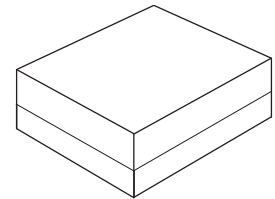


SF2444H

**433.920 MHz
SAW Filter**



SM2016-4

- 433.920 MHz SAW RF Filter
- 1.3 MHz Bandwidth
- 2.0 x 1.6 mm Surface-mount Case
- Complies with Directive 2002/95/EC (RoHS)
- Moisture Sensitivity Level: 1
- AEC-Q200 Qualified

Absolute Maximum Ratings

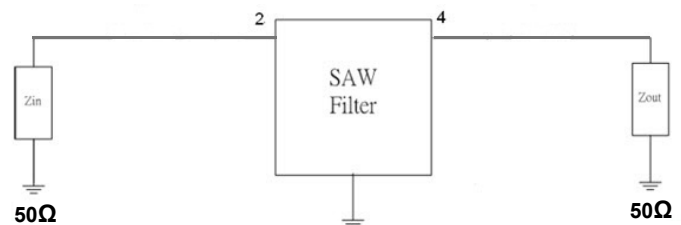
Rating	Value	Units
Maximum Incident Power in Passband	+10	dBm
Maximum DC Voltage On any Non-ground Terminal	3	VDC
Operable Temperature Range	-45 to +125	°C
Specification Temperature Range	-40 to +85	°C
Storage Temperature Range in Tape and Reel	-20 to +70	°C
Maximum Soldering Temperature Profile (5 cycles maximum)	265 °C for 10 s	

Electrical Characteristics

Characteristic	Sym	Notes	Min	Typ	Max	Units
Center Frequency	f _C			433.920		MHz
Insertion Loss, 433.270 to 434.570 MHz (Ripple is included)	IL			1.0	2.0	dB
Bandwidth at -1.0 dB	BW		1.3	11.0		MHz
Amplitude Ripple, 433.270 to 434.570 MHz	Δα					dB _{P-P}
Attenuation (relative to IL)	α _{rel}					dB
865.99 to 1200 MHz			40			
1200 to 2165.65 MHz			40			
2165.65 to 2171.05 MHz			50			
2171.05 to 3000 MHz			40			
3000 to 5198.19 MHz			40			
5198.19 to 5644.01 MHz			50			
5664.01 to 6000 MHz			40			
Case	2.0 X 1.6 X .55 mm, 4 Terminals					
Lid Symbolization, Y = Year, W = Week	9A, YW					
Terminating Source Impedance: Single-Ended				50		Ω
Terminating Source Impedance: Single-Ended				50		Ω
Temperature Coefficient of Frequency				-36		ppm/°C
Frequency Aging ABS Value First Year					10	ppm/yr
DS Insulation Resistance between Any 2 Pins			1.0			MΩ

Electrical Connections

Connection	Terminals
Input	2
Output	4
Ground	All Others



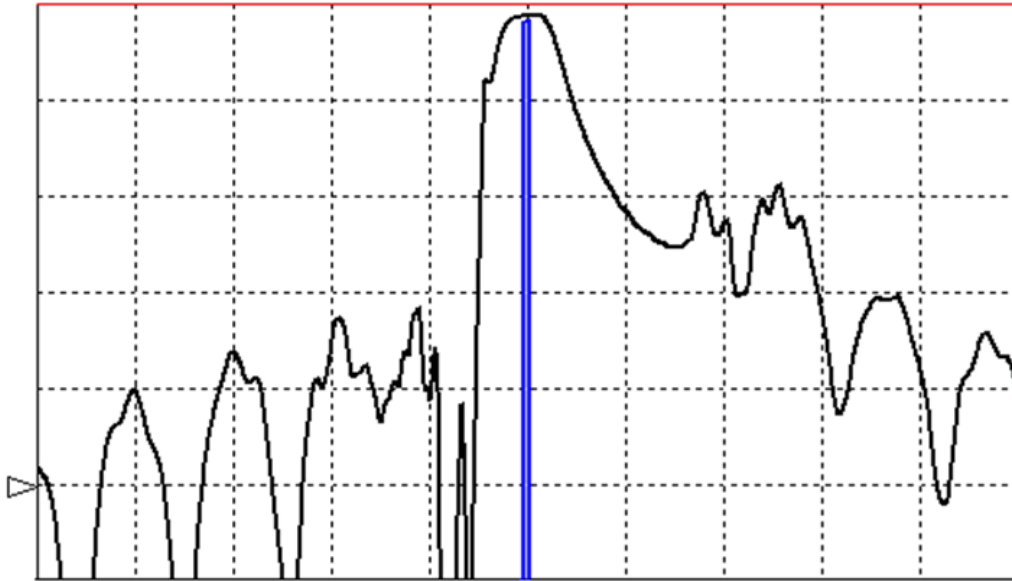
 **CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.**

