



*Total Solution Provider in Saw Device*

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# SA1650BM1

Wireless, RF SAW Filter  
Revision 0: June 2011



- Electrical Characteristics
  - Package Dimensions
  - Testing Environment
  - Frequency Characteristics
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## □ Electrical Characteristics

### Maximum Ratings

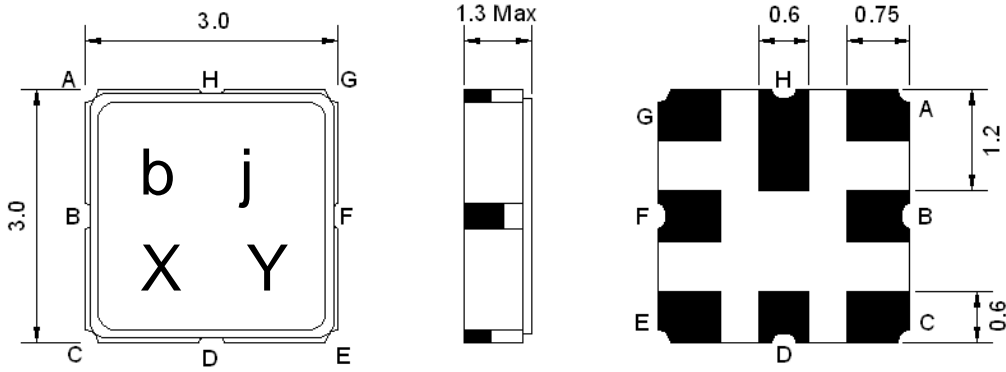
Parameters Description	Unit	Minimum	Typical	Maximum
Operating Temperature Range	°C	0	-	+55
Storage Temperature Range	°C	-40	-	+85
Maximum DC Common Mode Voltage	V	-	-	3.3
Maximum Differential DC Voltage	mV	-	-	20
Source Impedance (balanced) <sup>(1)</sup>	Ω	-	100	-
Load Impedance (balanced) <sup>(1)</sup>	Ω	-	100	-
Package type & size	M1			
Length x Width	-	-	3.0 x 3.0	-
Height	mm	-	-	1.3

### Electrical Specification

Parameters Description	Unit	Minimum	Typical	Maximum
Center Frequency (Fo)	MHz	-	1650.0	-
Insertion Loss within 1640.0 ~ 1660.0 MHz	dB	-	2.7	4.0
Amplitude Ripple within 1640.0 ~ 1660.0 MHz	dB <sub>p-p</sub>	-	0.8	1.5
Group Delay Variation within 1640.0 ~ 1660.0 MHz	ns <sub>p-p</sub>	-	5	25
-40dB Bandwidth	MHz	-	74	85
<b>Attenuation:</b>				
D.C. ~ 1500.0 MHz	dB	40	48	-
1500.0 ~ 1610.0 MHz	dB	30	36	-
1610.0 ~ 1629.0 MHz	dB	1.5	3.5	-
1671.0 ~ 1675.0 MHz	dB	1.0	4.0	-
1690.0 ~ 1800.0 MHz	dB	35	47	-
1800.0 ~ 6000.0 MHz	dB	15	25	-
VSWR within 1640.0 ~ 1660.0 MHz	dB	-	1.6	2.0

