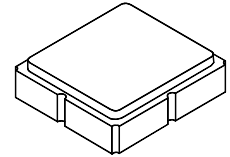


SF2036E

**1880 MHz
SAW Filter**



SM3030-6

- **Low Insertion Loss L-Band SAW Filter**
- **3.0 X 3.0 mm Surface-Mount Case**
- **Complies with Directive 2002/95/EC (RoHS)**
- **Moisture Sensitivity Level: 1**
- **AEC-Q200 Qualified**

Absolute Maximum Ratings

Rating	Value	Units
Maximum Incident Power in Passband	+10	dBm
DC Voltage on any Non-ground Terminal	5	V
Operable Temperature Range	-45 to +125	°C
Specification Temperature Range	-30 to +85	°C
Storage Temperature Range in Tape and Reel	-40 to +85	°C
Maximum Soldering Profile, 5 Cycles Maximum	265 °C for 10 s	

Electrical Characteristics

Characteristic	Sym	Notes	Min	Typ	Max	Units
Center Frequency	f_C			1880		MHz
Insertion Loss, 1850 to 1910 MHz	IL			2.45	4.0	dB
Amplitude Ripple, 1850 to 1910 MHz				1.2	2.5	dB _{p-p}
Attenuation Referenced to 0 dB:						
DC to 1660 MHz			20	32		dB
1660 to 1721 MHz			30	35		dB
1721 to 1800 MHz			20	37		dB
1930 to 1990 MHz			7	19		dB
2000 to 2040 MHz			25	37		dB
2040 to 2480 MHz			31	38		dB
3700 to 3820 MHz			25	35		dB
Input/Output Return Loss, 1850 to 1910 MHz			7.4	13		dB
Source Impedance	Z_S			50		Ω
Load Impedance	Z_L			50		Ω
Case Style	SM3030-6 3 x 3 mm Nominal Footprint					
Lid Symbolization, Y=year, WW=week, S=shift	510, <u>YWWS</u>					

Electrical Connections

Connection	Terminals
Input	2
Output	5
Ground	All others

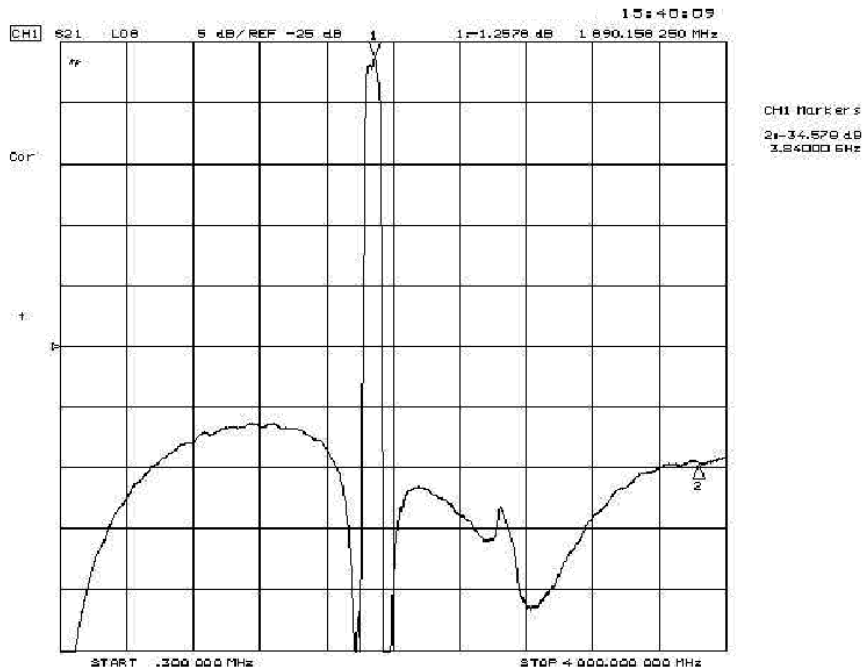
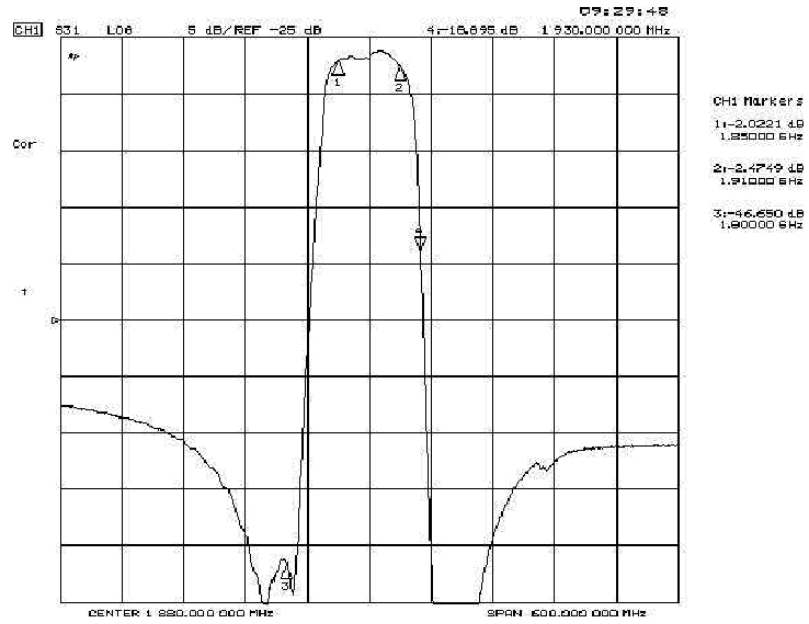


CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.

