



## **SAW Components**

### **SAW Tx filter**

WiMAX

<b>Series/type:</b>	<b>B5069</b>
<b>Ordering code:</b>	<b>B39441-B5069-U310</b>
<b>Date:</b>	<b>July 04, 2007</b>
<b>Version:</b>	<b>2.0</b>



SAW Components

B5069

SAW Tx filter

436.80 MHz

Data Sheet



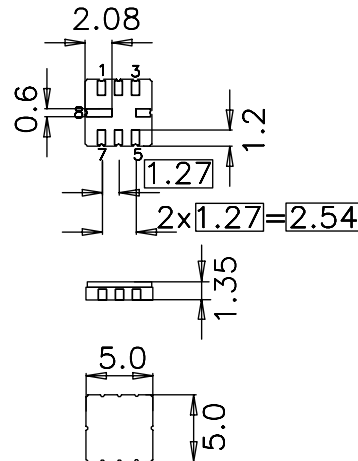
### Application

- Low-loss IF filter for base station WiMAX systems, transmit path (Tx)
- Unbalanced to unbalanced operation
- Low amplitude ripple
- No external matching required
- Usable passband 11 MHz



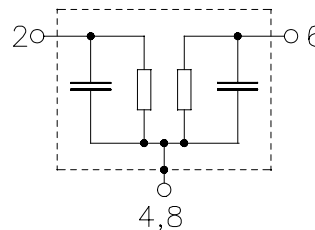
### Features

- Package size 5.0 x 5.0 x 1.35 mm<sup>3</sup>
- Package code QCC8C
- RoHS compatible
- Approximate weight 0.100 g
- Package for **Surface Mount Technology (SMT)**
- Ni, gold-plated terminals
- **Electrostatic Sensitive Device (ESD)**



### Pin configuration

- 2 Input
- 6 Output
- 1,3,5,7 To be grounded
- 4,8 Case ground



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



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**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>	$f_C$	—	436.80	—	MHz
<b>Maximum insertion attenuation</b>	$\alpha_{max}$	—	1.4	2.5	dB
431.30 ... 442.30 MHz					
<b>Amplitude ripple (p-p)</b>	$\Delta\alpha$	—	0.4	0.8	dB
431.30 ... 442.30 MHz					
<b>Input VSWR</b>		—	1.45	1.8	
431.30 ... 442.30 MHz					
<b>Output VSWR</b>		—	1.45	1.8	
431.30 ... 442.30 MHz					
<b>Group Delay</b>	$\tau$	—	90	250	ns
431.30 ... 442.30 MHz					
<b>Attenuation</b>	$\alpha$				dB
100.00 ... 336.80 MHz		45	56	—	
336.80 ... 386.80 MHz		45	50	—	
386.80 ... 401.80 MHz		32	48	—	
401.80 ... 411.80 MHz		22	44	—	
411.80 ... 421.80 MHz		9	29	—	
451.80 ... 461.80 MHz		9	27	—	
461.80 ... 471.80 MHz		22	31	—	
471.80 ... 486.80 MHz		32	50	—	
486.80 ... 536.80 MHz		45	50	—	
536.80 ... 600.00 MHz		45	47	—	
600.00 ... 900.00 MHz		35	40	—	
900.00 ... 1200.00 MHz		30	35	—	
1200.00 ... 1500.00 MHz		25	33	—	



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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>	100 <sup>1)</sup>	V	machine model, 10 pulses
Input power at 431.30 ... 442.30MHz	P <sub>IN</sub>	15	dBm	40% Duty Cycle
Tx bands				

