



*Total Solution Provider in Saw Device*

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# SA05509AD1

55.0 MHz IF SAW Filter  
9.92 MHz Bandwidth  
Revision 0: 09. MAY. 2008



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

### Maximum Ratings

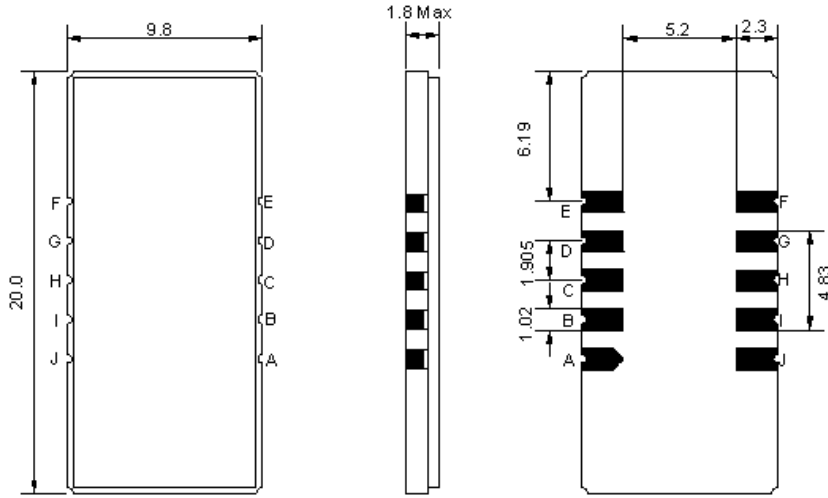
Parameters Description	Unit	Minimum	Typical	Maximum
Operation Temperature Range	°C	0	-	60
Storage Temperature Range	°C	-30	-	80
Maximum DC Voltage	V	-	-	10
Maximum Input Power	dBm	-	-	10
Source Impedance (single ended) <sup>(1)</sup>	Ω	-	50	-
Load Impedance (single ended) <sup>(1)</sup>	Ω	-	50	-
Package type & size	D1			
Length x Width	mm <sup>2</sup>	-	20.0 x 9.8	-
Height	mm	-	-	1.8

### Electrical Specification

Parameters Description	Unit	Minimum	Typical	Maximum
Center Frequency (Fo)	MHz	-	55.0	-
Insertion Loss at Fo	dB	-	24.8	26.5
Group Delay Variation (Fo±4.42MHz)	ns	-	36	80
Absolute Delay	us	-	2.35	-
Passband Ripple (Fo±4.42MHz)	dB	-	0.48	1.00
Bandwidth at -1dB	MHz	-	9.92	-
Bandwidth at -3dB	MHz	-	10.30	-
Bandwidth at -40dB	MHz	-	11.85	-
Ultimate Rejection	dB	-	50	-
Temperature coefficient	ppm/°C	-	-72	-

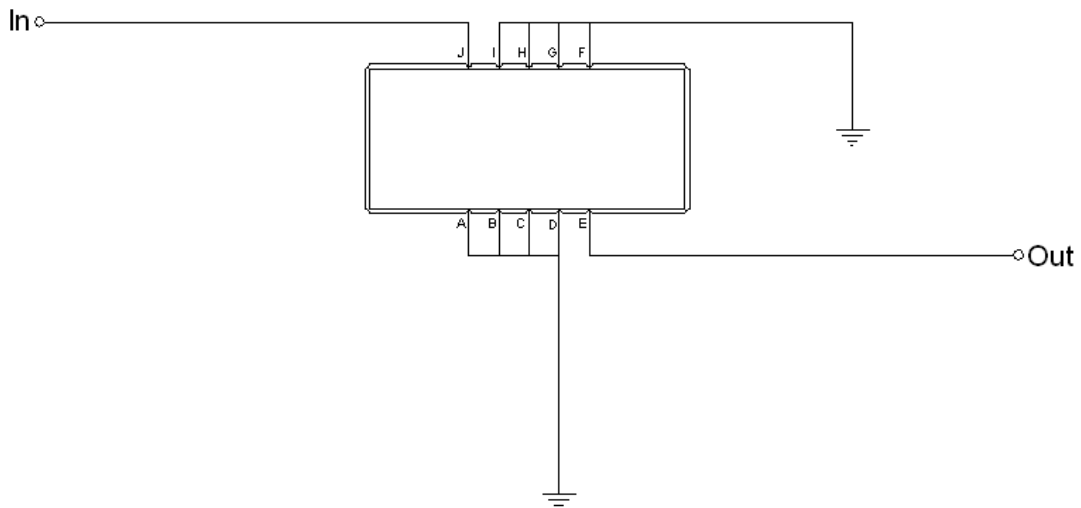
**Notes :** (1) With Matching Network (Ref. Testing Environment Circuit as shown below).  
Those impedances could be modified with different impedance values and/or structures, if necessary.

