

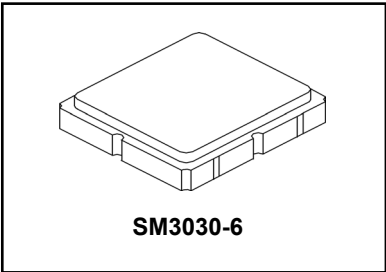


- Surface Mount 3.0 x 3.0 mm Package
- Complies with Directive 2002/95/EC (RoHS)
- For the GPS L5 Band
- Moisture Sensitivity Level: 1
- AEC-Q200 Qualified

RoHS
Compliant

SF2388E

**1176.45 MHz
SAW Filter**



Absolute Maximum Ratings

Rating	Value	Units
Input Power Level	10	dBm
DC Voltage	7.5	V
Operating Temperature Range	-40 to +85	°C
Storage Temperature Range in Tape and Reel	-40 to +85	°C
Suitable for Lead-free Soldering - Maximum Soldering Profile	260°C for 30 s	

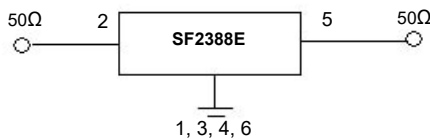
Electrical Characteristics

Characteristic	Sym	Notes	Min	Typ	Max	Min	Typ	Max	Units
			-40 to +85°C			-40 to +105°C			
Center Frequency	f_C			1176.45			1176.45		MHz
Insertion Loss, 1166.45 to 1186.45 MHz	IL			3.3	4.1		3.3	4.3	dB
Amplitude Ripple, 1166.45 to 1186.45 MHz				1.0	1.5		1.0	1.8	
Attenuation, Referenced from 0dB:									
1121.45 MHz			30	42		30	42		dB
1231.45 MHz			30	45		30	45		
Input/Output VSWR, 1166.45 to 1186.45 MHz				1.5	2.0		1.5	2.2	
Source Impedance	Z_S			50			50		Ω
Load Impedance	Z_L			50			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	6V, <u>YWWS</u>								
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

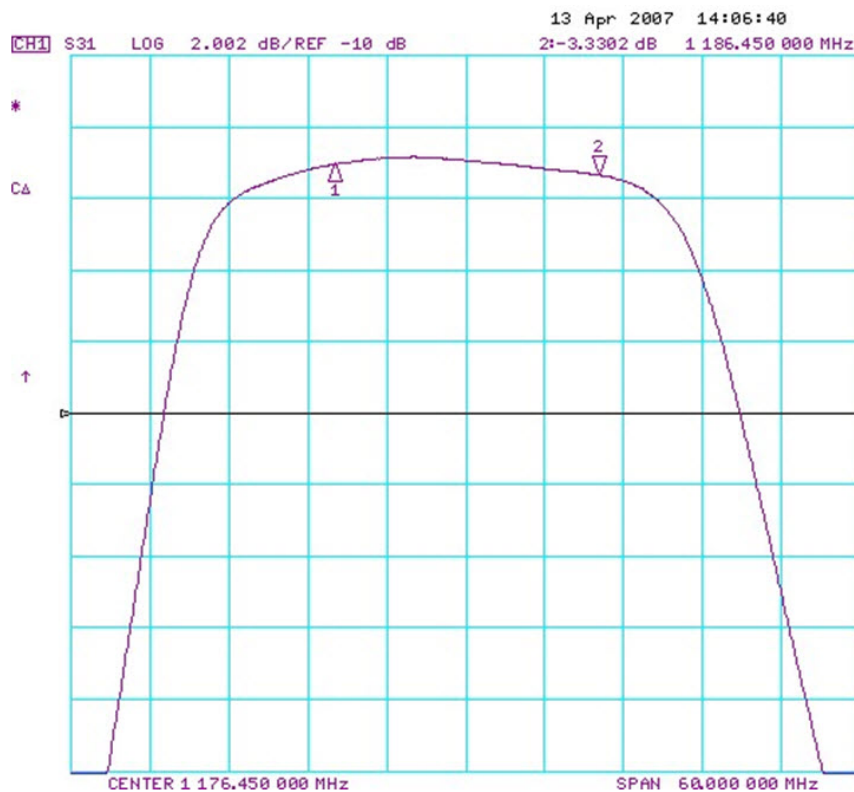


CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.

