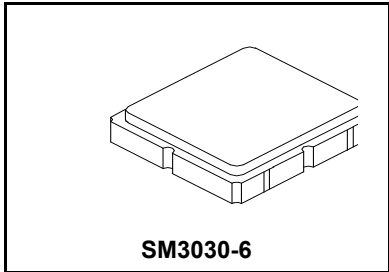


**SF2049E-1**

**915.00 MHz  
SAW Filter**



- **Steep Roll-off Filter for 915 MHz ISM band**
- **Complies with Directive 2002/95/EC (RoHS)**



**Absolute Maximum Ratings**

Rating	Value	Units
Input Power Level	+24	dBm
DC Voltage on any Non-ground Terminal	5	V
Operating Temperature Range	-40 to +85	°C
Storage Temperature Range in Tape and Reel	-40 to +85	°C
Maximum Soldering Profile, 5 Cycles/10 seconds Maximum	265	°C

**Electrical Characteristics**

Characteristic	Sym	Notes	Min	Typ	Max	Units
Center Frequency	$f_c$			915.00		MHz
Insertion Loss, 902 to 928 MHz	IL			2.2	3.5	dB
Peak-to-Peak Amplitude Ripple, 902 to 928 MHz				0.6	2.0	dB
VSWR, 902 to 928 MHz	SWR			1.6:1	2.3:1	
Attenuation, Referenced to 0 dB:						dB
DC to 800 MHz			50	63.0		
800 to 880 MHz			40.0	48.0		
960 to 1080 MHz			32.0	39.0		
1080 to 1500 MHz			45.0	65.0		
1500 to 3000 MHz			22.0	28.0		
Source Impedance	$Z_s$			50		$\Omega$
Load Impedance	$Z_L$			50		$\Omega$
Case Style	SM3030-6 3.0 x 3.0 mm Nominal Footprint					
Lid Symbolization (Y=year, WW=week, S=shift) dot=pin 1 indicator	917, YWWS					
Standard Reel Quantity	Reel Size 7 inch					500 Pieces/Reel
	Reel Size 13 inch					3000 Pieces/Reel

**Electrical Connections**

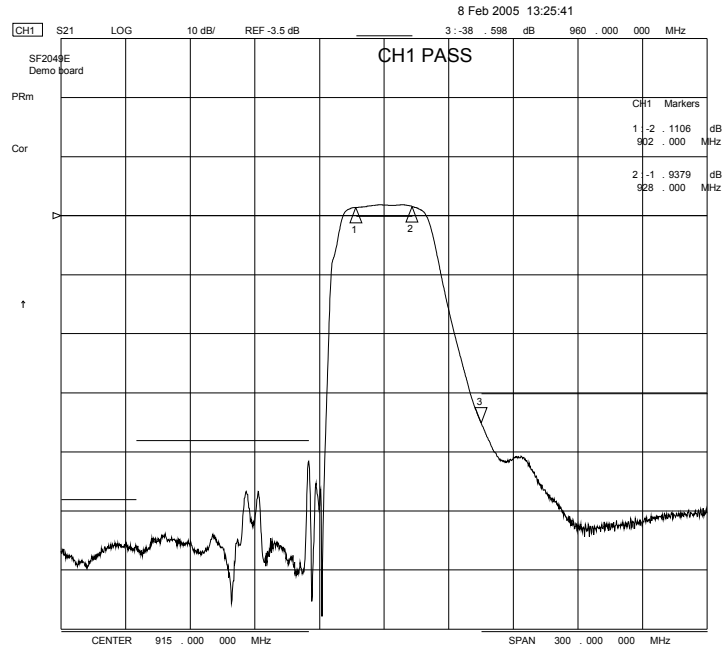
Connection	Terminals
Input	2
Output	5
Case Ground	All others

