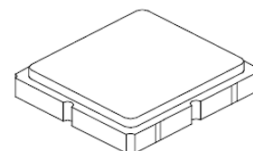


**SF2137E-1**

**869.00 MHz  
SAW Filter**



**SM3030-6**

- **Steep Roll-off SAW Filter for 869.00 MHz Unlicensed Band**
- **Complies with Directive 2002/95/EC (RoHS)**
- **No Matching Required for Operation in 50Ω Environment**
- **Moisture Sensitivity Level: 1**

**Absolute Maximum Ratings**

Rating	Value	Units
Input Power Level	14	dBm
DC Voltage on any Non-ground Terminal	5	V
Operating Temperature Range	-30 to +65	°C
Storage Temperature Range in Tape and Reel	-40 to +85	°C
Soldering Profile Maximum Temperature, 5 cycles/10 s maximum	265	°C

**Electrical Characteristics**

Characteristic	Sym	Notes	Min	Typ	Max	Units
Center Frequency	$f_c$			869.00		MHz
Insertion Loss, 868 to 870 MHz	IL			2.7	3.5	dB
Amplitude Ripple, 868 to 870 MHz				0.2	1.5	dB <sub>P-P</sub>
Attenuation Referenced to 0 dB:						
DC to 828 MHz			45	51		dB
828 to 849 MHz			30	40		
881 to 890 MHz			10	18		
890 to 925 MHz			22	38		
925 to 1200 MHz			40	49		
1200 to 1740 MHz			36	49		
Source Impedance	$Z_S$			50		Ω
Load Impedance	$Z_L$			50		Ω
Case Style	SM3030-6 3.0 x 3.0 mm Nominal Footprint					
Lid Symbolization, Y=year, WW=week, S=shift, Dot=pin 1 indicator	994, <u>YWWS</u>					

