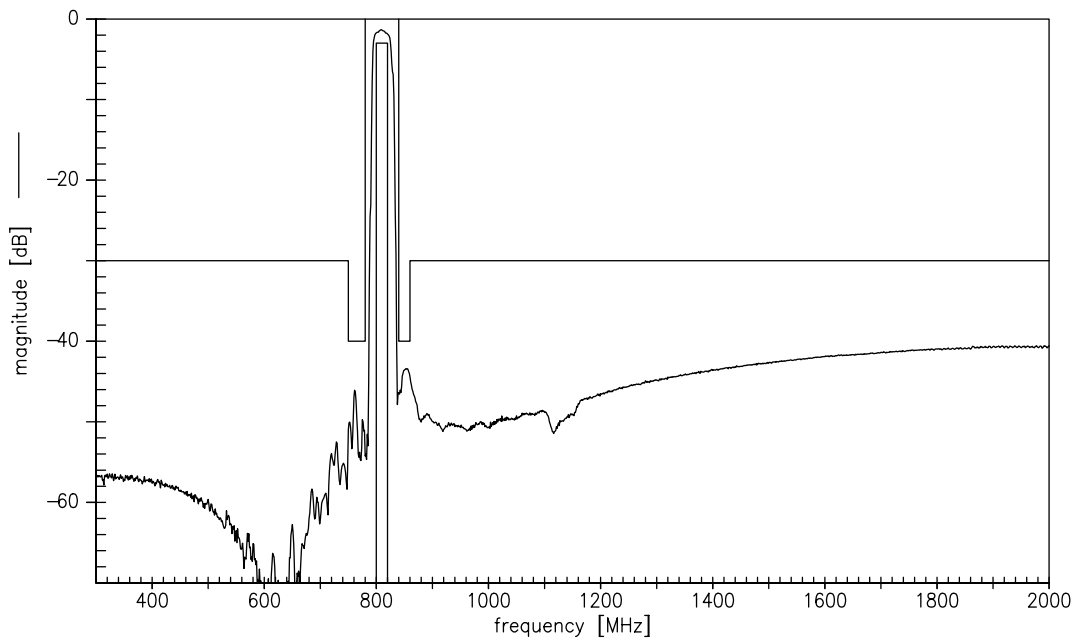
<sup>1)</sup> acc. to JESD22-A115A (machine model), 1 negative & 1 positive pulse.



Transfer function



Transfer function (wideband)



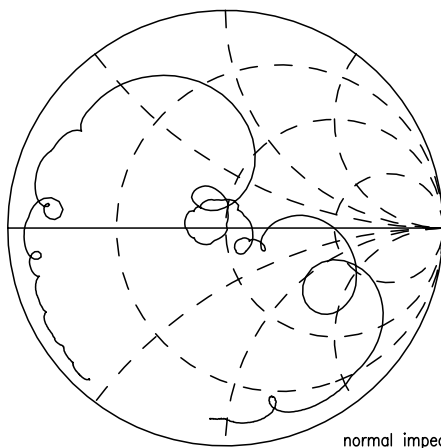


Data sheet

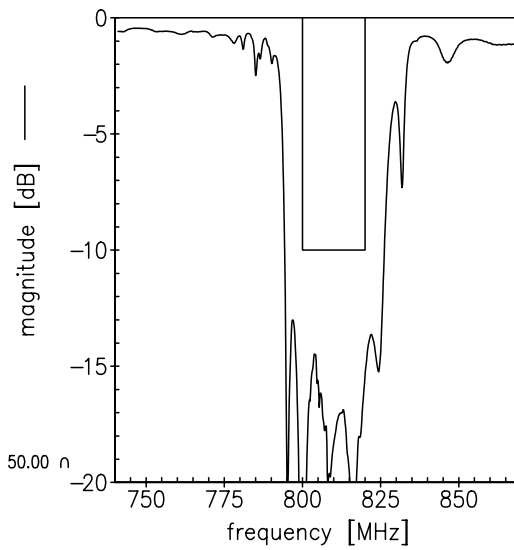


Smith charts

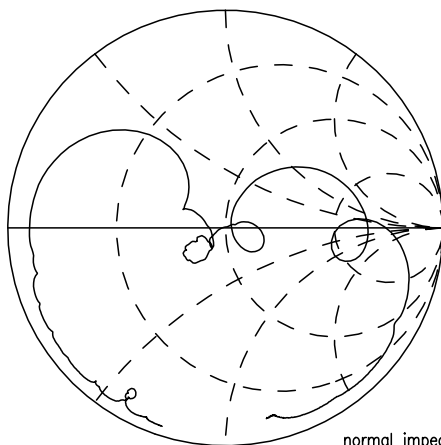
S<sub>11</sub> function



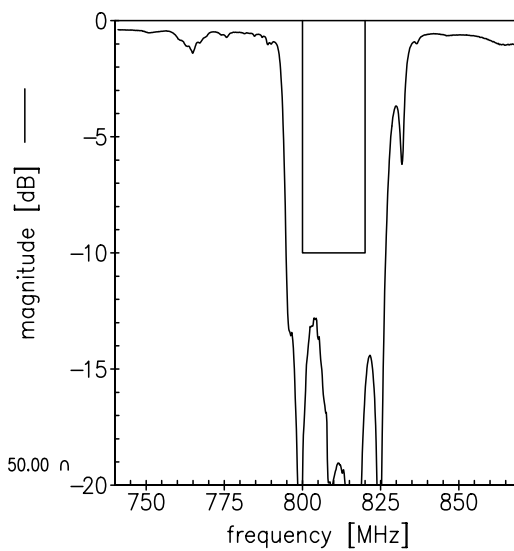
normal impedance: 50.00  $\Omega$



S<sub>22</sub> function



normal impedance: 50.00  $\Omega$





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**SAW filter** **810.00 MHz**

Data sheet



### References

<b>Type</b>	B5094
<b>Ordering code</b>	B39811B5094U410
<b>Marking and package</b>	C61157-A7-A67
<b>Packaging</b>	F61074-V8168-Z000
<b>Date codes</b>	L_1126
<b>S-parameters</b>	B5094_NB.s2p B5094_WB.s2p
<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."

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