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



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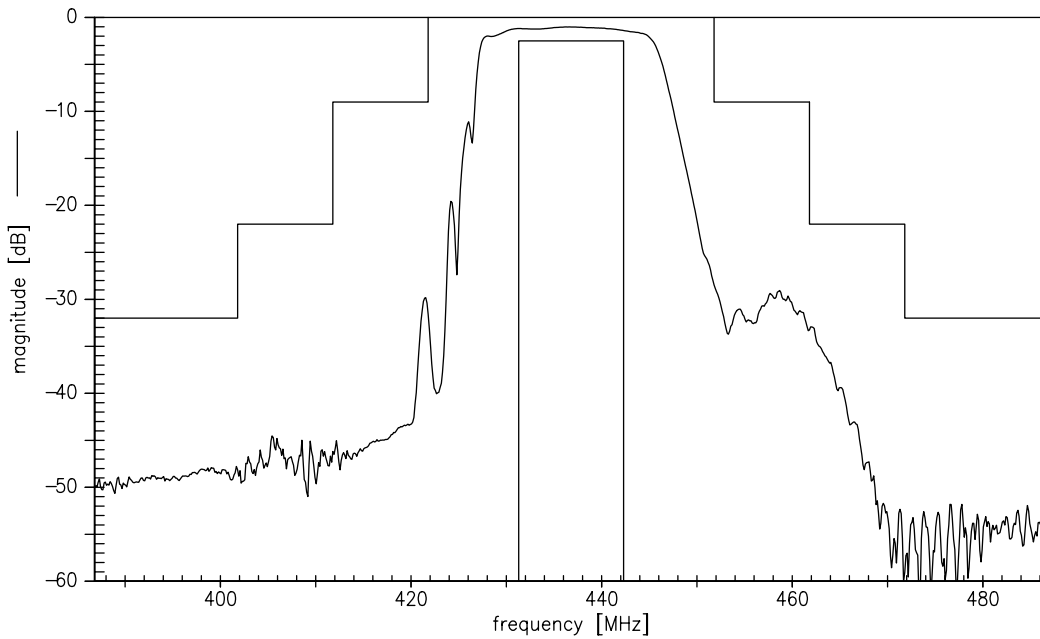
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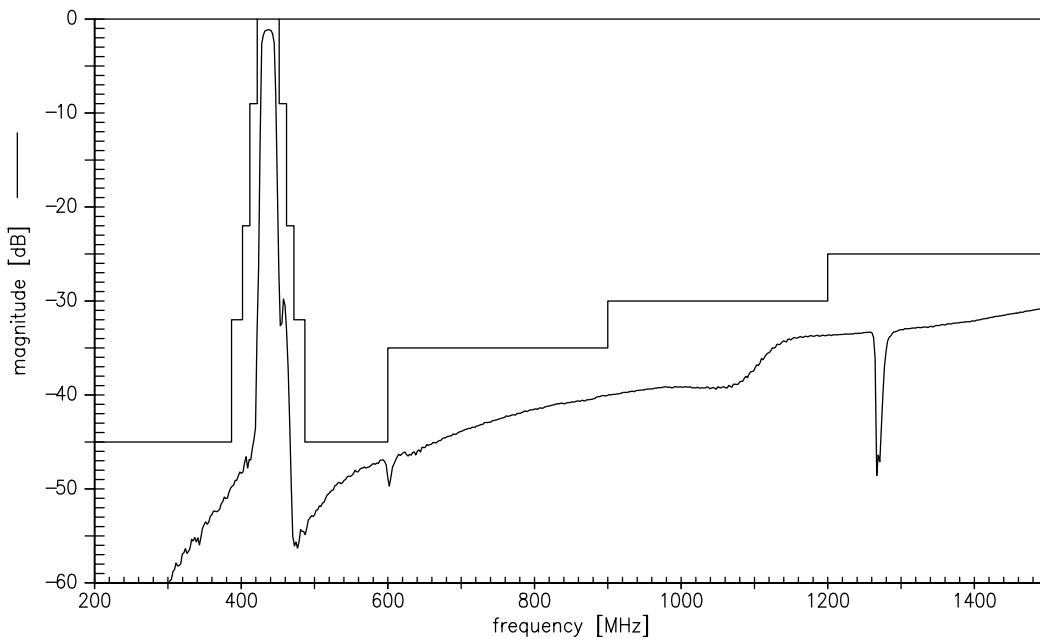
Data Sheet