**Electrical Connections**

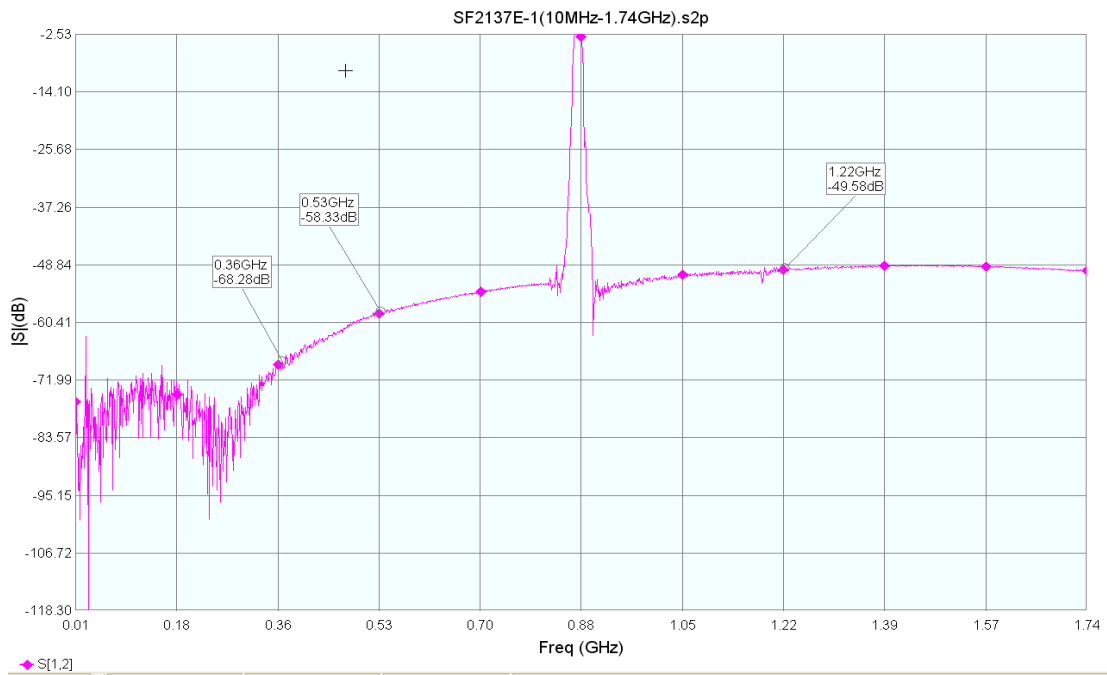
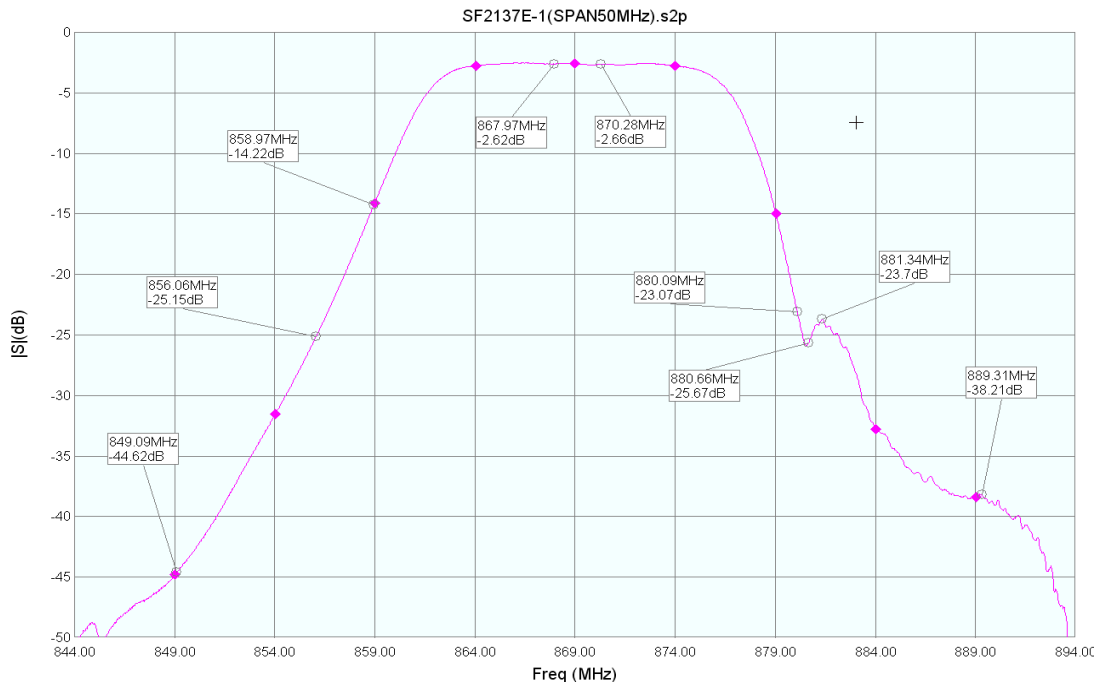
Connection	Terminals
Port 1	2
Port 2	5
Case Ground	All others



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

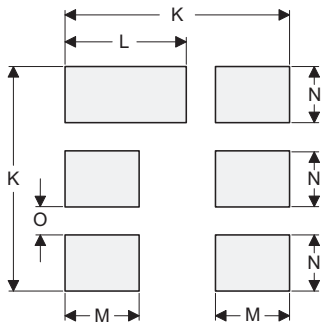
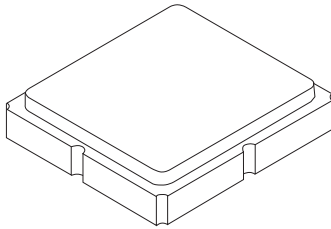
**NOTES:**

1. The design, manufacturing process, and specifications of this device are subject to change.
2. US or International patents may apply.
3. RoHS compliant from the first date of manufacture.



# SM3030-6 Case

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



PCB Footprint Top View

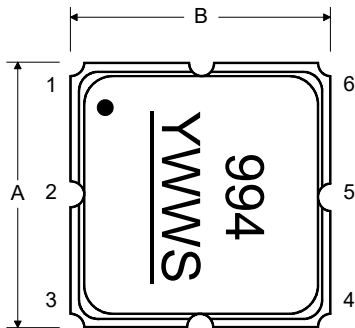
### Case and PCB Footprint Dimensions

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	1.40	0.044	0.049	0.055
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	

