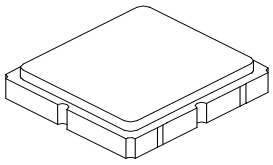
AEC-Q200
This component was always RoHS compliant from the first date of manufacture.

SF2161E

2650 MHz SAW Filter

- ***Low Insertion Loss SAW RF Filter***
- ***3.0 x 3.0 x 1.3 mm Surface-Mount Case***
- ***No Matching Circuit Required***
- ***Complies with Directive 2002/95/EC (RoHS)***



SM3030-6

Absolute Maximum Ratings

Rating	Value	Units
Input Power Level	+10	dBm
DC Voltage on any Non-ground Terminal	3	Volts
Operating Temperture Range	-20 to +70	°C
Storage Temperature Range in Tape and Reel	-30 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	1		2650		MHz
Insertion Loss	IL			2.0	3.5	MHz
Amplitude Ripple, 2615 to 2685 MHz				0.9	2.5	dB_{P-P}
Attenuation Referenced to 0 dB:						
DC to 2300 MHz			23.0	27.5		dB
2300 to 2500 MHz			25.0	32.0		
2800 to 4000 MHz			30.0	34.0		
4000 to 5000 MHz			20.0	32		
VSWR, 2615 to 2685 MHz				1.6:1	2.3:1	
Source Impedance	Z_S			50		Ω
Load Impedance	Z_L			50		Ω

Single-Ended Input / Output Impedance Match	No matching network required for operation at 50 ohms
Case Style	SM3030-6 3 x 3 mm Nominal Footprint
Lid Symbolization, Y=year, WW=week, S=shift	848 YWWS

Electrical Connections

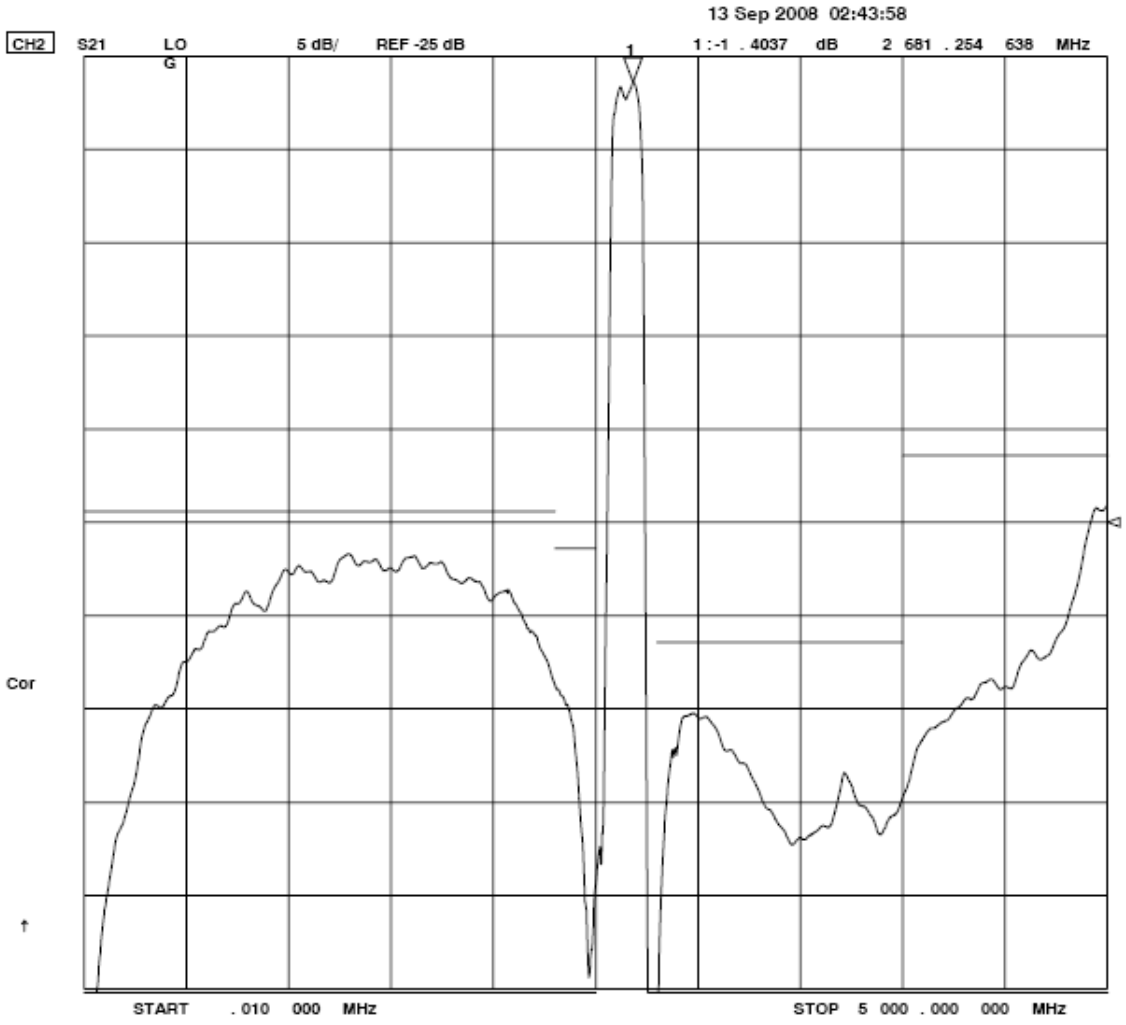
Connection	Terminals
Input	2
Output	5
Ground	All others

CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.

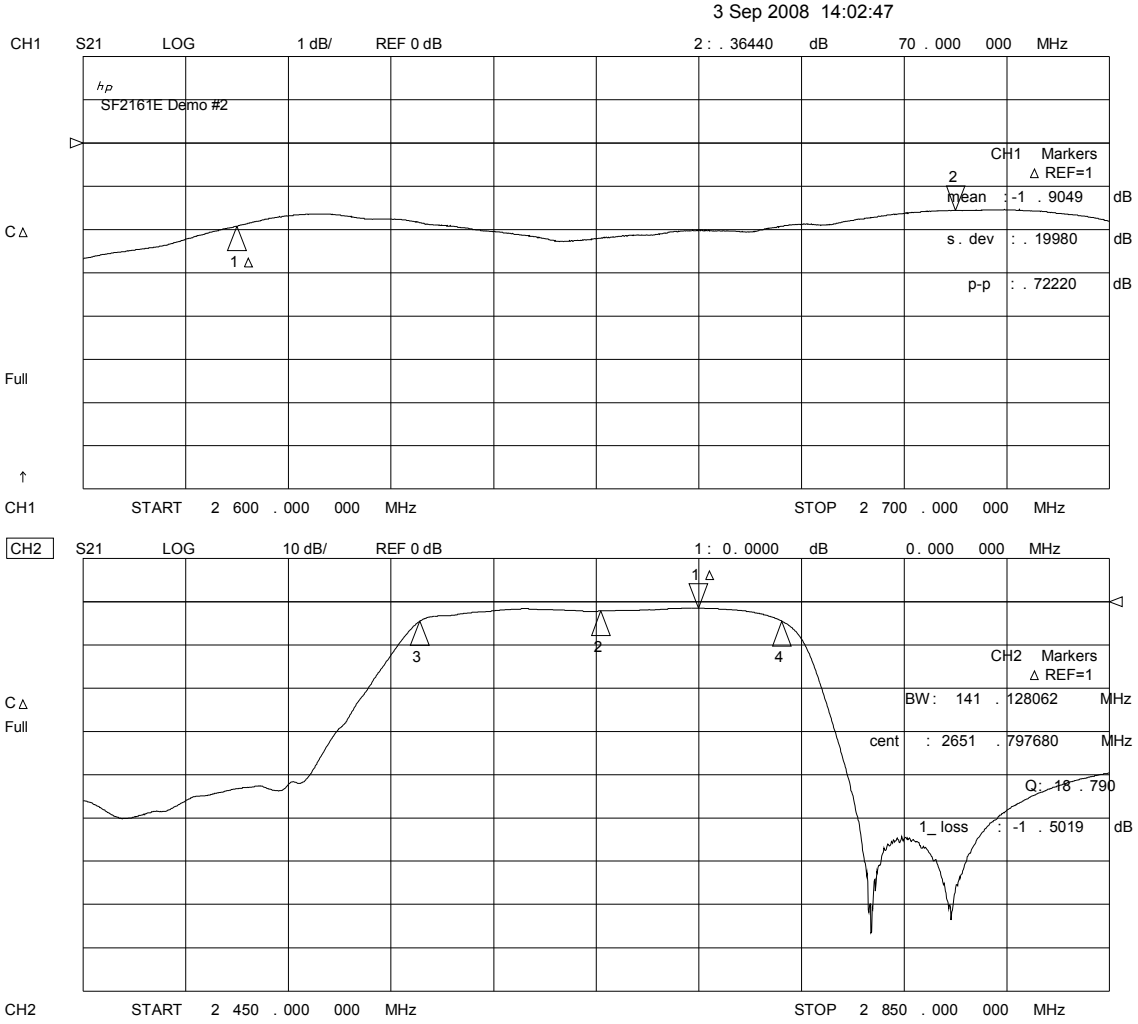
NOTES:

