



## **SAW Components**

### **SAW filter**

Short range devices

<b>Series/type:</b>	<b>B4059</b>
<b>Ordering code:</b>	<b>B39162B4059U810</b>
<b>Date:</b>	<b>May 18, 2007</b>
<b>Version:</b>	<b>2.1</b>



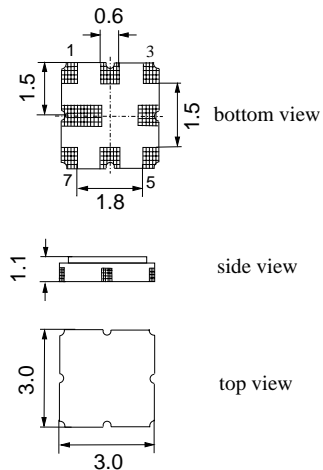
**Application**

- Low-loss RF filter for GPS application
- Unbalanced to unbalanced operation
- High stop-band rejection
- No matching network required for operation at 50 Ω



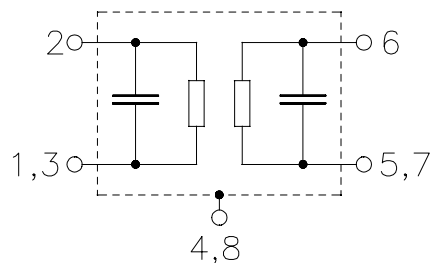
**Features**

- Package size 3.0 x 3.0 x 1.1 mm<sup>3</sup>
- Package code QCC8D
- RoHS compatible
- Approximate weight 0.037 g
- Package for **Surface Mount Technology (SMT)**
- Ni, gold-plated terminals
- Lead free soldering compatible with J - STD20C
- **Electrostatic Sensitive Device (ESD)**



**Pin configuration**

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





SAW Components

B4059

SAW filter

1575.42 MHz

Data sheet



**Characteristics**

Temperature range for specification:  $T_A = -40\text{ °C to }+85\text{ °C}$   
 Terminating source impedance:  $Z_S = 50\ \Omega$   
 Terminating load impedance:  $Z_L = 50\ \Omega$

		min.	typ. @ 25 °C	max.	
<b>Center frequency</b>	$f_C$	—	1575.42	—	MHz
<b>Maximum insertion attenuation</b>	$\alpha_{\max}$	—	2.8	3.5	dB
1574.22 ... 1576.62 MHz					
<b>Amplitude ripple (p-p)</b>	$\Delta\alpha$	—	0.9	1.5	
1574.22 ... 1576.62 MHz					
<b>Attenuation</b>	$\alpha$				
0.00 ... 1425.00 MHz		50.0	55.0	—	dB
1425.00 ... 1525.00 MHz		33.0	36.0	—	dB
1525.00 ... 1535.42 MHz		45.0	48.0	—	dB
1615.00 ... 1625.00 MHz		30.0	37.0	—	dB
1625.00 ... 2200.00 MHz		40.0	45.0	—	dB
2200.00 ... 4000.00 MHz		30.0	38.0	—	dB



<b>SAW Components</b>	<b>B4059</b>
<b>SAW filter</b>	<b>1575.42 MHz</b>

Data sheet **SMD**

**Characteristics**

Temperature range for specification:  $T_A = -40\text{ °C to }+105\text{ °C}$   
 Terminating source impedance:  $Z_S = 50\ \Omega$   
 Terminating load impedance:  $Z_L = 50\ \Omega$

		min.	typ. @ 25 °C	max.	
<b>Center frequency</b>	$f_C$	—	1575.42	—	MHz
<b>Maximum insertion attenuation</b>	$\alpha_{\max}$	—	2.8	3.7	dB
1574.22 ... 1576.62 MHz					
<b>Amplitude ripple (p-p)</b>	$\Delta\alpha$	—	0.9	1.5	
1574.22 ... 1576.62 MHz					
<b>Attenuation</b>	$\alpha$				
0.00 ... 1425.00 MHz		50.0	55.0	—	dB
1425.00 ... 1525.00 MHz		33.0	36.0	—	dB
1525.00 ... 1535.42 MHz		45.0	48.0	—	dB
1615.00 ... 1625.00 MHz		30.0	37.0	—	dB
1625.00 ... 2200.00 MHz		40.0	45.0	—	dB
2200.00 ... 4000.00 MHz		30.0	38.0	—	dB

