

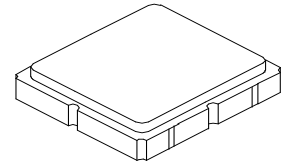
- 915 MHz Low-loss SAW Filter
- Surface Mount 3.0 x 3.0 mm Package

**Absolute Maximum Ratings**

Rating	Value	Units
Input Power Level	10	dBm
DC Voltage on any Non-ground Terminal	3	V
Operating Temperature Range	-40 to +60	°C
Storage Temperature Range in Tape and Reel	-40 to +85	°C
Solder Reflow Temperature, 10 seconds, 5 cycles maximum	260	°C

**SF2150E**

**915 MHz  
SAW Filter**



**SM3030-6**

**Electrical Characteristics**

Characteristic	Sym	Notes	Min	Typ	Max	Units
Center Frequency	$f_c$			915		MHz
Insertion Loss, 910 to 920 MHz	IL			3.0	3.7	dB
Amplitude Ripple, 910 to 920 MHz				0.8	1.7	dB <sub>p-p</sub>
Attenuation, Referenced to 0 dB						
DC to 880 MHz			45	50		dB
880 to 890 MHz			40	52		
940 to 950 MHz			35	40		
950 to 1200 MHz			43	48		
1200 to 1600 MHz			40	48		
1600 to 2200 MHz			30	43		
2200 to 2500 MHz			25	35		
2500 to 3000 MHz			20	27		
Source Impedance	$Z_s$			50		Ω
Load Impedance	$Z_L$			50		

Case Style	SM3030-6 3.0 x 3.0 mm Nominal Footprint					
Lid Symbolization (Y=year, WW=week, S=shift) dot=pin 1 indicator	A44, YWWS					
Standard Reel Quantity	Reel Size 7 Inch					500 Pieces/Reel
	Reel Size 13 Inch					3000 Pieces/Reel

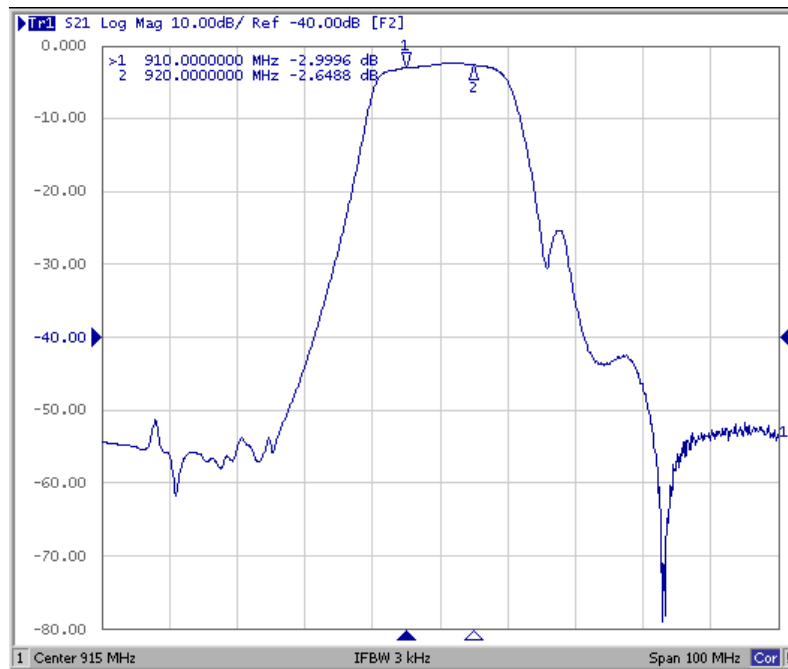
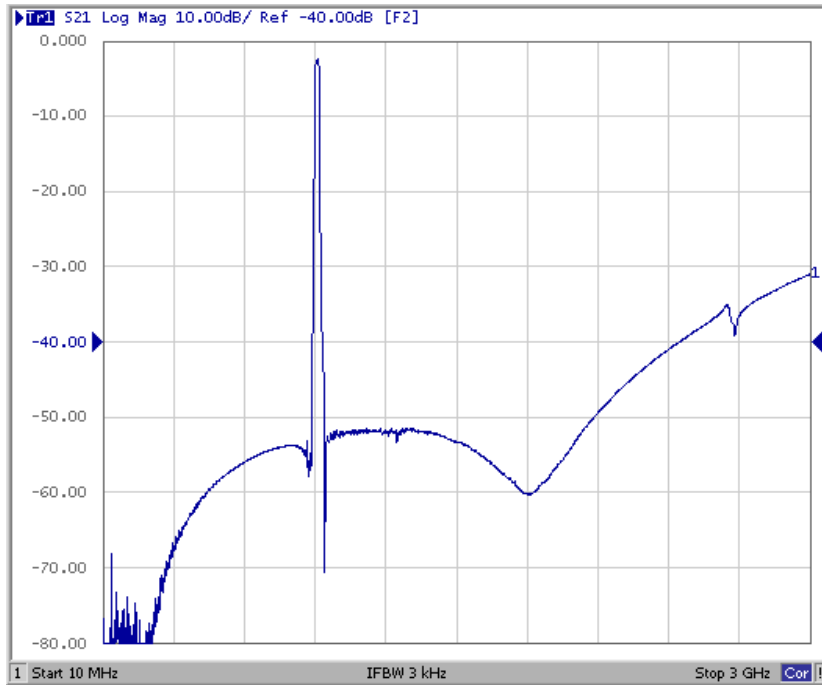


**CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.**

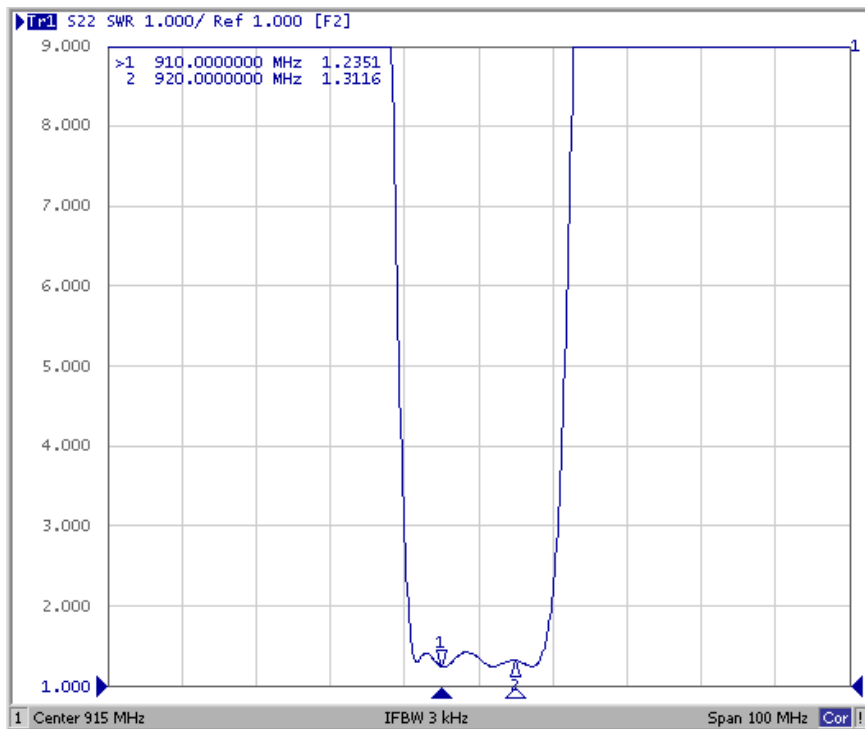
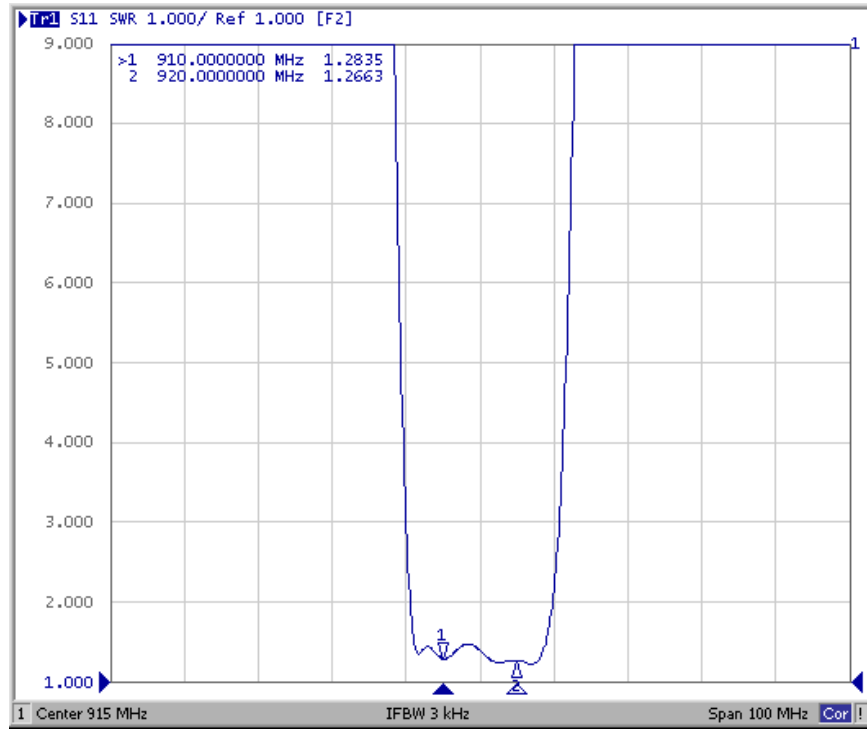
**NOTES:**