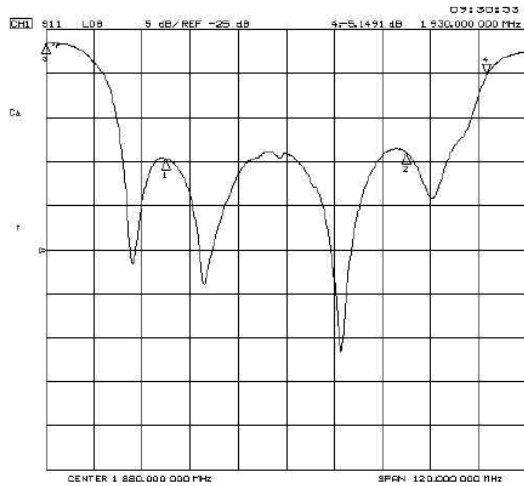
NOTES:

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.

**Frequency Characteristics :
Transfer function**



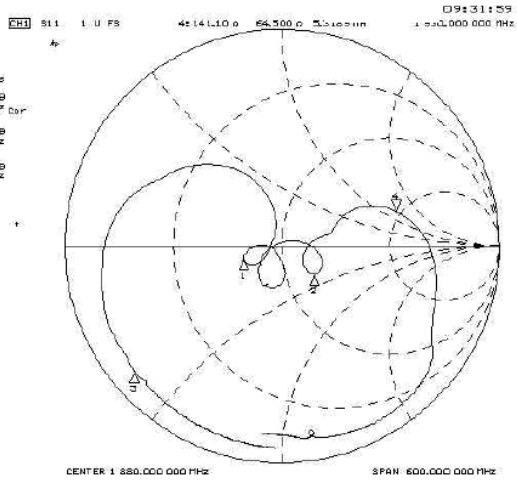
S11



CH1 Markers
 1: -1.4639 dB
 1.89000 GHz

2: -1.3870 dB
 1.91000 GHz

3: -1.3689 dB
 1.92000 GHz

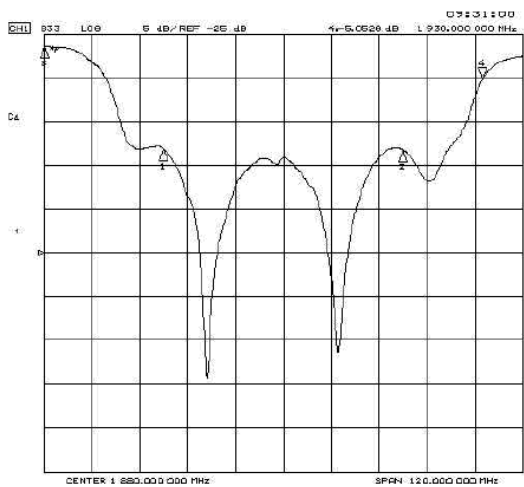


CH1 Markers
 1: 34.939 a
 -4.3281 a
 1.89000 GHz

2: 65.307 a
 -17.477 a
 1.91000 GHz

3: 31.2109 a
 -18.410 a
 1.92000 GHz

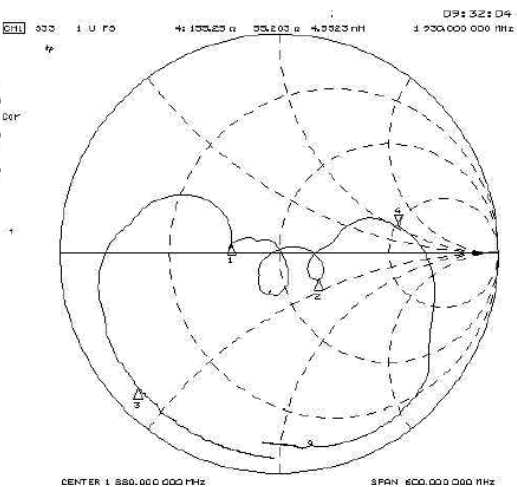
S22



CH1 Markers
 1: -13.186 dB
 1.89000 GHz

2: -13.236 dB
 1.91000 GHz

3: -13.764 dB
 1.92000 GHz



CH1 Markers
 1: 32.140 a
 2.9961 a
 1.89000 GHz

2: 65.670 a
 -17.388 a
 1.91000 GHz

3: 31.3535 a
 -20.100 a
 1.92000 GHz

SM3030-6 Case