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 Response Plots

Tr1 Log Mag 10.000dB/ REF -50.00dB

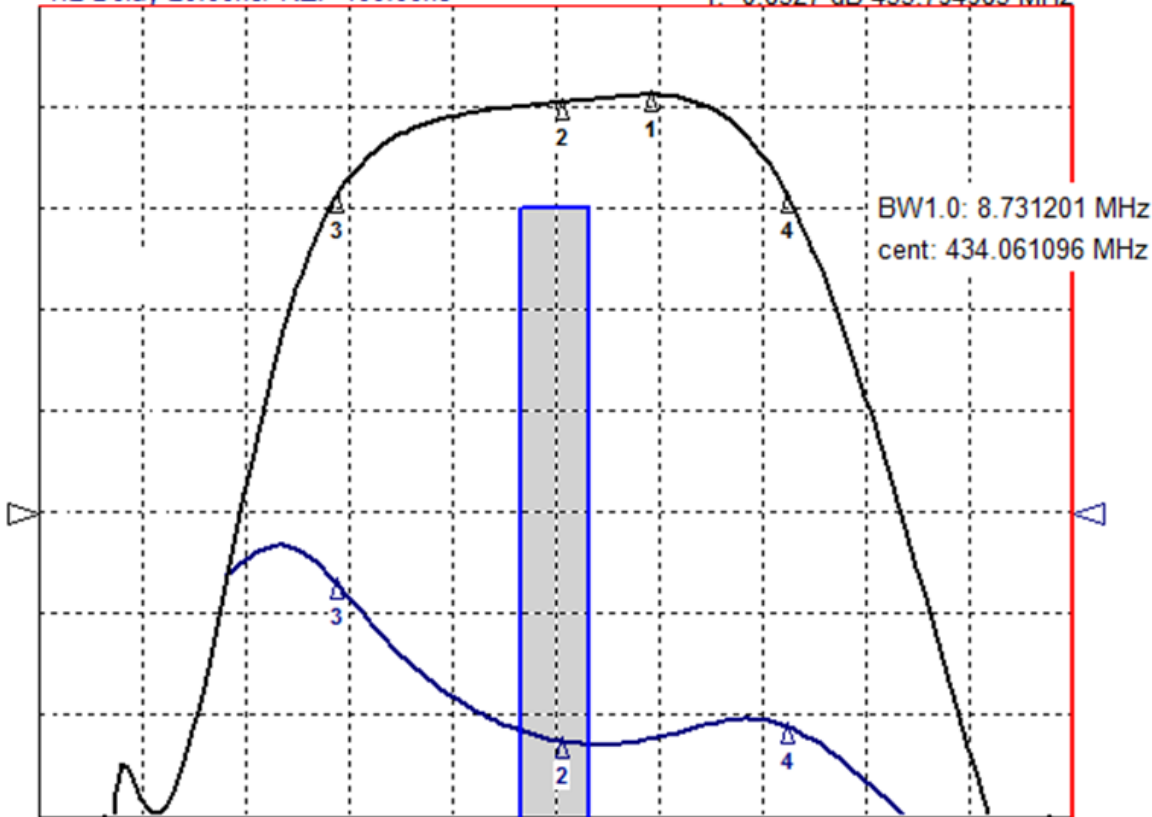


CENTER 433.920 MHz

SPAN 200.00 MHz

Tr1 Log Mag 1.000dB/ REF -5.00dB
Tr2 Delay 20.00ns/ REF 100.00ns

1: -0.8527 dB 435.794983 MHz

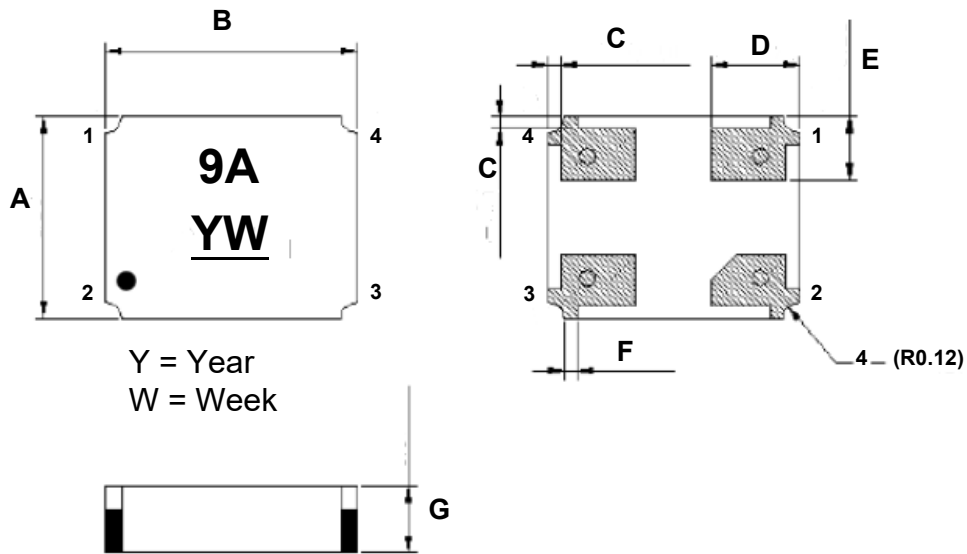


BW1.0: 8.731201 MHz
cent: 434.061096 MHz

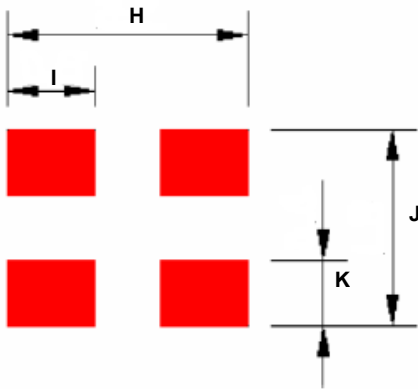
CENTER 433.920 MHz

SPAN 20.00 MHz

SM2016 - 2.0 X 1.6 mm -Terminal Surface-mount Case Drawing