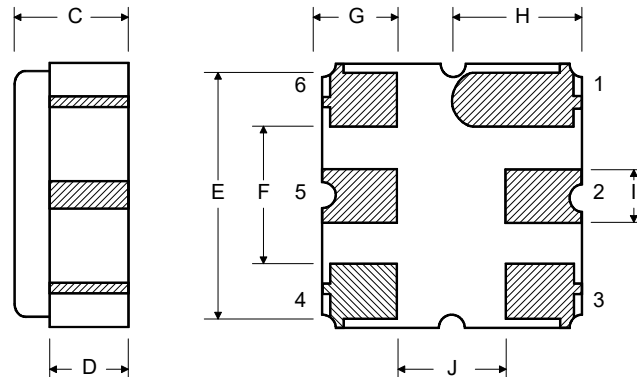
### Case Materials

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

### Top View

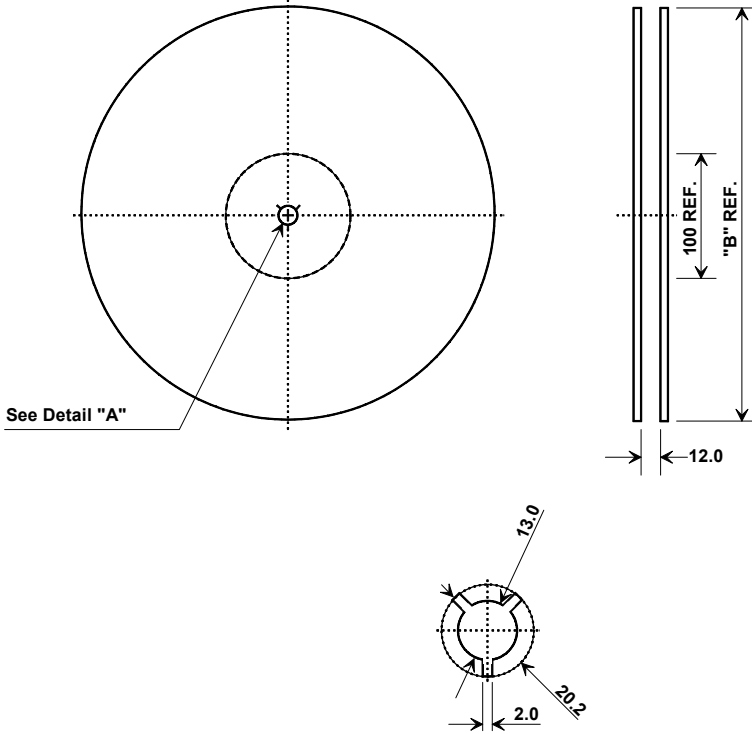


### Bottom View



## Tape and Reel Specifications

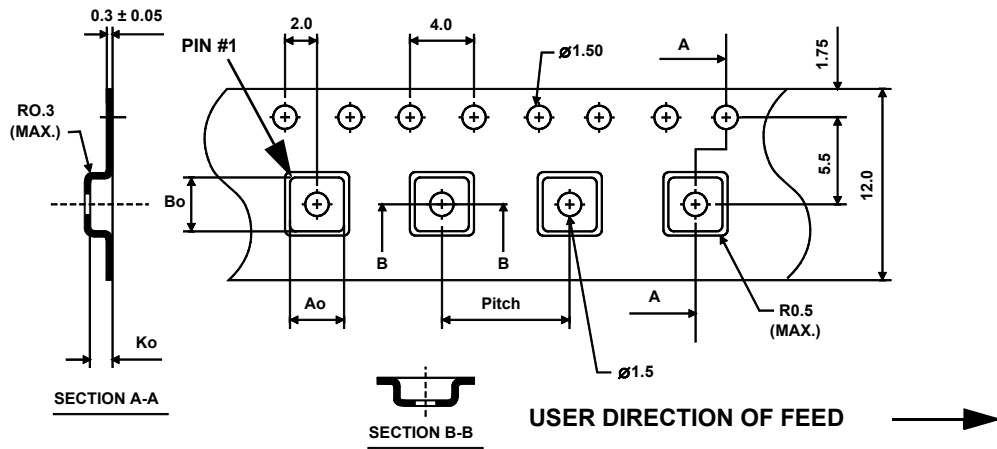
Tape and Reel Standard per ANSI/EIA-481



"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



## Recommended Reflow Profile

1. Preheating shall be fixed at 150~180°C for 60~90 seconds.
2. Ascending time to preheating temperature 150°C shall be 30 seconds min.
3. Heating shall be fixed at 220°C for 50~80 seconds and at 260°C +0/-5°C peak (10 seconds).
4. Time: 5 times maximum.

