



## **SAW Components**

### **SAW filter**

Base-station RF

<b>Series/type:</b>	<b>B5129</b>
<b>Ordering code:</b>	<b>B39192B5129U410</b>
<b>Date:</b>	<b>February 26, 2010</b>
<b>Version:</b>	<b>2.0</b>



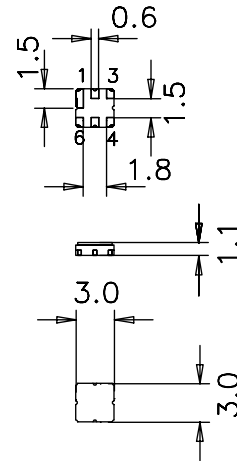
**Application**

- Low-loss base-station RF filter
- Low amplitude ripple
- No matching required for operation at 50Ω
- Usable passband 40 MHz



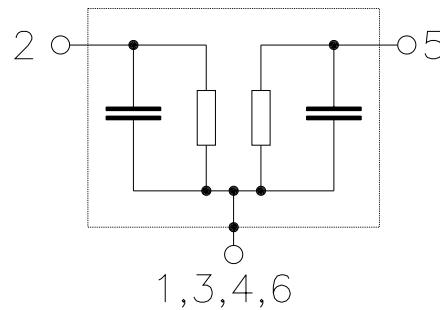
**Features**

- 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 To be 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>Nominal frequency</b>	$f_N$	—	1900.0	—	MHz
<b>Minimum insertion attenuation</b>	$\alpha_{\min}$				
	$f_N \pm 20.0\text{ MHz}$	—	2.8	3.0	dB
<b>Amplitude ripple (p-p)</b>	$\Delta\alpha$				
	$f_N \pm 20.0\text{ MHz}$	—	0.8	1.2	dB
<b>VSWR</b>					
Input	$f_N \pm 20.0\text{ MHz}$	—	1.7:1	2.0:1	
Output	$f_N \pm 20.0\text{ MHz}$	—	1.7:1	2.0:1	
<b>Relative attenuation (relative to <math>\alpha_{\min}</math>)</b>	$\alpha_{\text{rel}}$				
	10 ... 1700 MHz	32	45	—	dB
	1700 ... 1830 MHz	32	36	—	dB
	1830 ... 1845 MHz	20	33	—	dB
	1942 ... 1970 MHz	4	11	—	dB
	1970 ... 2400 MHz	35	43	—	dB
	2400 ... 3500 MHz	30	40	—	dB
	3500 ... 4000 MHz	22	35	—	dB
	4000 ... 6000 MHz	13	22	—	dB



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B5129

SAW filter

1900.0 MHz

Data sheet



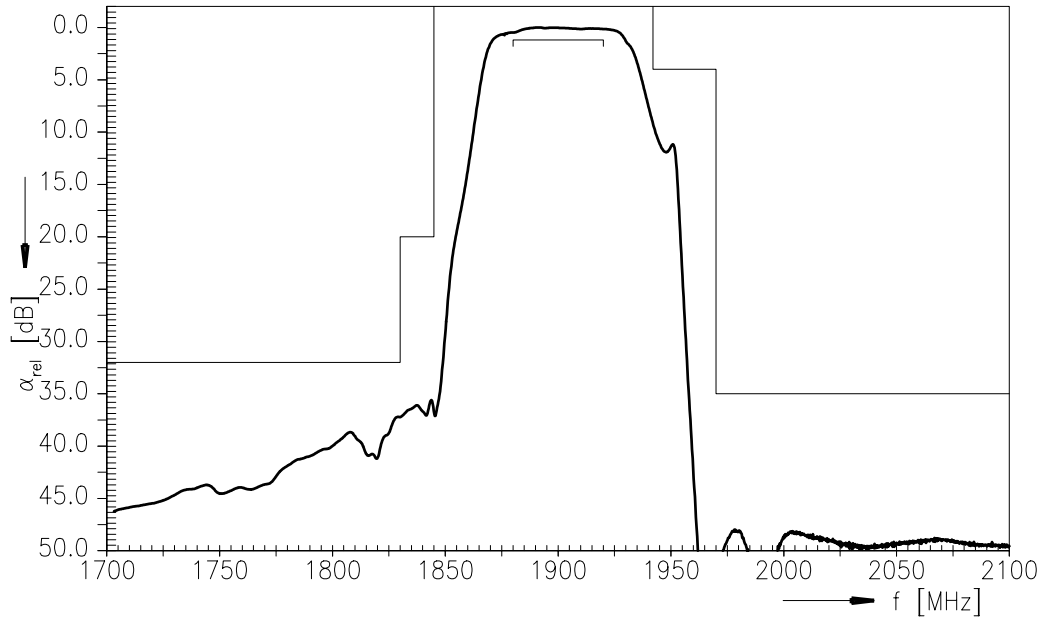
### Maximum ratings

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				
1805 ... 1850 MHz	P <sub>IN</sub>	11	dBm	CW
1880 ... 1920 MHz	P <sub>IN</sub>	10	dBm	CW