**Notes :** (1) No Matching Network

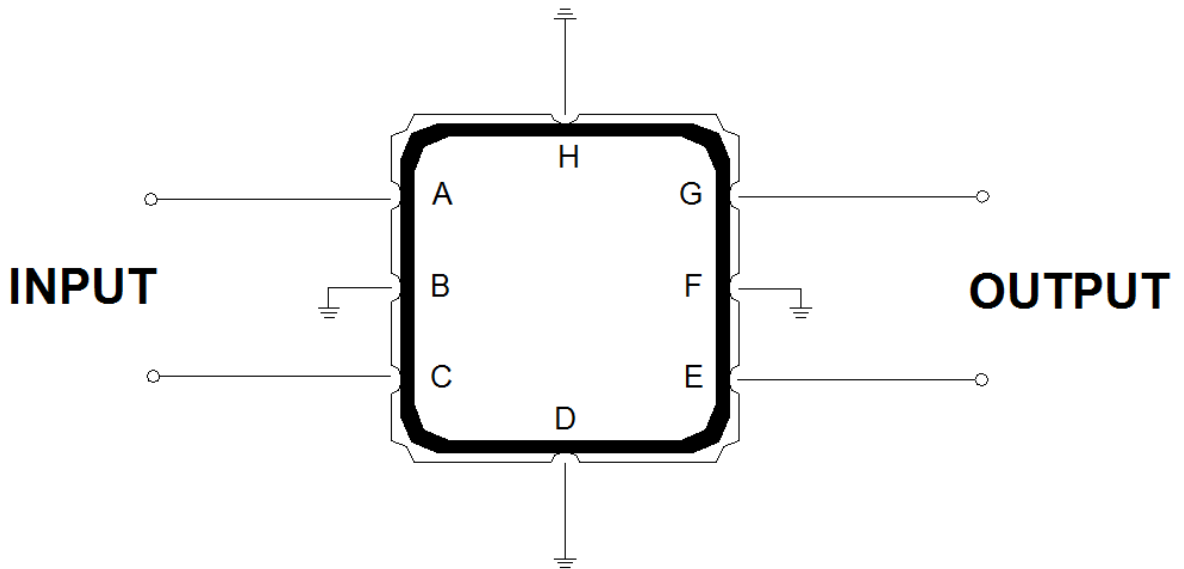
**Package Dimensions**



Marking Descriptions	
b	Wireless Application
j	Series Number
X	Date Code(Year)
Y	Date Code(Month)

Pin Description	
B,D,F,H	Ground
A,C	Balanced Input
E,G	Balanced Output

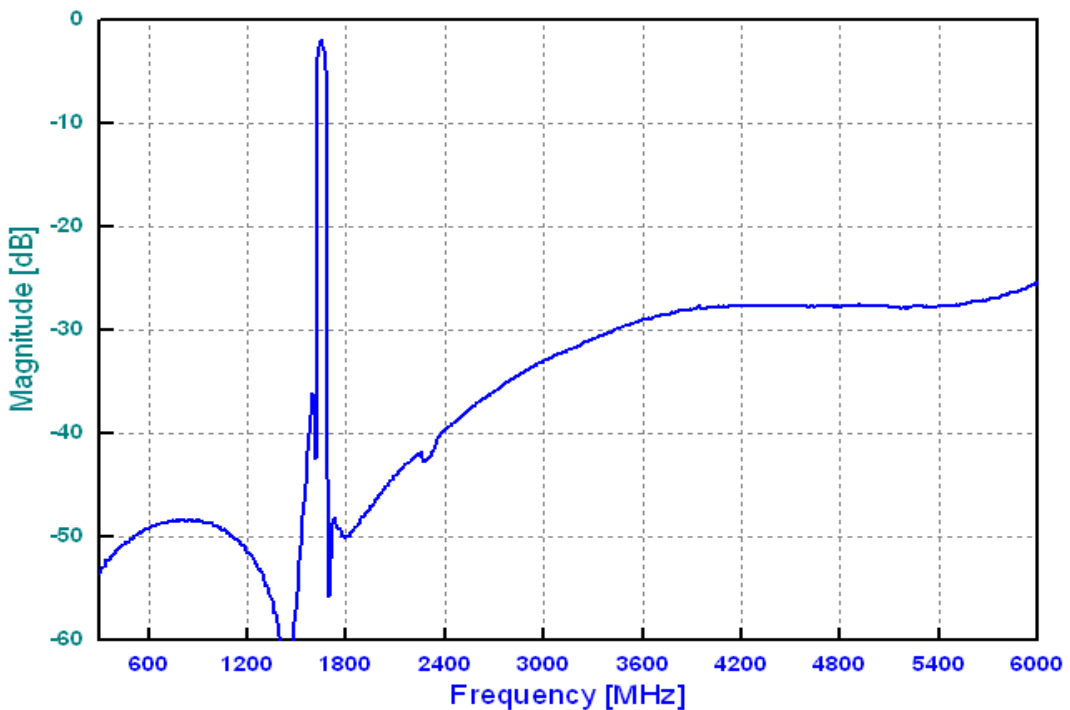
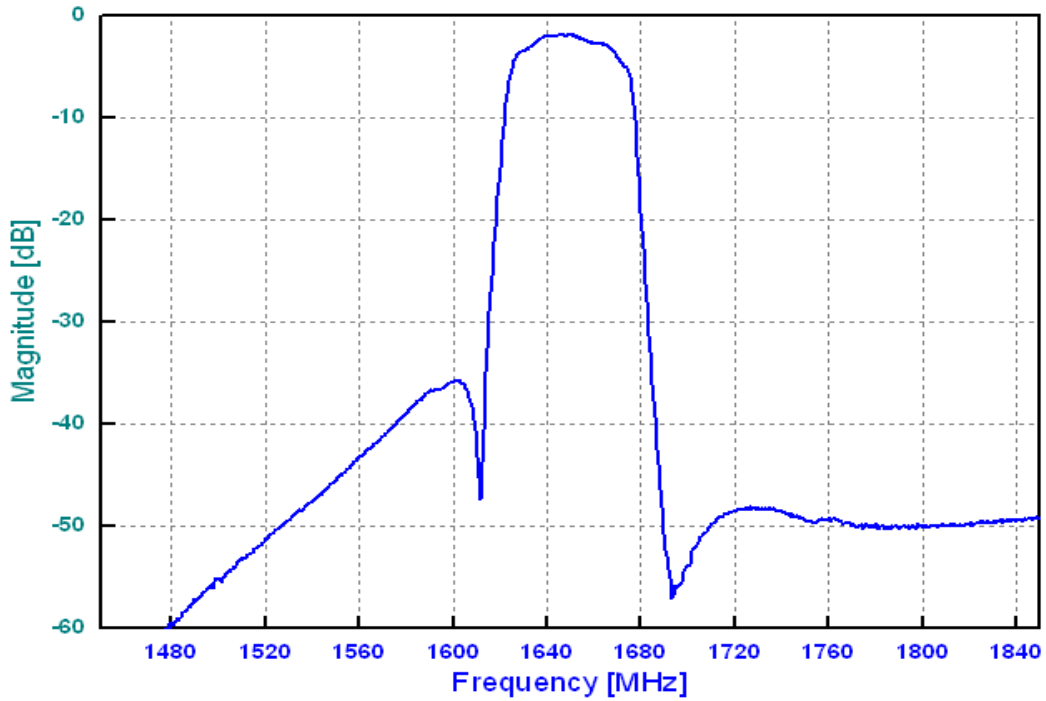
**Testing Environment**