1. The design, manufacturing process, and specifications of this device are subject to change.
2. US or International patents may apply.

Broadband Filter Response

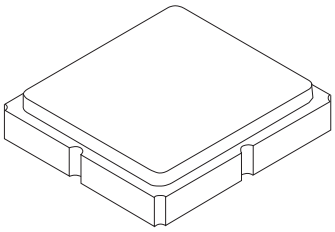


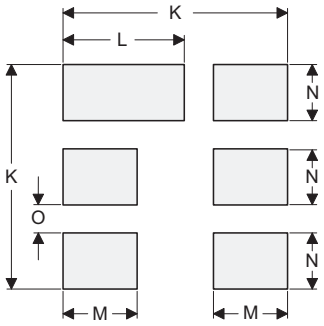
Passband Filter Response



SM3030-6 Case

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





PCB Footprint Top View

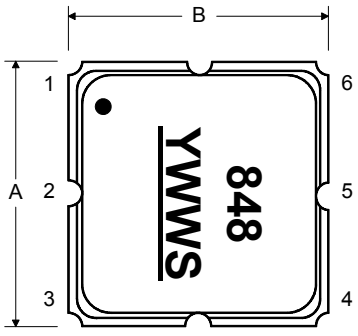
Case and PCB Footprint Dimensions

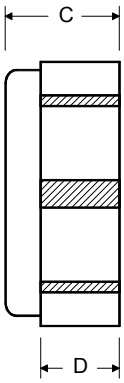
Dimension	mm			Inches		
	Min	Nom	Max	Min	Nom	Max
A	2.87	3.00	3.13	0.113	0.118	0.123
B	2.87	3.00	3.13	0.113	0.118	0.123
C	1.12	1.25	1.38	0.044	0.049	0.054
D	0.77	0.90	1.03	0.030	0.035	0.040
E	2.67	2.80	2.93	0.105	0.110	0.115
F	1.47	1.60	1.73	0.058	0.063	0.068
G	0.72	0.85	0.98	0.028	0.033	0.038
H	1.37	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

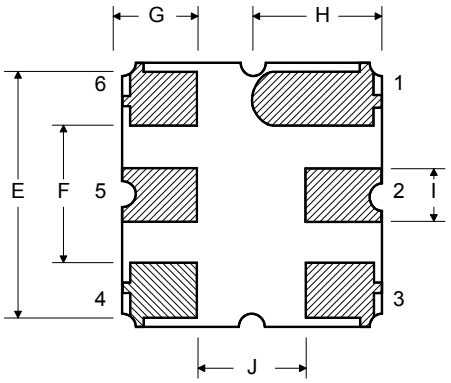
Materials	
Solder Pad Plating	0.3 to 1.0 µm Gold over 1.27 to 8.89 µm Nickel
Lid Plating	2.0 to 3.0 µm Nickel
Body	Al_2O_3 Ceramic
Pb Free	

