



## SAW Components

SAW filter

WCDMA Band I

**Series/type:** B5127  
**Ordering code:** B39192B5127U410

**Date:** July 30, 2009  
**Version:** 2.0

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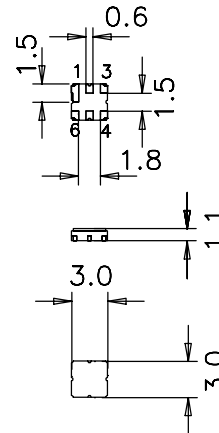
**Application**

- Low-loss base-station RF filter
- Low amplitude ripple
- No matching required for operation at 50Ω
- Usable passband 20 MHz



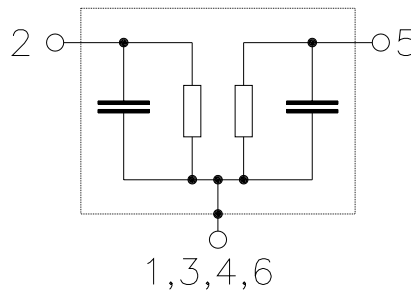
**Features**

- 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 To be grounded



Please read *cautions and warnings and important notes* at the end of this document.



Data sheet



Characteristics

Temperature range for specification:  $T = -33\text{ °C to }+85\text{ °C}$   
 Terminating source impedance:  $Z_S = 50\Omega$   
 Terminating load impedance:  $Z_L = 50\Omega$

		min.	typ. @ 25 °C	max.	
<b>Center frequency</b>	$f_C$	—	1950.0	—	MHz
<b>Maximum insertion attenuation</b>	$\alpha_{max}$				
	$f_C \pm 10.0\text{ MHz}$	—	2.5	3.0	dB
<b>Amplitude ripple (p-p)</b>	$\Delta\alpha$				
	$f_C \pm 10.0\text{ MHz}$	—	0.5	1.0	dB
<b>Input VSWR</b>					
	$f_C \pm 10.0\text{ MHz}$	—	1.7:1	2.0:1	
<b>Output VSWR</b>					
	$f_C \pm 10.0\text{ MHz}$	—	1.6:1	2.0:1	
<b>Group Delay Ripple (p-p)</b>	$\Delta\tau$				
	$f_C \pm 10.0\text{ MHz}$	—	5	15	ns
<b>Attenuation</b>	$\alpha_{abs}$				
	800.0 ... 960.0 MHz	37.0	47.0	—	dB
	1160.0 ... 1220.0 MHz	43.0	55.0	—	dB
	1540.0 ... 1600.0 MHz	36.0	44.0	—	dB
	1730.0 ... 1790.0 MHz	30.0	39.0	—	dB
	1884.5 MHz	30.0	33.0	—	dB
	1900.0 MHz	30.0	40.0	—	dB
	1919.6 MHz	6.5	9.5	—	dB
	2110.0 ... 2170.0 MHz	32.0	38.0	—	dB



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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				
1940 ... 1960 MHz	P <sub>IN</sub>	0	dBm	CW

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

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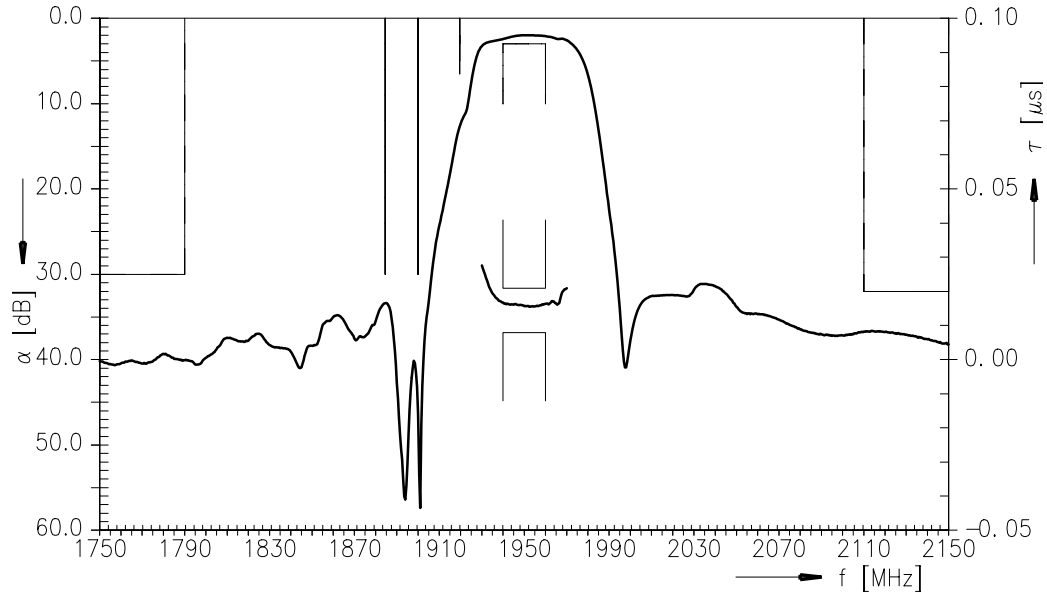
SAW filter