1. Unless noted otherwise, all specifications apply over the operating temperature range with filter soldered to the specified demonstration board with impedance matching to 50 Ω and measured with 50 Ω network analyzer.
2. Unless noted otherwise, all frequency specifications are referenced to the nominal center frequency,  $f_c$ .
3. Rejection is measured as attenuation below the minimum IL point in the passband. Rejection in final user application is dependent on PCB layout and external impedance matching design. See Application Note No. 42 for details.
4. "LRIP" or "L" after the part number indicates "low rate initial production" and "ENG" or "E" indicates "engineering prototypes."
5. The design, manufacturing process, and specifications of this filter are subject to change.
6. Either Port 1 or Port 2 may be used for either input or output in the design. However, impedances and impedance matching may vary between Port 1 and Port 2, so that the filter must always be installed in one direction per the circuit design.
7. US and international patents may apply.
8. Murata, stylized Murata logo, and Murata N.A., Inc. are registered trademarks of Murata Manufacturing Co., Ltd.

# Filter Response Plots

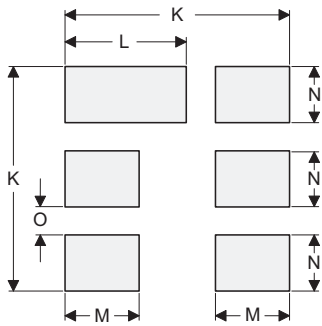
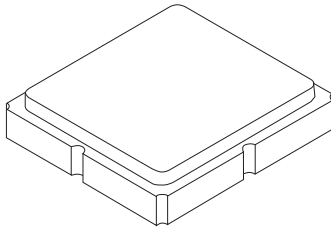


# VSWR Plots



# SM3030-6 Case

## 6-Terminal Ceramic Surface-Mount Case 3.0 X 3.0 mm Nominal Footprint



PCB Land Pattern  
Top View

### Case and PCB Footprint Dimensions

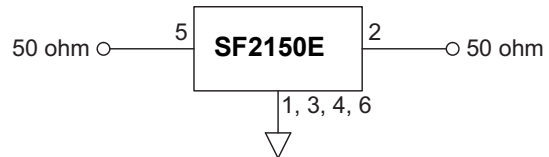
Dimension	mm			Inches		
	Min	Nom	Max	Min	Nom	Max
A	2.87	3.00	3.13	0.113	0.118	0.123
B	2.87	3.00	3.13	0.113	0.118	0.123
C	1.12	1.25	1.38	0.044	0.049	0.054
D	0.77	0.90	1.03	0.030	0.035	0.040
E	2.67	2.80	2.93	0.105	0.110	0.115
F	1.47	1.60	1.73	0.058	0.063	0.068
G	0.72	0.85	0.98	0.028	0.033	0.038
H	1.37	1.50	1.63	0.054	0.059	0.064
I	0.47	0.60	0.73	0.019	0.024	0.029
J	1.17	1.30	1.43	0.046	0.051	0.056
K		3.20			0.126	
L		1.70			0.067	
M		1.05			0.041	
N		0.81			0.032	
O		0.38			0.015	

