



## **SAW Components**

### **SAW Rx filter**

CDMA450

<b>Series/type:</b>	<b>B4960</b>
<b>Ordering code:</b>	<b>B39471B4960U510</b>
<b>Date:</b>	<b>July 09, 2007</b>
<b>Version:</b>	<b>2.1</b>



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SAW Rx filter

465.00 MHz

Data Sheet

**SMD**

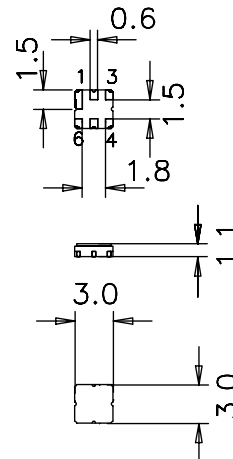
### Application

- Low-loss IF filter for CDMA450 systems, receive path (Rx)
- Unbalanced to balanced operation
- Low amplitude ripple
- Usable passband 5 MHz



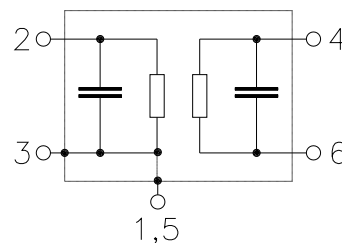
### Features

- Package size 3.0 x 3.0 x 1.1 mm<sup>3</sup>
- Package code DCC6D
- 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
- 4,6 Output balanced
- 1,3,5 To be grounded



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



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**Characteristics**

Temperature range for specification: T = -30 °C to +85 °C  
 Terminating source impedance: Z<sub>S</sub> = 50Ω  
 Terminating load impedance: Z<sub>L</sub> = 100Ω

		min.	typ. @ 25 °C	max.	
<b>Center frequency</b>	f <sub>C</sub>	—	465.00	—	MHz
<b>Maximum insertion attenuation</b>	α <sub>max</sub>				
462.5 ... 467.5 MHz		—	2.3	2.7 <sup>1)</sup>	dB
<b>Amplitude ripple (p-p)</b>	Δα				
462.5 ... 467.5 MHz		—	0.7	1.0	dB
<b>Input VSWR</b>					
462.5 ... 467.5 MHz		—	1.5	1.9	
<b>Output VSWR</b>					
462.5 ... 467.5 MHz		—	1.5	1.9	
<b>Output amplitude balance ( S<sub>31</sub>/S<sub>21</sub> )</b>					
462.5 ... 467.5 MHz		-0.5	-0.2/+0.3	0.5	dB
<b>Output phase balance (φ(S<sub>31</sub>) - φ(S<sub>21</sub>)+180°)</b>					
462.5 ... 467.5 MHz		-3	-2/+4	5	°
<b>Attenuation</b>	α				
0.5 ... 440.0 MHz		55	62	—	dB
440.0 ... 452.5 MHz		40	48	—	dB
452.5 ... 457.5 MHz		30	33	—	dB
485.0 ... 495.0 MHz		23	33	—	dB
495.0 ... 530.0 MHz		42	50	—	dB
530.0 ... 1200.0 MHz		48	52	—	dB
1200.0 ... 1500.0 MHz		40	50	—	dB
1500.0 ... 3000.0 MHz		30	32	—	dB

1) 2.5dB max for -10°C to +85°C



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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>	5	V	
ESD voltage	V <sub>ESD</sub>	50 <sup>1)</sup>	V	machine model, 10 pulses
Input power at CDMA450	P <sub>IN</sub>	17	dBm	CW

<sup>1)</sup> acc. to JESD22-A115A (machine model), 10 negative & 10 positive pulses.