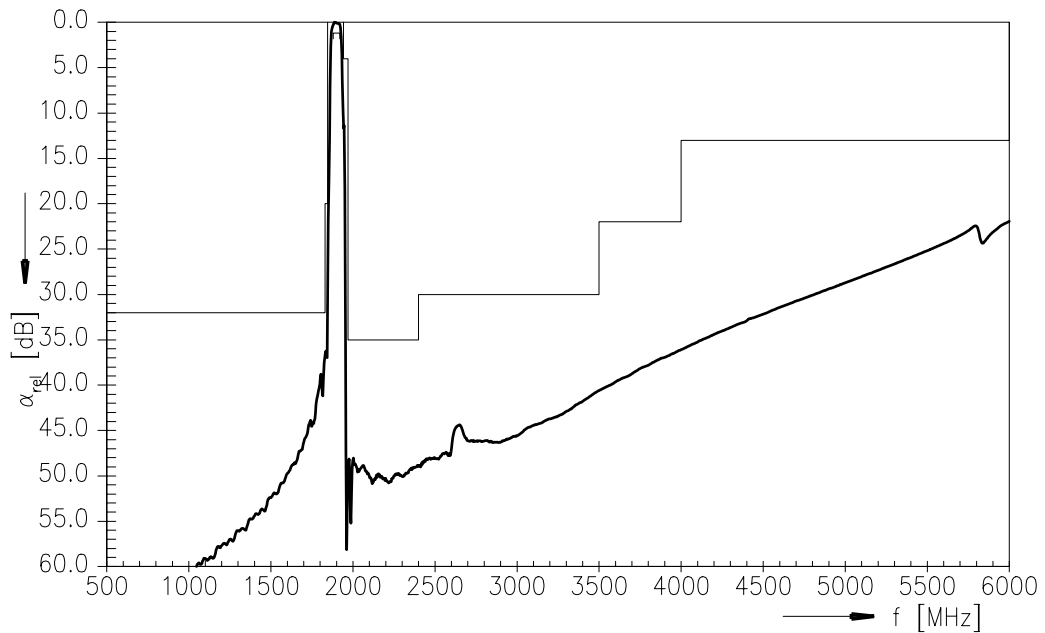
<sup>1)</sup> acc. to JEDEC22-A115A (machine model), 1 negative & 1 positive pulse.



Transfer function (normalized)



Transfer function (wideband, normalized)

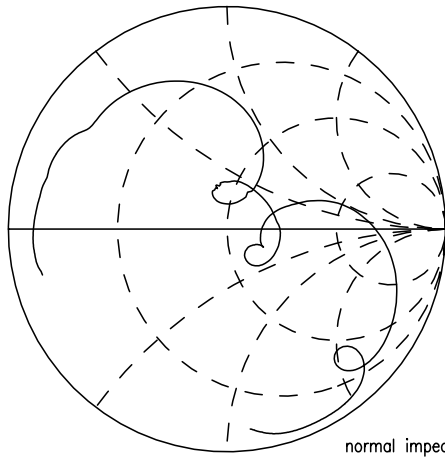


Data sheet

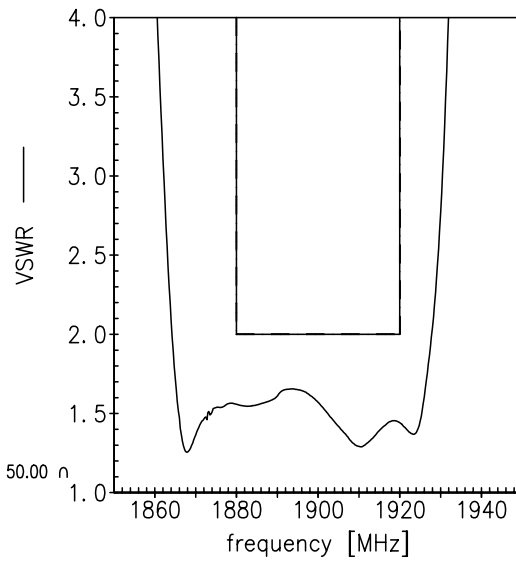


Smith charts

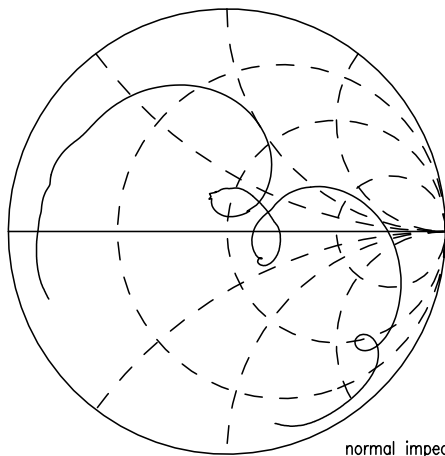
$S_{11}$  function



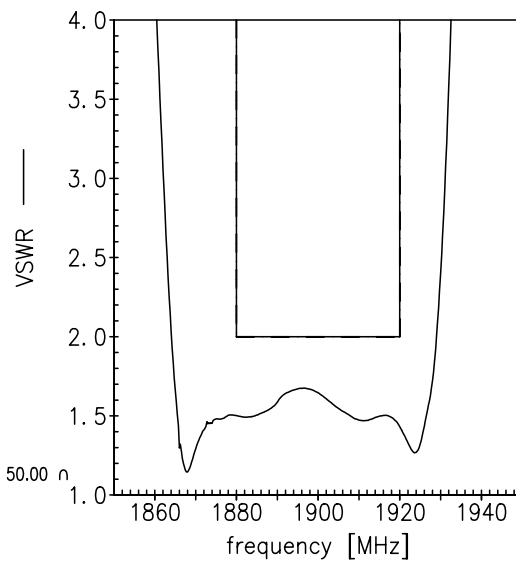
normal impedance: 50.00  $\Omega$



$S_{22}$  function



normal impedance: 50.00  $\Omega$





**SAW Components** **B5129**

**SAW filter** **1900.0 MHz**

Data sheet



### References

<b>Type</b>	B5129
<b>Ordering code</b>	B39192B5129U410
<b>Marking and package</b>	C61157-A7-A67
<b>Packaging</b>	F61074-V8168-Z000
<b>Date codes</b>	L_1126
<b>S-parameters</b>	B5129_NB.s2p B5129_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."

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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