

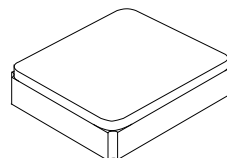
- Low-loss SAW Filter
- 2.5 x 2.0 x 1.0 mm Surface-Mount Case
- No Matching Circuit Required

#### Absolute Maximum Ratings

Rating	Value	Units
Maximum Input Power	+5	dBm
Maximum DC Voltage on any Non-ground Terminal	5	VDC
Storage Temperature Range in Tape and Reel	-40 to +85	°C
Maximum Soldering Profile, 5 cycles maximum	265 °C for 10 s	

**SF2236G**

**1642.5 MHz  
SAW Filter**



**SM2520-4**

#### Electrical Characteristics

Characteristic	Sym	Notes	Min	Typ	Max	Units
Nominal Operating Frequency	$f_C$			1642.5		MHz
Passband Insertion Loss, 1625 to 1660 MHz	IL			2.1	3.5	dB
Amplitude Ripple, 1625 to 1660 MHz				0.9	2.0	dB <sub>p-p</sub>
Attenuation Referenced to 0 dB:						dB
DC to 1500 MHz			21	28		
1525 to 1559 MHz			30	34		
1700 to 2050 MHz			30	33		
2050 to 3500 MHz			25	33		
VSWR, 1625 to 1660 MHz				1.5:1	2.3:1	
Source impedance	$Z_S$			50		$\Omega$
Load impedance	$Z_L$			50		$\Omega$
Operating Temperature Range	$T_A$		-20		+75	°C

Single-ended Input / Output Impedance Match	No matching network required for operation at 50 ohms
Case Style	SM2520-4
Lid Symbolization (3K = Filter ID, Y = year, W = week)	3K, YW