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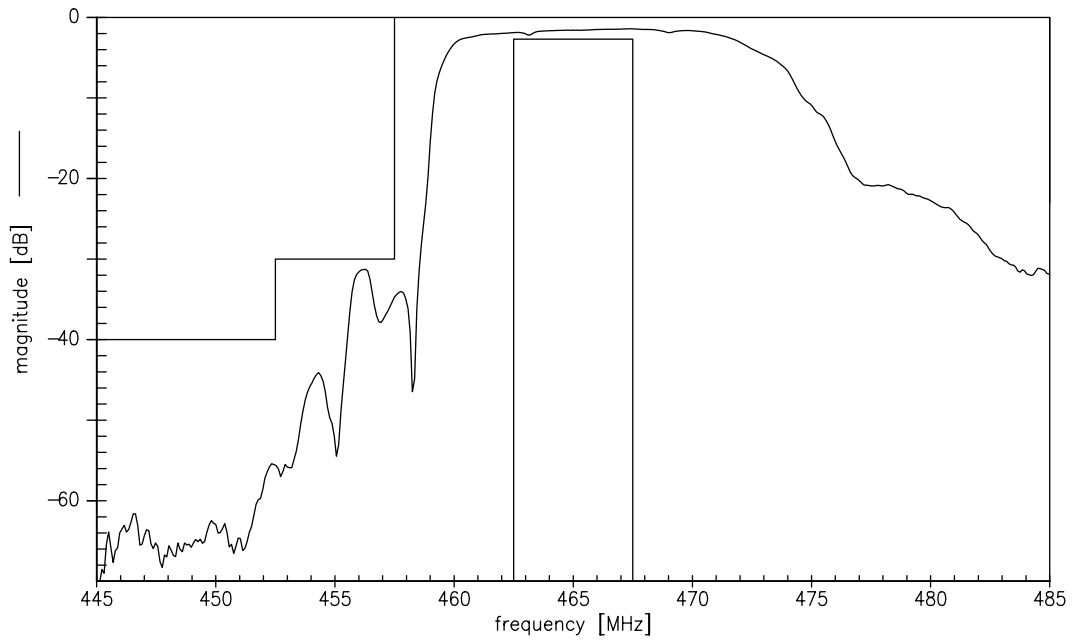
SAW Rx filter

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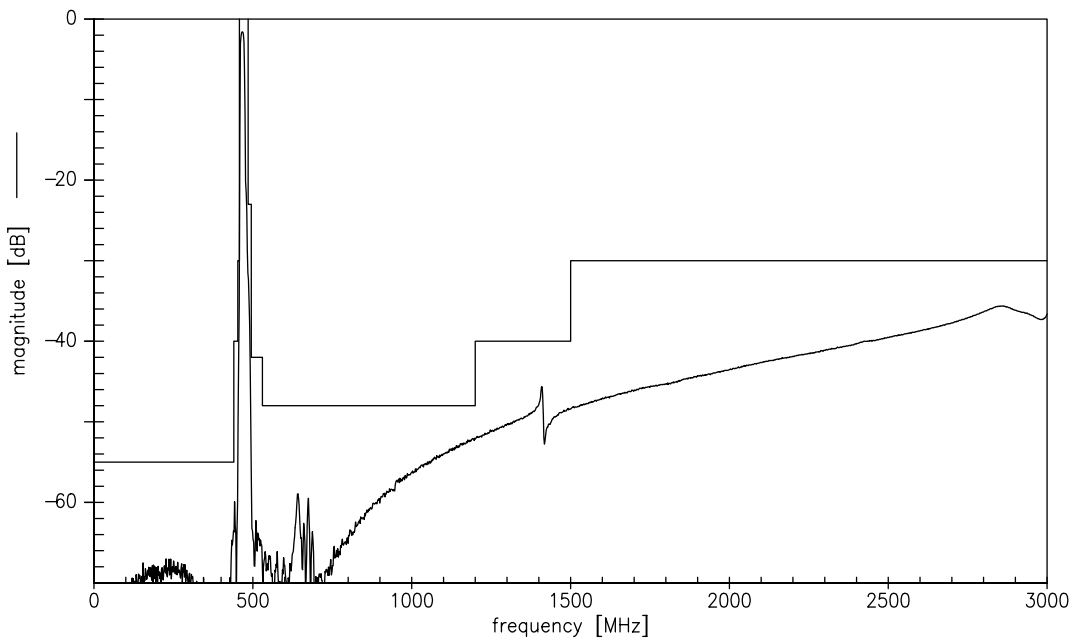
Data Sheet



Transfer function



Transfer function (wideband)