### Transfer function



### Transfer function (wideband)



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

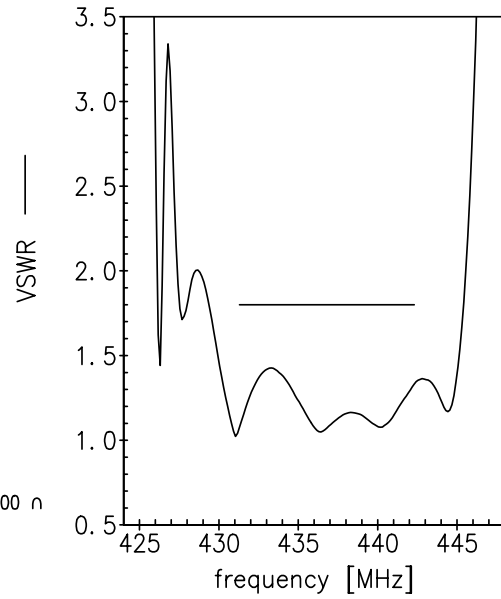
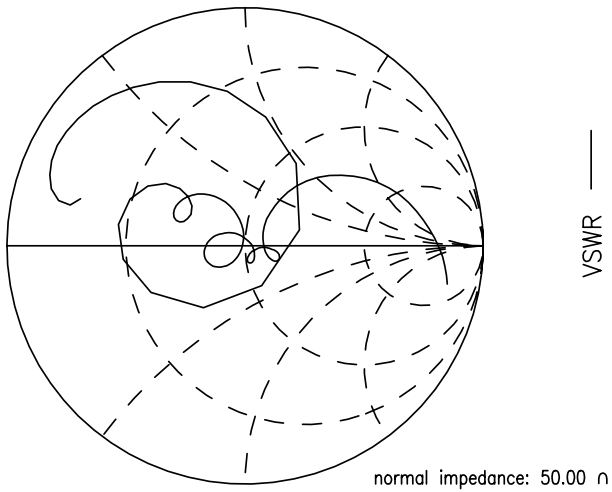


Data Sheet

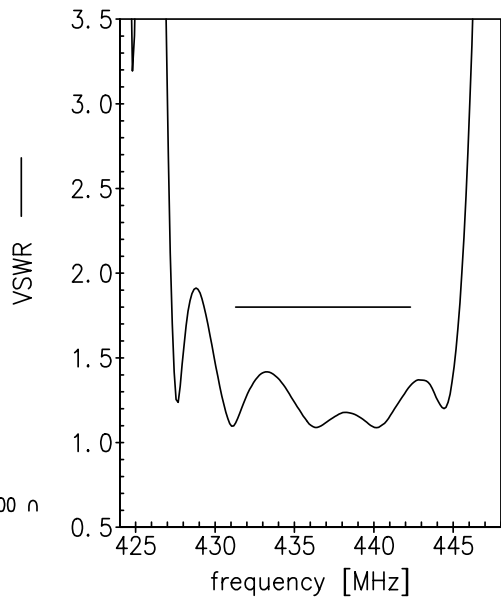
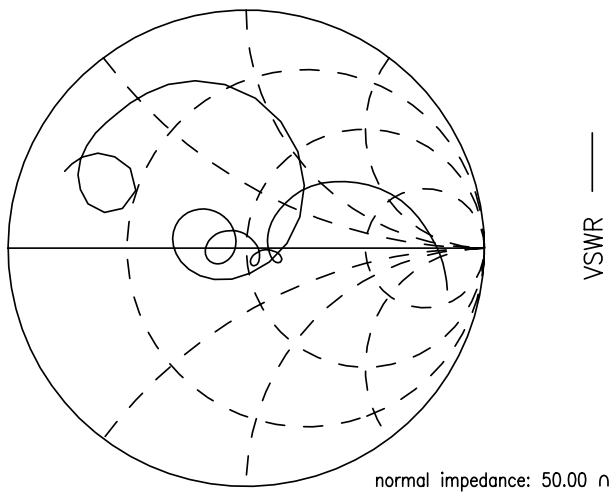


Smith charts

S<sub>11</sub> function



S<sub>22</sub> function





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## References

<b>Type</b>	B5069
<b>Ordering code</b>	B39441-B5069-U310
<b>Marking and package</b>	C61157-A7-A56
<b>Packaging</b>	F61074-V8169-Z000
<b>Date codes</b>	L_1126
<b>S-parameters</b>	B5069_NB.s2p B5069_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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