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



PCB Footprint Top View

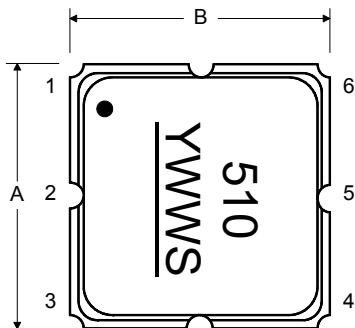
Case and PCB Footprint Dimensions

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	

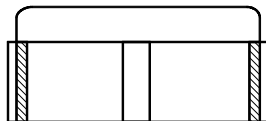
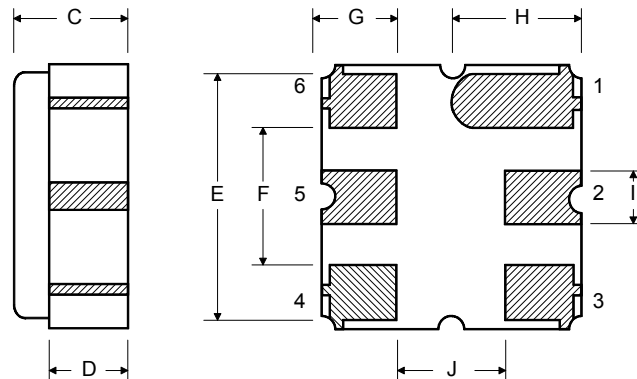
Case Materials

Materials	
Solder Pad Plating	0.3 to 1.0 μm Gold over 1.27 to 8.89 μm Nickel
Lid Plating	2.0 to 3.0 μm Nickel
Body	Al_2O_3 Ceramic

Top View

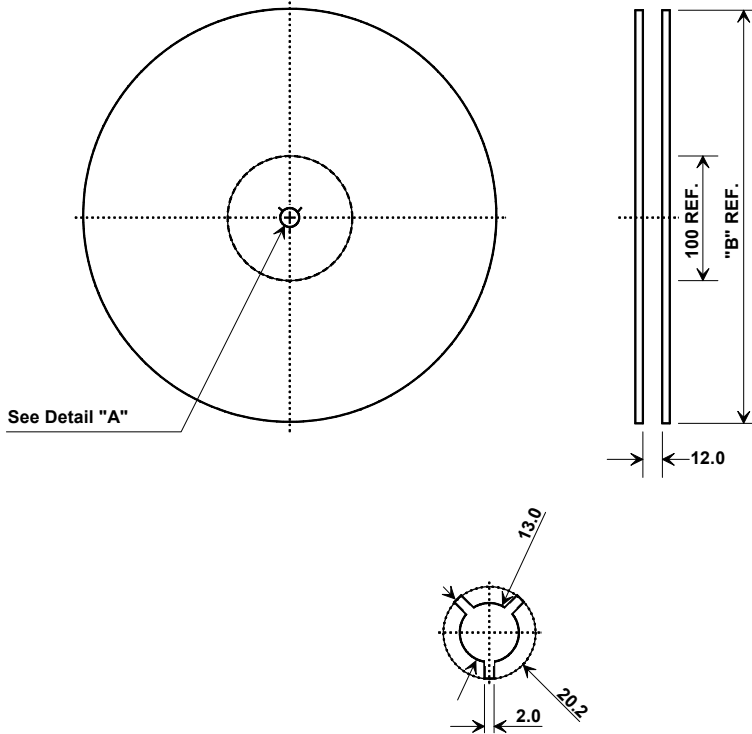


Bottom View



Tape and Reel Specifications

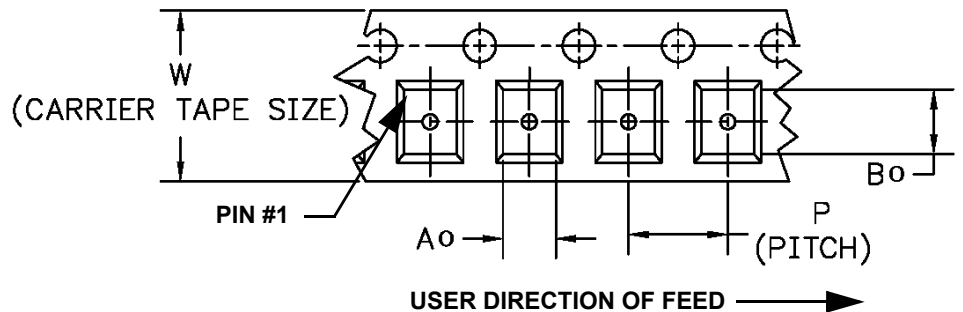
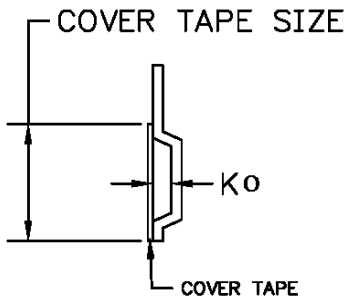
Tape and Reel Standard per ANSI/EIA-481



"B" Nominal Size		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	1.4 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.