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



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SAW Rx filter

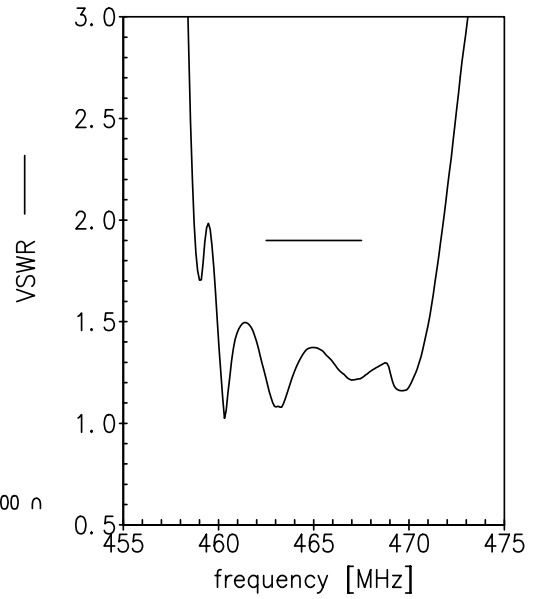
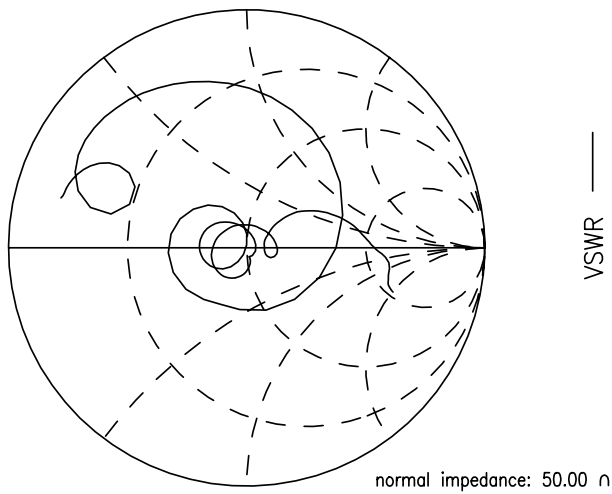
465.00 MHz

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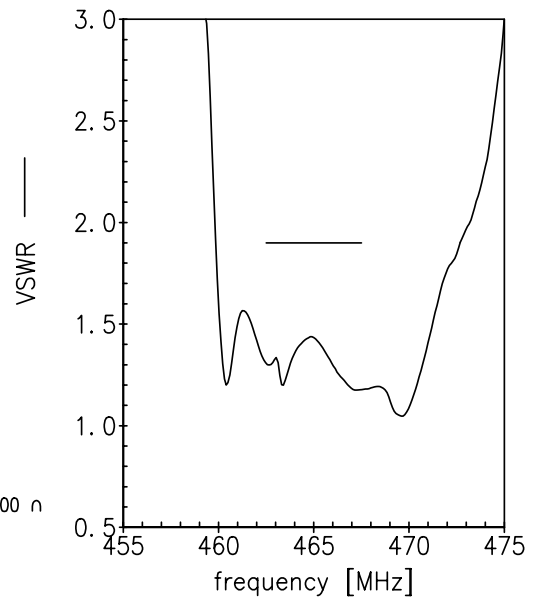
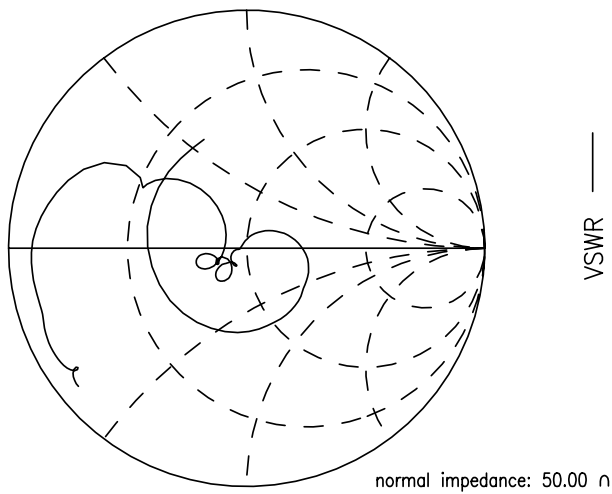


Smith charts

$S_{11}$  function



$S_{22}$  function



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## References

<b>Type</b>	B4960
<b>Ordering code</b>	B39471B4960U510
<b>Marking and package</b>	C61157-A7-A68
<b>Packaging</b>	F61074-V8168-Z000
<b>Date codes</b>	L_1126
<b>S-parameters</b>	B4960_NB.s3p B4960_WB.s3p
<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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