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

**NOTES:**

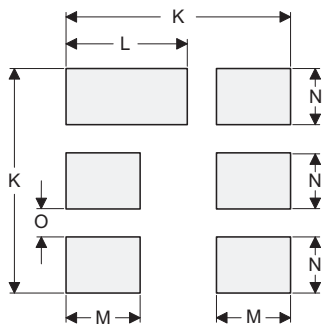
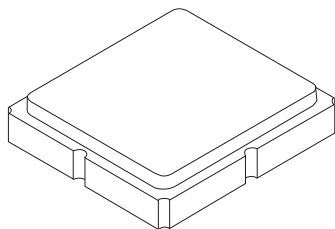
1. Unless noted otherwise, all specifications apply over the operating temperature range with filter soldered to the specified demonstration board with impedance matching to 50  $\Omega$  and measured with 50  $\Omega$  network analyzer.
2. Unless noted otherwise, all frequency specifications are referenced 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.

HBM ESD Test Result		MM ESD Test Result	
Applied Voltage (V)	Failure Quantity (pcs)	Applied Voltage (V)	Failure Quantity (pcs)
25	0	25	0
50	0	50	0
100	0	100	0
150	0	150	0
200	0	200	0



# SM3030-6 Case

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



PCB Footprint Top View

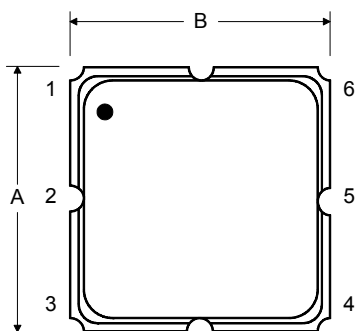
### Case and PCB Footprint Dimensions

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	

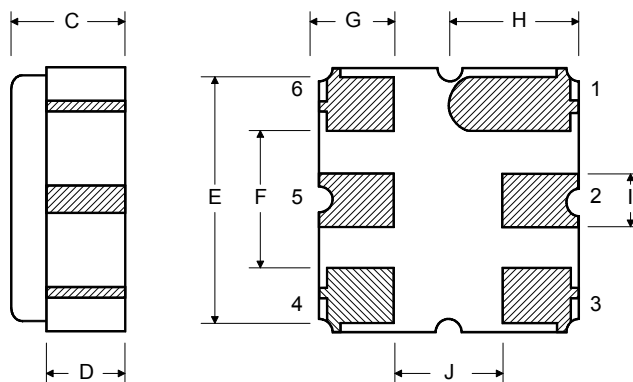
### Case Materials

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	

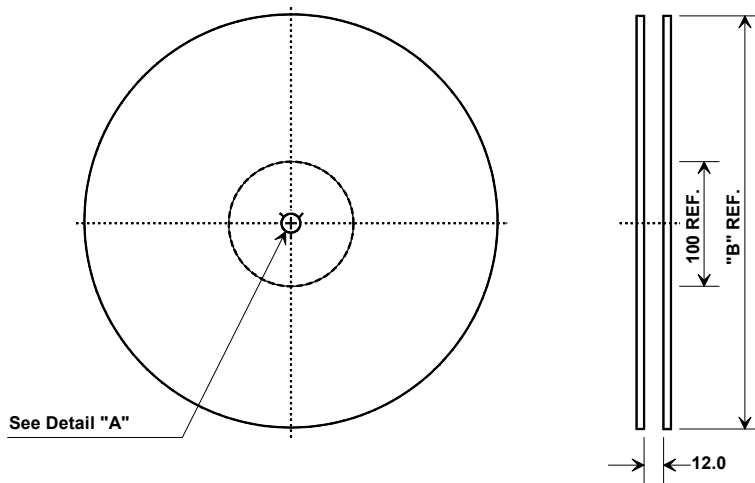
### TOP VIEW



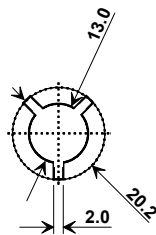
### BOTTOM VIEW



## 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