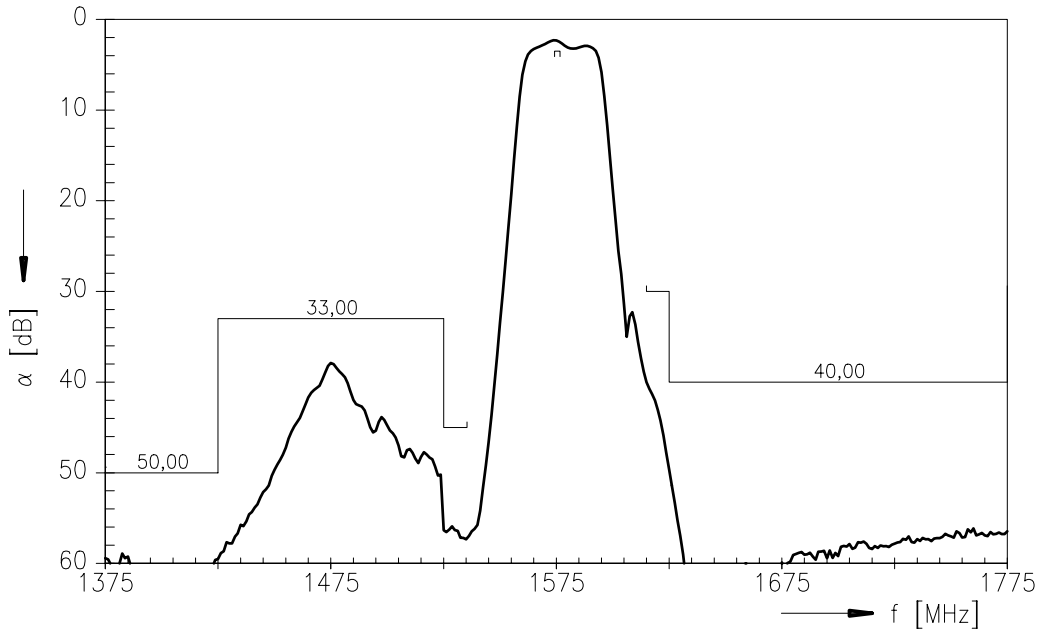
**Maximum ratings**

Operable temperature range	$T_A$	-45/+125	°C	
Storage temperature range	$T_{\text{stg}}$	-45/+125	°C	
DC voltage	$V_{\text{DC}}$	0	V	
Source power	$P_S$	10	dBm	source impedance 50 $\Omega$

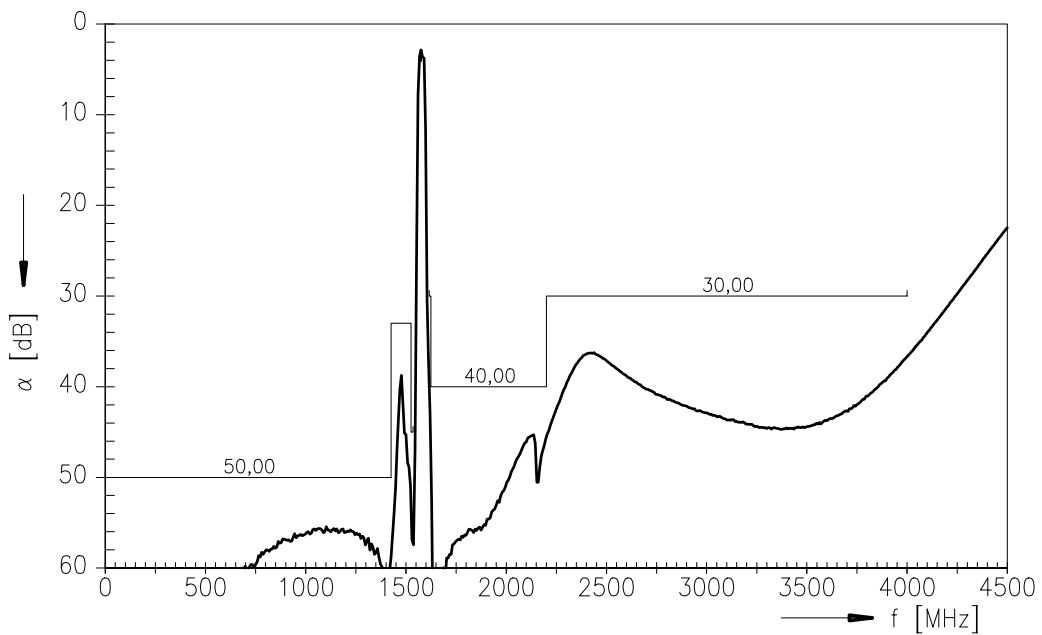
Please read *cautions and warnings and important notes* at the end of this document.



Transfer function (passband)



Transfer function





**SAW Components**

**B4059**

**SAW filter**

**1575.42 MHz**

Data sheet



## References

<b>Type</b>	B4059
<b>Ordering code</b>	B39162B4059U810
<b>Marking and package</b>	C61157-A7-A72
<b>Packaging</b>	F61074-V8168-Z000
<b>Date codes</b>	L_1126
<b>S-parameters</b>	B4059_NB.s2p B4059_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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Please read *cautions and warnings and important notes* at the end of this document.



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