1950.0 MHz

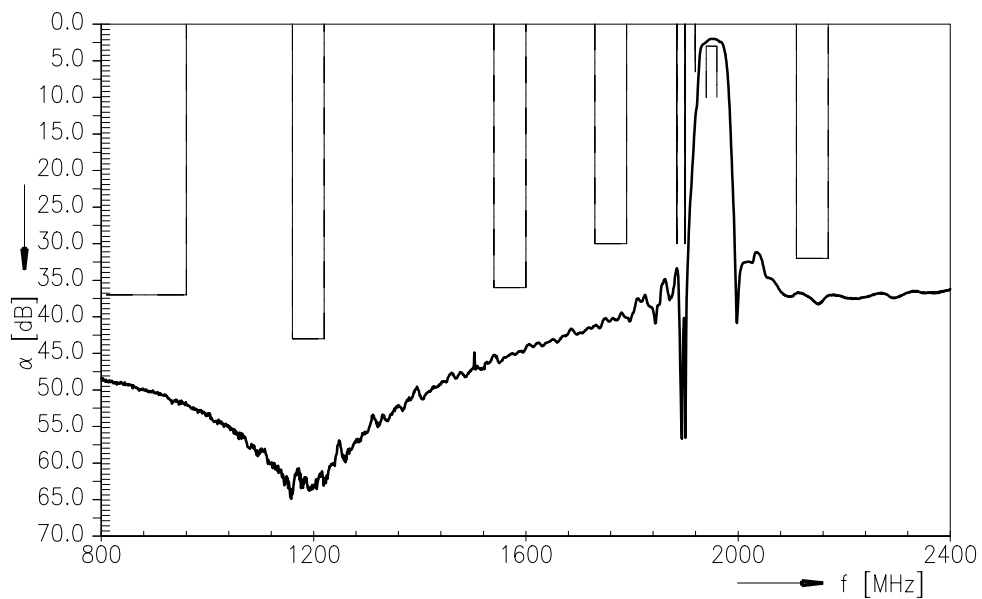
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SMD

### Transfer function



### Transfer function (wideband)



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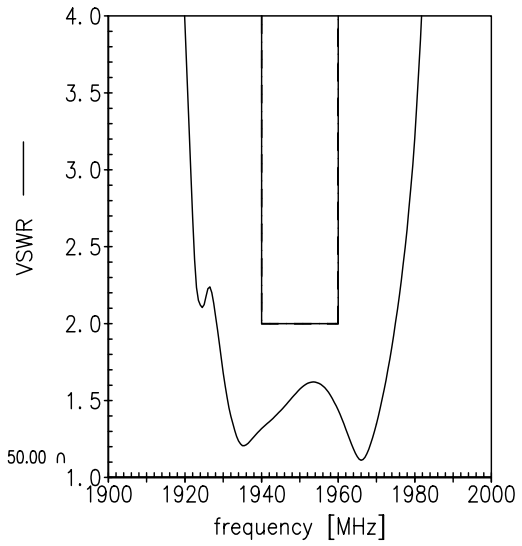
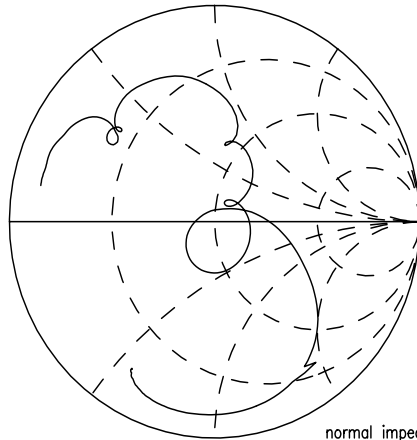


Data sheet

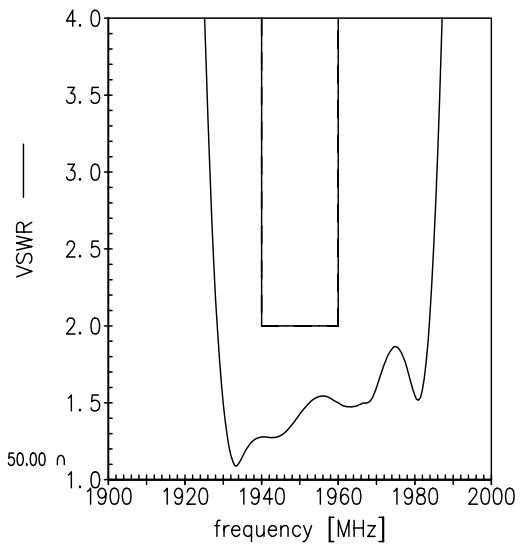
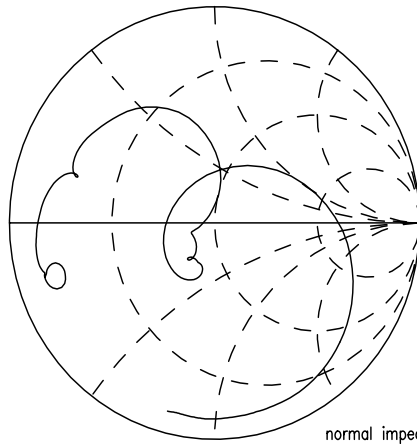


Smith charts

S<sub>11</sub> function



S<sub>22</sub> function



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<b>SAW Components</b>	<b>B5127</b>
<b>SAW filter</b>	<b>1950.0 MHz</b>
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## References

<b>Type</b>	B5127
<b>Ordering code</b>	B39192B5127U410
<b>Marking and package</b>	C61157-A7-A67
<b>Packaging</b>	F61074-V8168-Z000
<b>Date codes</b>	L_1126
<b>S-parameters</b>	B5127_NB.s2p B5127_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."

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