PCB Footprint



Case and PCB Footprint Dimensions

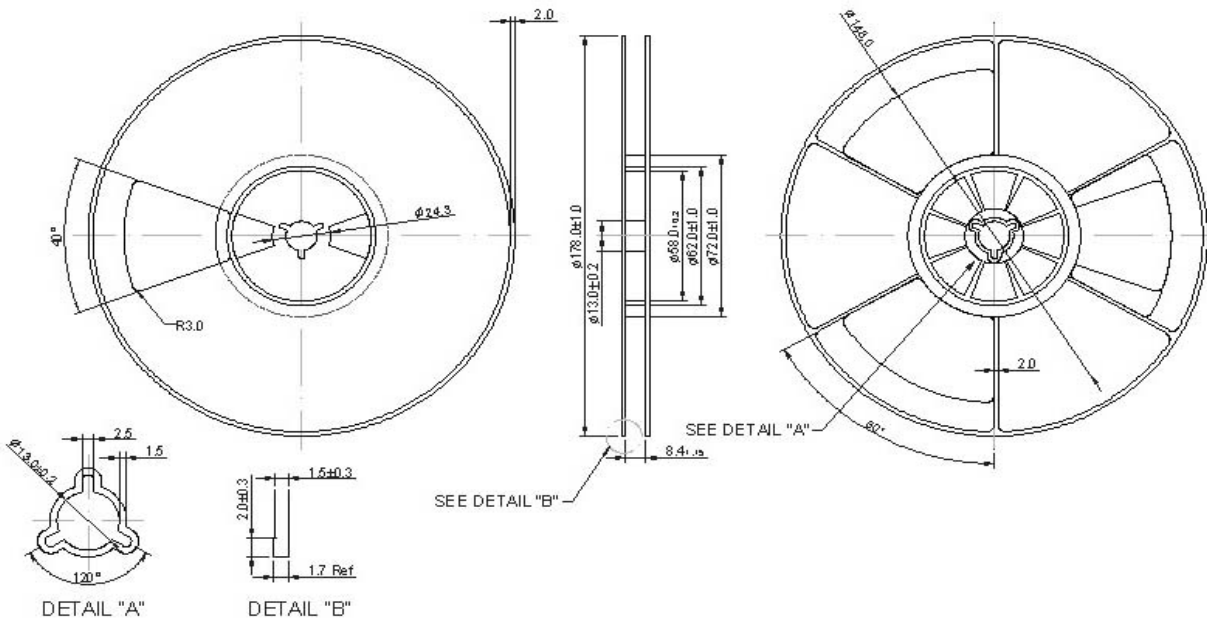
Dimension	mm			Inches		
	Min	Nom	Max	Min	Nom	Max
A	1.57	1.65	1.73	0.064	0.062	0.068
B	1.97	2.05	2.13	0.077	0.080	0.083
C	-	0.10	-	-	0.003	-
D	0.53	0.70	0.83	0.020	0.027	0.032
E	0.37	0.50	0.63	0.014	0.019	0.024
F	-	0.10	-	-	0.003	-
G	0.55	0.625	0.70	0.024	0.021	0.027
H	-	2.20	-	-	0.086	-
I	-	0.80	-	-	0.031	-
J	-	1.80	-	-	0.070	-
K	-	0.60	-	-	0.023	-