**□ Package Dimensions**



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

**□ Testing Environment**

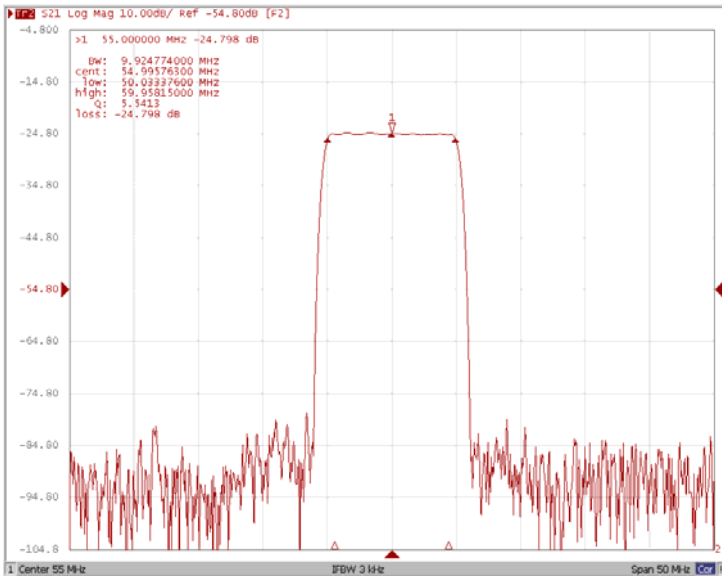


Test Fixture & Values	
Source/Load Impedance	50 Ω

### Frequency Characteristics

#### Frequency Response

**Bandwidth at -1.0 dB**



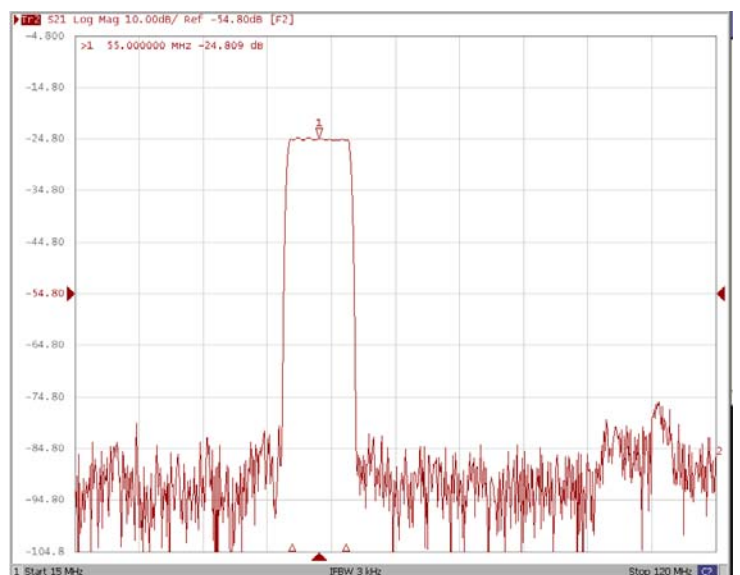