NOTES:

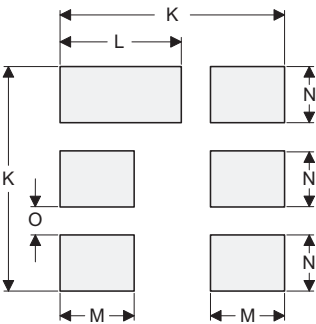
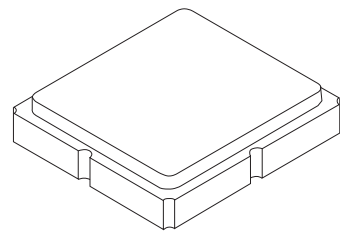
1. The design, manufacturing process, and specifications of this device are subject to change.
2. US or International patents may apply.
3. RoHS compliant from the first date of manufacture.

SF2388E Frequency Characteristics



SM3030-6 Case

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



PCB Footprint Top View

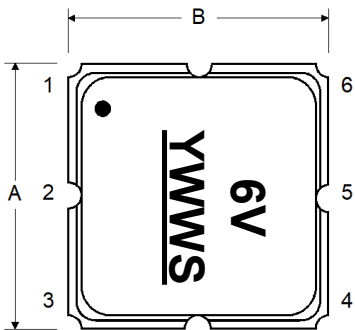
Case and PCB Footprint Dimensions

Dimension	mm			Inches		
	Min	Nom	Max	Min	Nom	Max
A	-	3.00	-	-	0.118	-
B	-	3.00	-	-	0.118	-
C	-	-	1.30	-	-zzzz	0.054
D	-	0.90	-	-	0.035	-
E	-	2.80	-	-	0.110	-
F	-	1.60	-	-	0.063	-
G	-	0.85	-	-	0.033	-
H	-	1.50	-	-	0.059	-
I	-	0.60	-	-	0.024	-
J	-	1.30	-	-	0.051	-
K	-	3.20	-	-	0.126	-
L	-	1.70	-	-	0.067	-
M	-	0.96	-	-	0.037	-
N	-	0.81	-	-	0.032	-
O	-	0.38	-	-	0.015	-

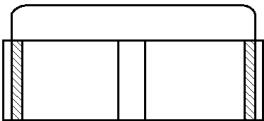
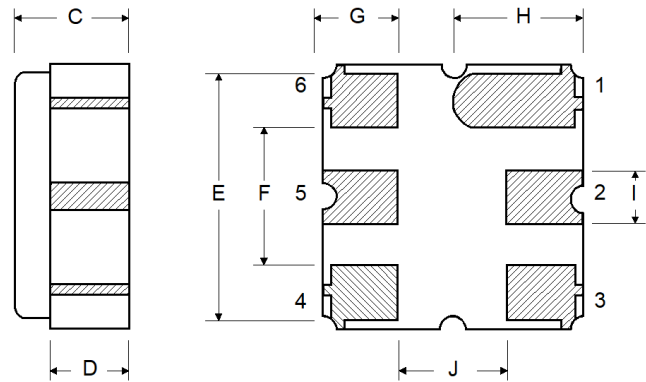
Case Materials

Materials	
Solder Pad Plating	0.3 to 1.0 μ m Gold over 1.27 to 8.89 μ m Nickel
Lid Plating	2.0 to 3.0 μ m Nickel
Body	Al ₂ O ₃ Ceramic

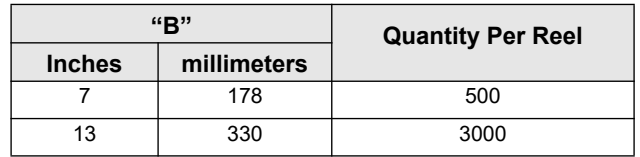
TOP VIEW



BOTTOM VIEW



Tape and Reel Standard per ANSI/EIA-481



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.