Materials	
Solder Pad Plating	0.3 to 1.0 μm Gold over 1.27 to 8.89 μm Nickel
Lid Plating	1.27 μm (minimum) Nickel over Cold Rolled Steel
Body	Al_2O_3 Ceramic

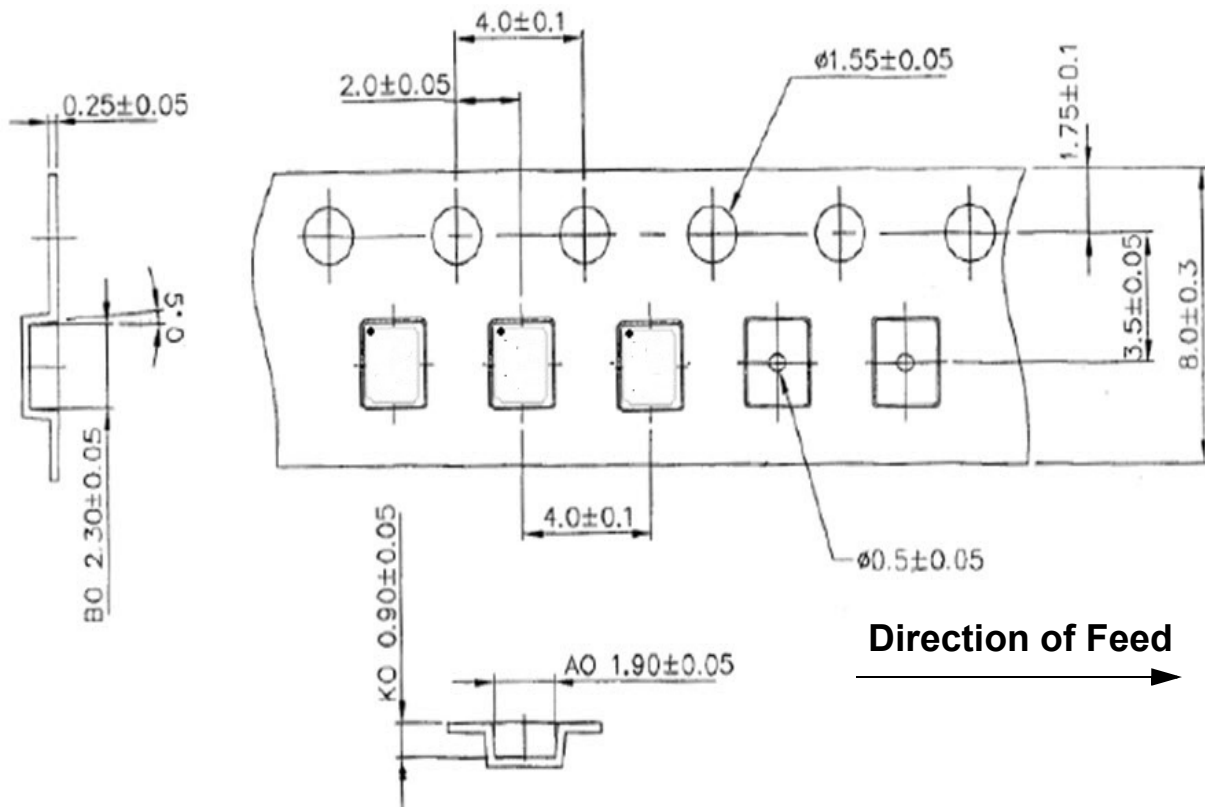
Reel Dimensions

Reel Count:
 7" = 2000
 13" = 10,000

Tape and Reel Standard per ANSI/EIA-481



Tape Dimensions



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.

