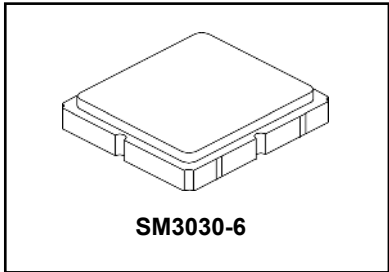


**SF2388E**

**1176.45 MHz  
SAW Filter**



- **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**

**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	

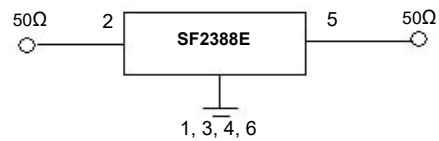
**Electrical Characteristics**

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:									dB
1121.45 MHz			30	42		30	42		
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		$\Omega$
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

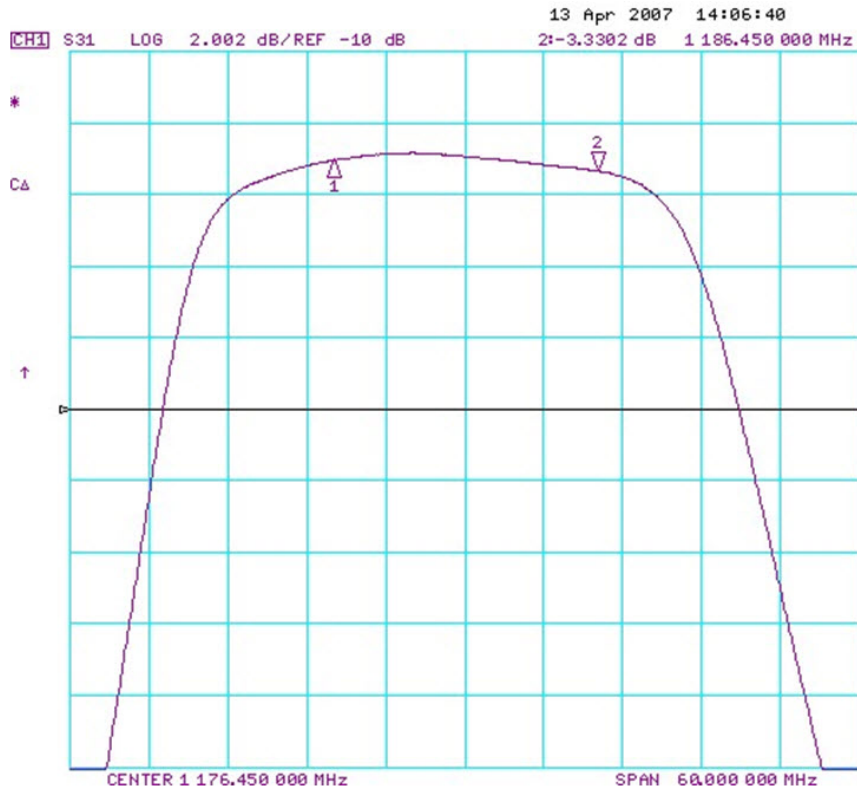


**CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.**

**NOTES:**

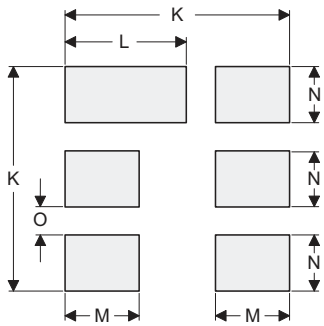
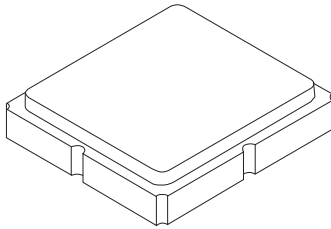
1. The design, manufacturing process, and specifications of this device are subject to change.
2. US or International patents may apply.
3. RoHS compliant from the first date of manufacture.