#### Electrical Connections

Connection	Terminals
Input	1
Output	3
Ground	All others

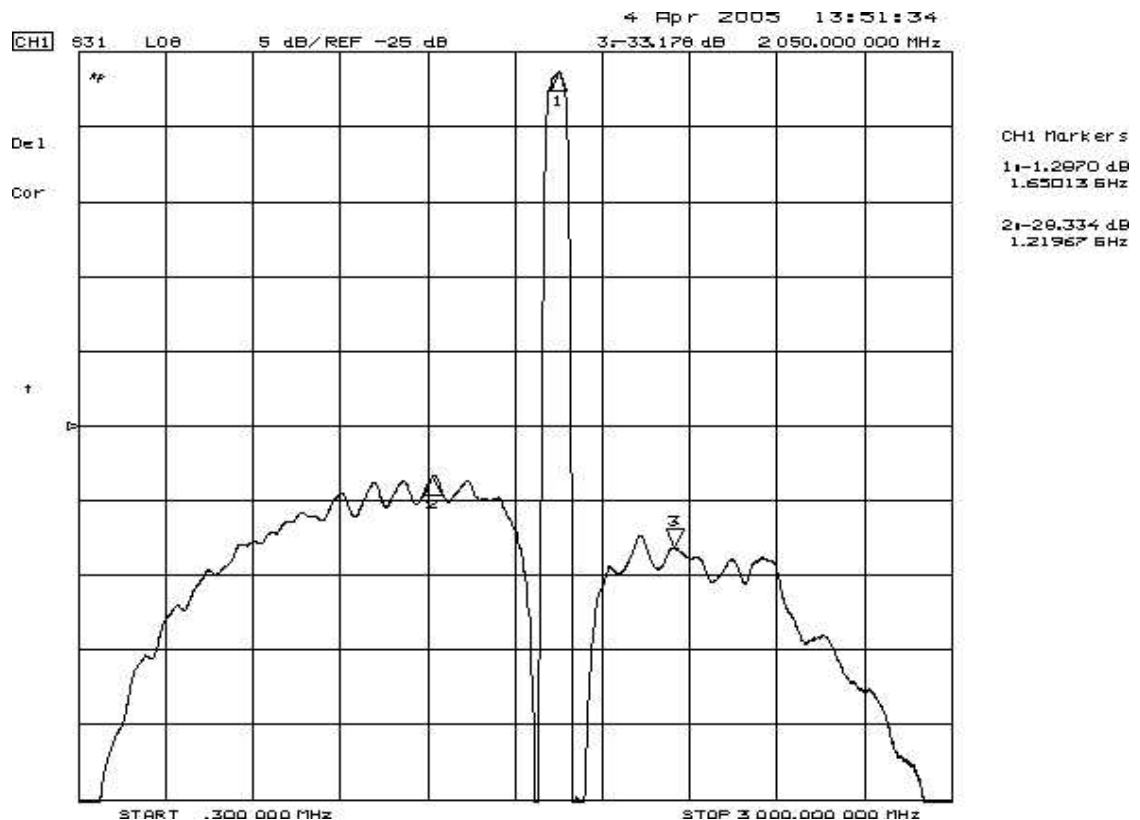
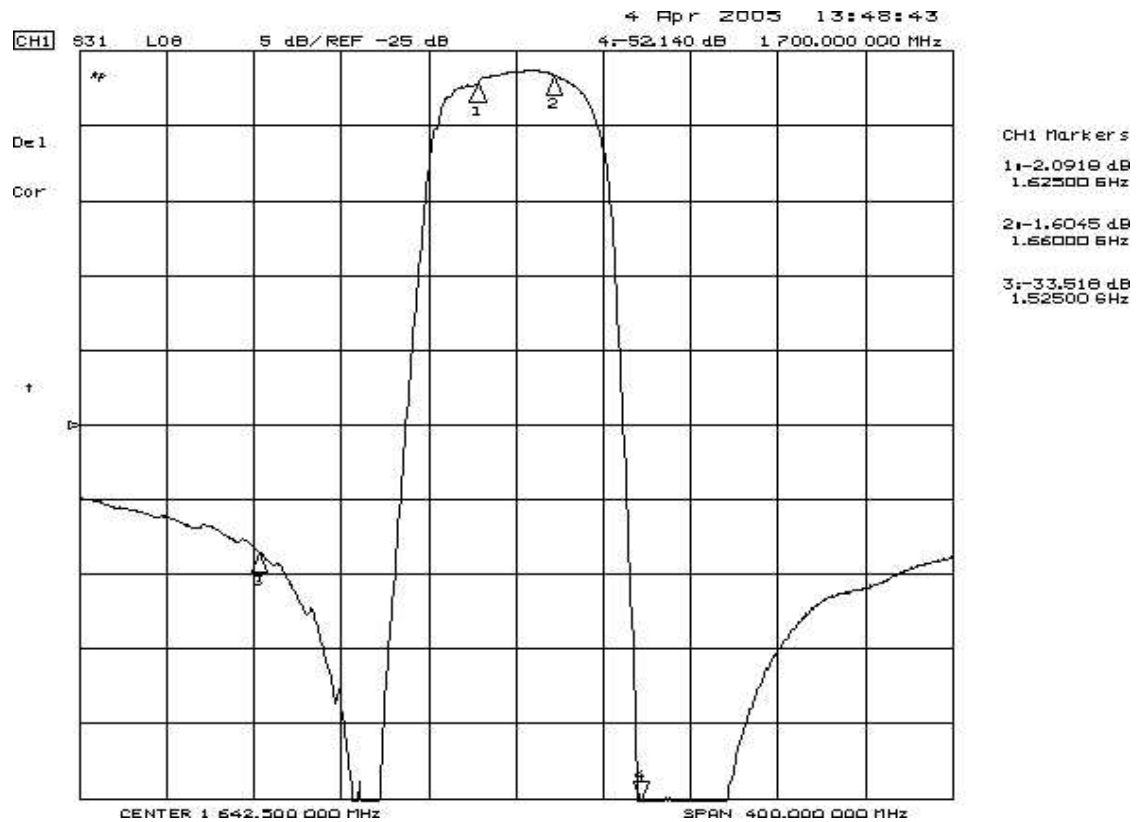


**CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.**

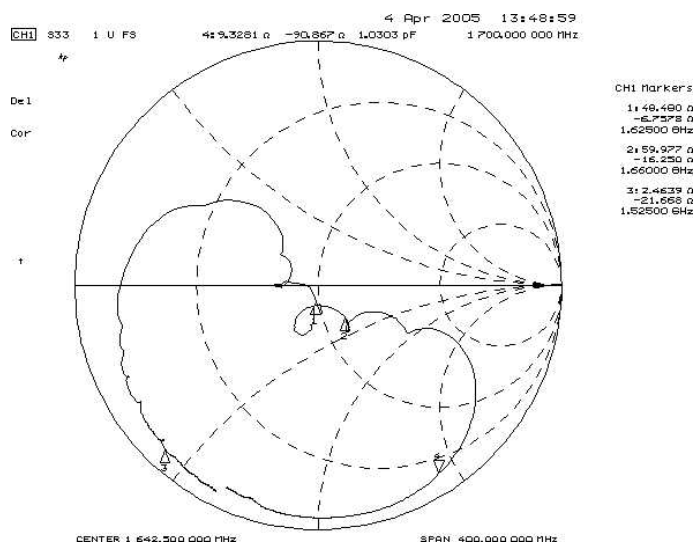
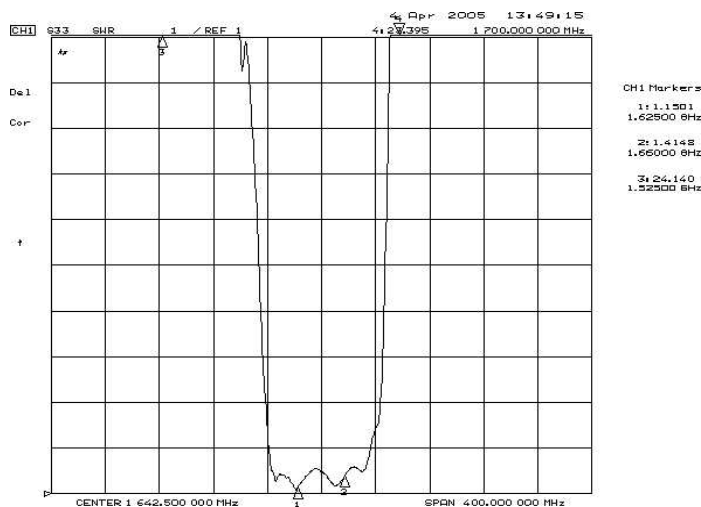
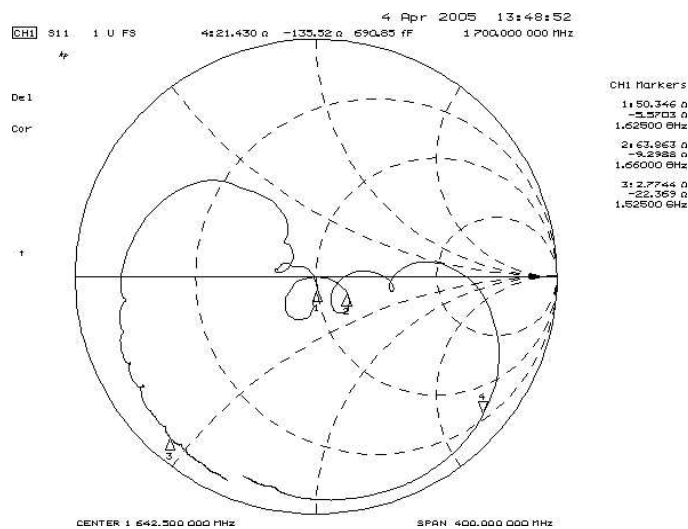
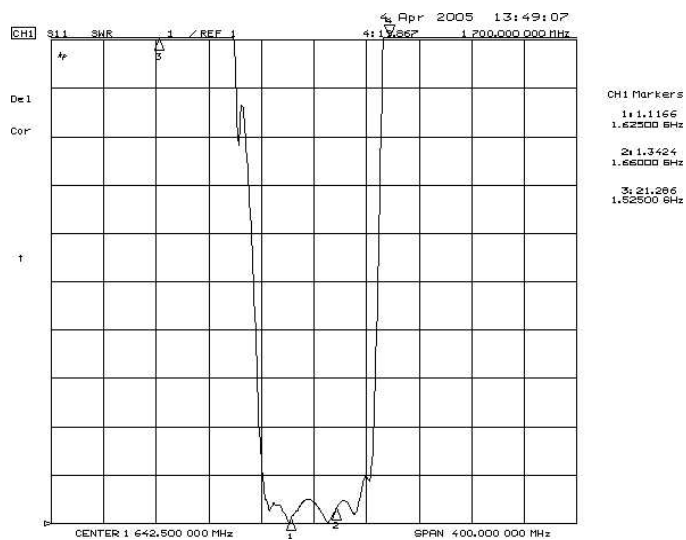
#### NOTES:

1. US and international patents may apply.
2. Murata, stylized Murata logo, and Murata N.A., Inc. are registered trademarks of Murata Manufacturing Co., Ltd.

## Filter Amplitude Plots



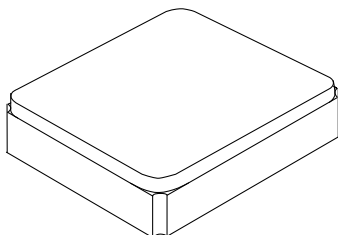
# Filter Impedance Plots



# SM2520-4 Case

## 4-Terminal Ceramic Surface-Mount Case

2.5 X 2.0 mm Nominal Footprint



### Case Dimensions

Dimension	mm			Inches		
	Min	Nom	Max	Min	Nom	Max
A	1.88	2.0	2.12	0.074	0.079	0.083
B	2.38	2.5	2.62	0.094	0.098	0.103
C	-	-	1.00	-	-	0.039
D	0.67	0.80	0.83	0.026	0.031	0.033
E	0.80	0.95	1.10	0.031	0.037	0.433
F	0.55	0.70	0.85	0.022	0.028	0.033
G	0.50	0.60	0.70	0.020	0.024	0.028