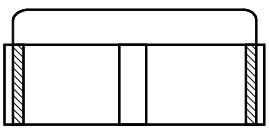
Top View





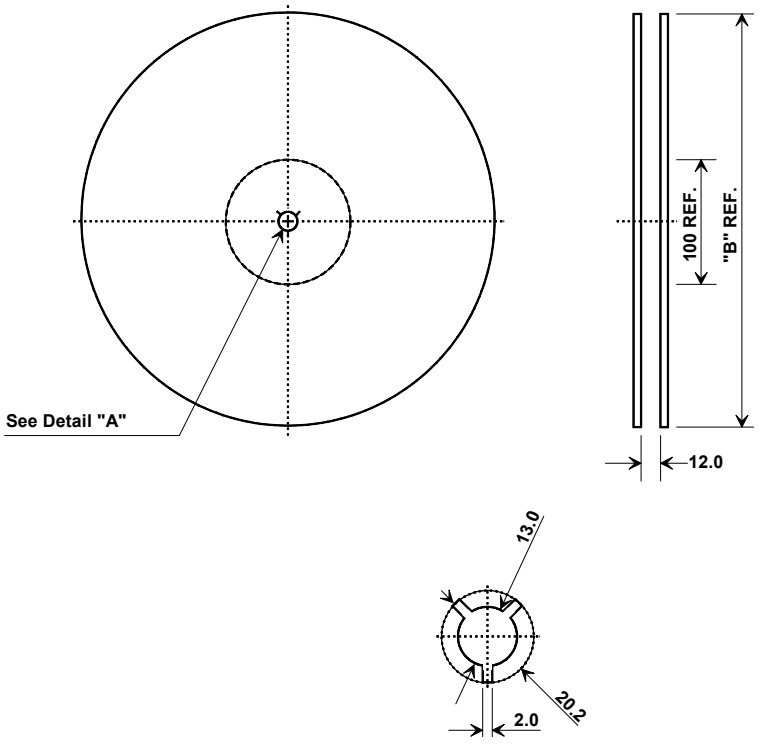
Bottom View





Tape and Reel Specifications

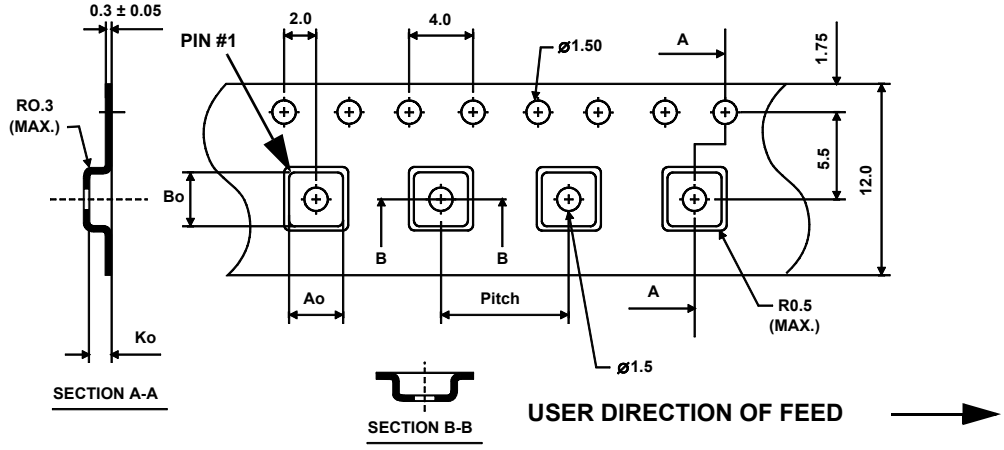
Tape and Reel Standard per ANSI/EIA481



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