# SF2388E Frequency Characteristics



# SM3030-6 Case

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



PCB Footprint Top View

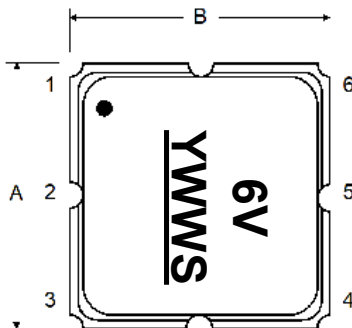
### Case and PCB Footprint Dimensions

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	-

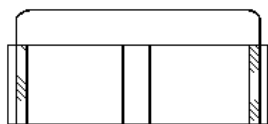
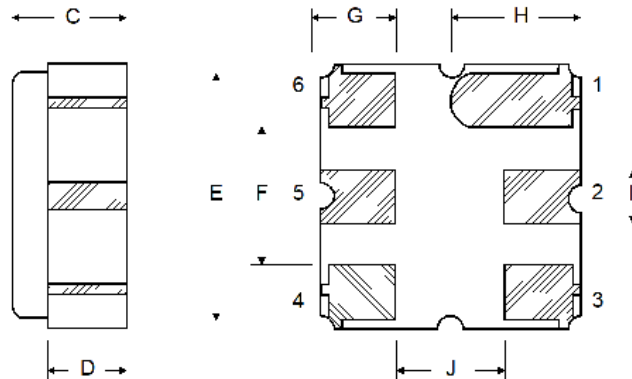
### Case Materials

Materials	
Solder Pad Plating	0.3 to 1.0 $\mu\text{m}$ 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

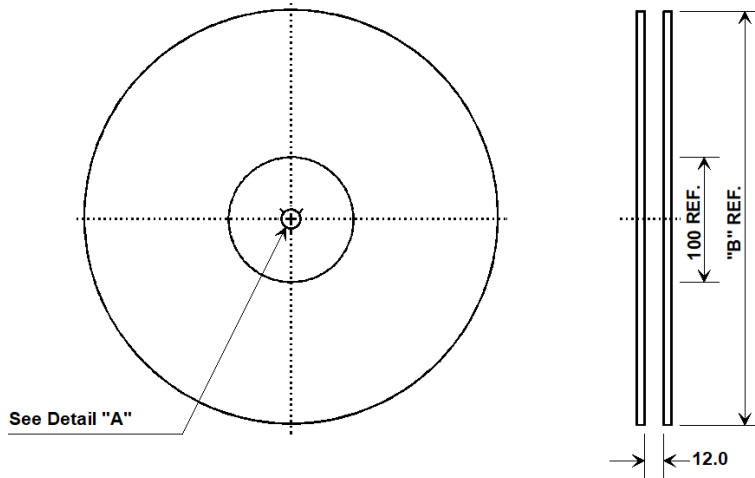


### BOTTOM VIEW

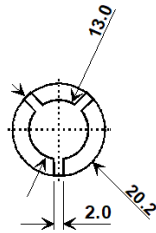


## Tape and Reel Specifications

Tape and Reel Standard per ANSI/EIA-481

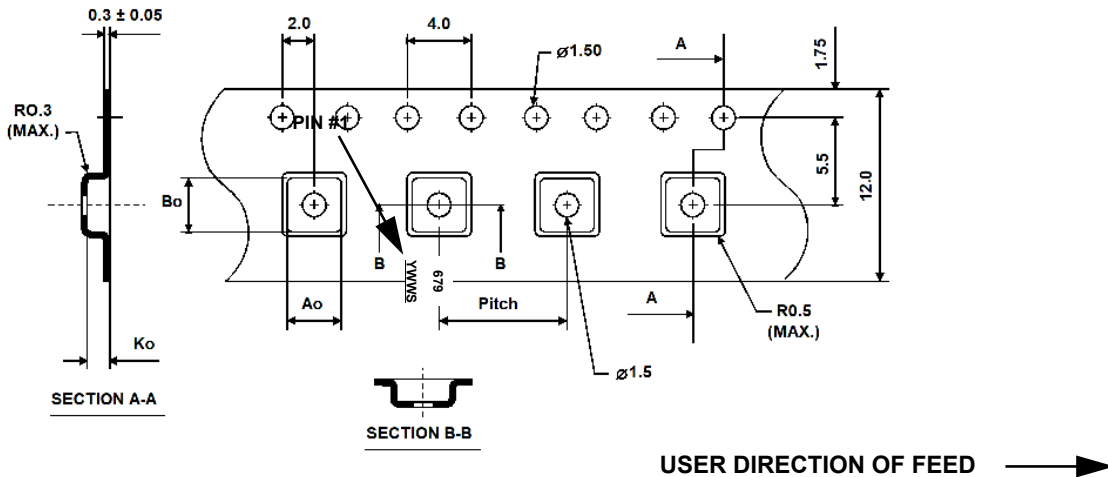


"B"		Quantity Per Reel
Inches	millimeters	
7	178	500
13	330	3000



### 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.