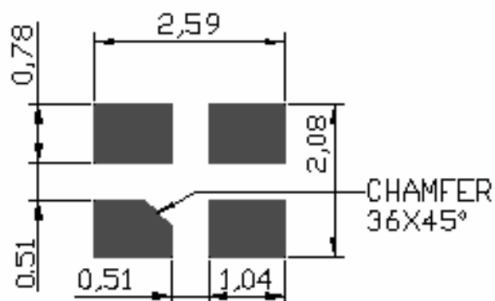
### Electrical Connections

Connection		Terminals
Port 1	Single-ended Input	1
Port 2	Single-ended Output	3
	Ground	All others

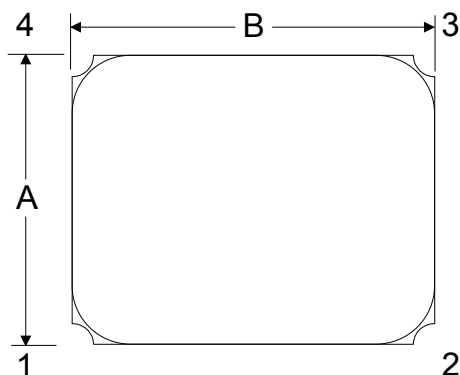
### Case Materials

Materials	
Solder Pad Plating	0.3 to 1.0 µm Gold over 1.27 to 8.89 µm Nickel
Lid Plating	2.0 to 3.0 µm Nickel
Body	Al <sub>2</sub> O <sub>3</sub> Ceramic
Pb Free	

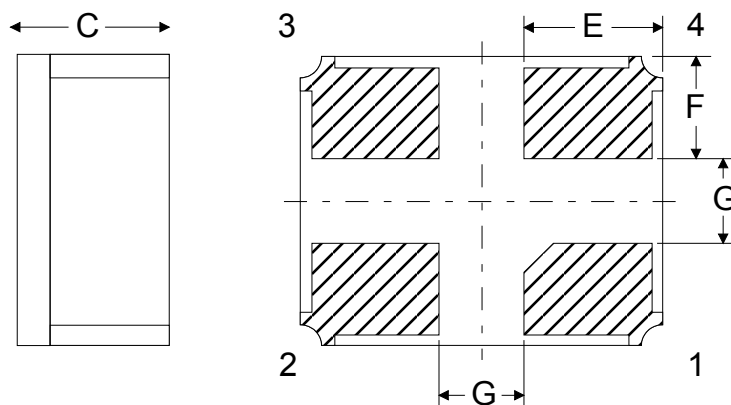
### PCB Footprint (mm)



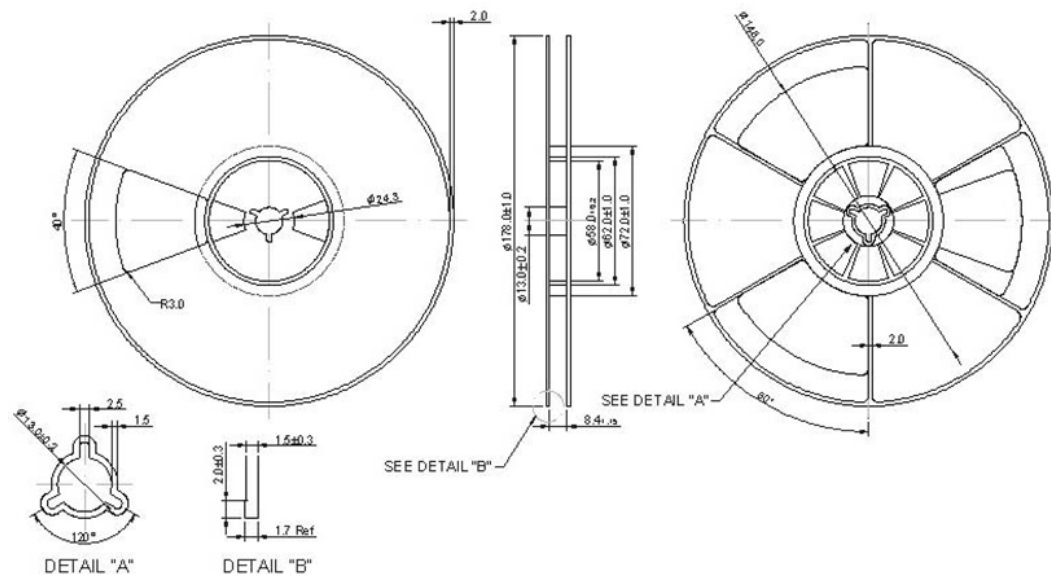
### TOP VIEW



### BOTTOM VIEW



## Reel Dimension



## Tape Dimension