### Case Materials

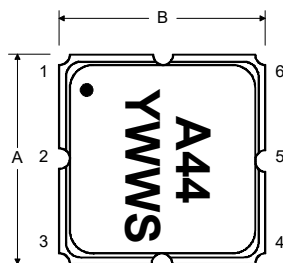
Materials	
Solder Pad Plating	0.3 to 1.0 $\mu\text{m}$ Gold over 1.27 to 8.89 $\mu\text{m}$ Nickel
Lid Plating	2.0 to 3.0 $\mu\text{m}$ Nickel
Body	$\text{Al}_2\text{O}_3$ Ceramic
Pb Free	

### Electrical Connections

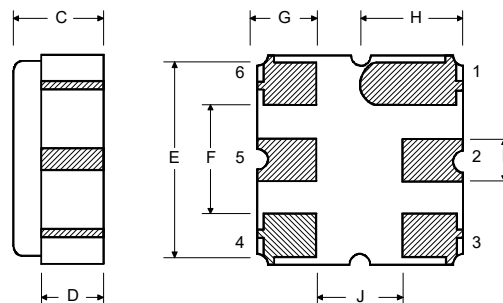
Connection	Terminals
Input	2
Output	5
Ground	All Others



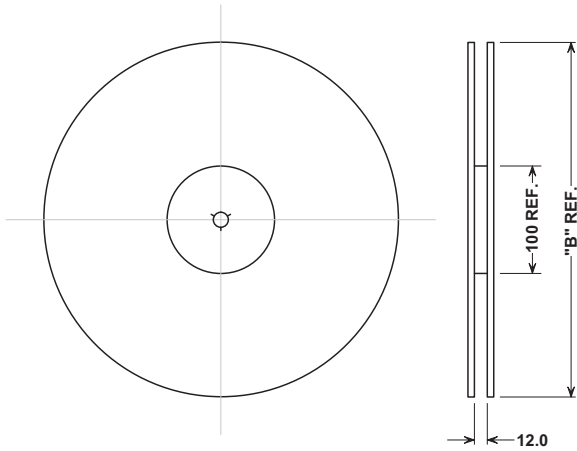
### TOP VIEW



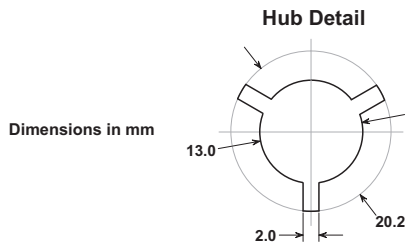
### BOTTOM VIEW



## Tape and Reel Specifications

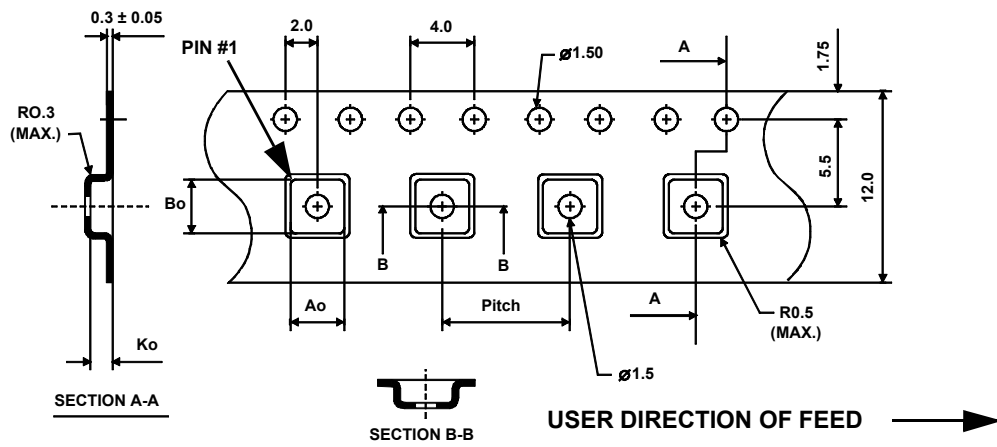


"B"		Quantity Per Reel
Inches	millimeters	
7	178	500
13	330	3000



## COMPONENT ORIENTATION and DIMENSIONS

Carrier Tape Dimensions	
Ao	3.35 mm
Bo	3.35 mm
Ko	1.40 mm
Pitch	8.0 mm
W	12.0 mm



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