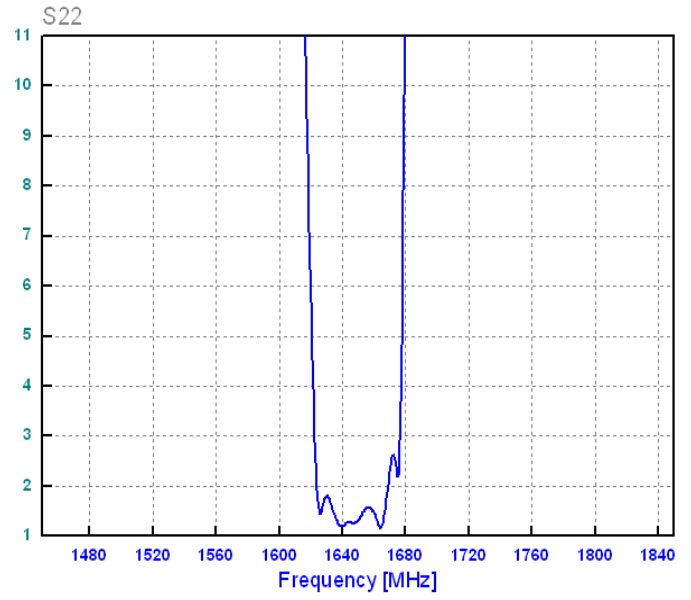
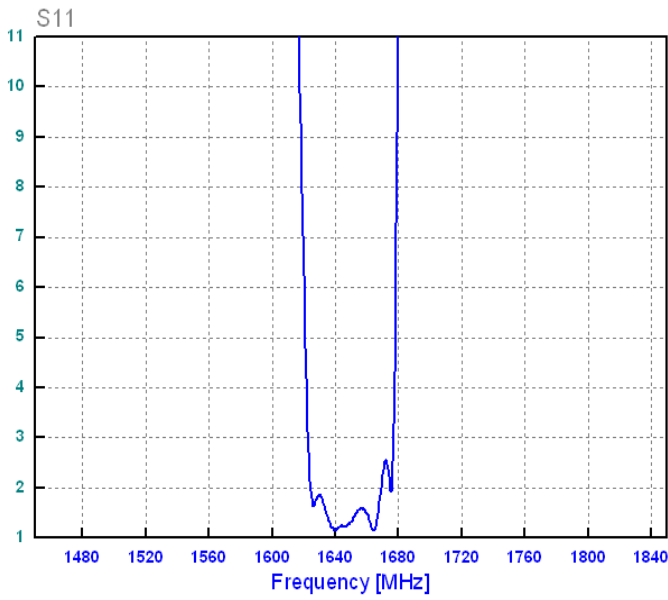
Source & Load Impedance: 100 Ω

## □ Frequency Characteristics

Frequency Response



**VSWR**



**Smith Chart**