**Bandwidth at -3.0 dB**



**Bandwidth at -40.0 dB**



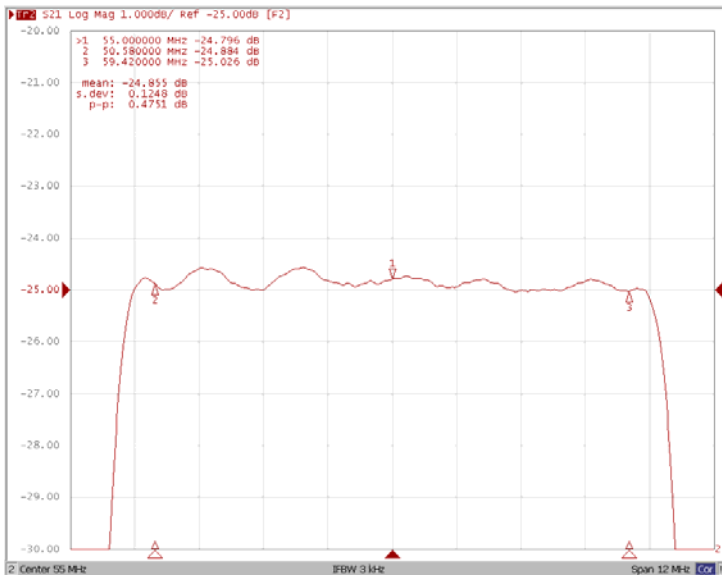
**Wide Band**



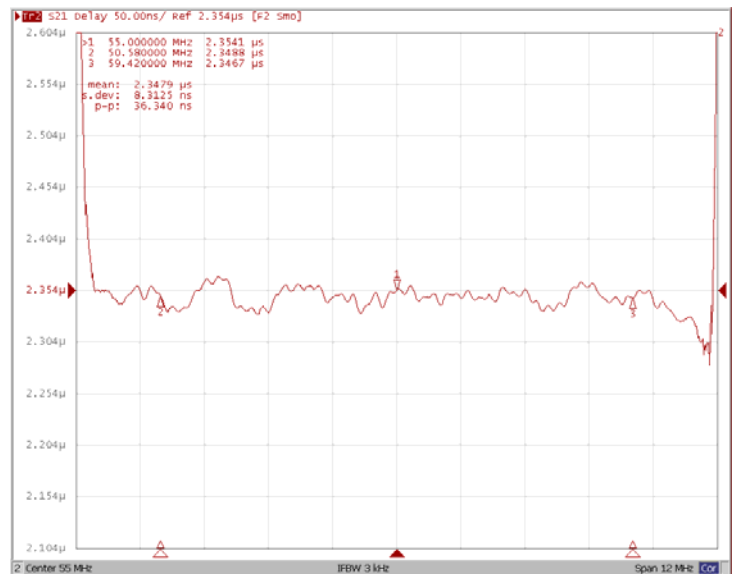
### □ Frequency Characteristics

#### Frequency Response

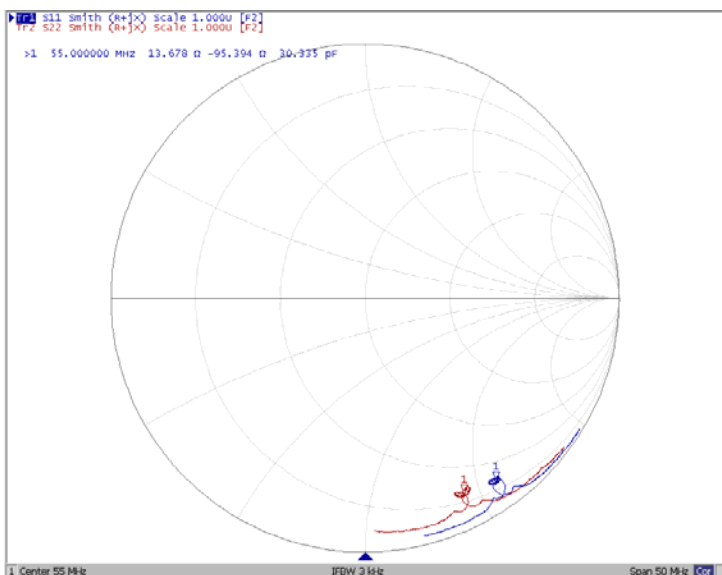
Ripple Variation  $Fo \pm 4.42\text{MHz}$



Group Delay Variation  $Fo \pm 4.42\text{MHz}$



Smith Chart



VSWR

