



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

- **SAW Filter for Digital Television**
- **Complies with Directive 2002/95/EC (RoHS)**



#### Characteristics:

Balance-to-balanced operation

Terminating source impedance :  $Z_S = 200 \Omega$

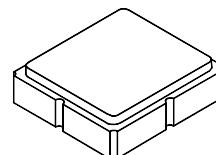
Terminating load impedance :  $Z_L = 200 \Omega$

#### Maximum Rating

| Rating                                                       | Value          | Units |
|--------------------------------------------------------------|----------------|-------|
| Input Power Level                                            | 0              | dBm   |
| DC Voltage on any Non-ground Terminal                        | 3              | V     |
| Operating Temperature                                        | -30 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 |       |

# SF2032E

## 1220 MHz SAW Filter



**SM3030-8**

| Characteristic                     | Sym   | Notes | Min | Typ  | Max | Units |
|------------------------------------|-------|-------|-----|------|-----|-------|
| Center Frequency                   | $f_C$ |       |     | 1220 |     | MHz   |
| Insertion Loss, 1206 to 1234 MHz   | IL    |       |     | 4.0  | 5.7 | dB    |
| Amplitude Ripple, 1206 to 1234 MHz |       |       |     | 1.9  | 3.5 | dB    |
| Attenuation Referenced to 0 dB:    |       |       |     |      |     |       |
| 300 to 1118 MHz                    |       |       | 40  | 59   |     | dB    |
| 1118 to 1146 MHz                   |       |       | 45  | 60   |     |       |
| 1300 to 2000 MHz                   |       |       | 45  | 59   |     |       |
| Group Delay Ripple                 |       |       |     | 15   |     | nSp-p |

|                                                                  |                                         |                  |  |  |  |  |
|------------------------------------------------------------------|-----------------------------------------|------------------|--|--|--|--|
| Case Style                                                       | SM3030-8 3.0 x 3.0 mm Nominal Footprint |                  |  |  |  |  |
| Lid Symbolization (Y=year, WW=week, S=shift) dot=pin 1 indicator | 504, YWWS                               |                  |  |  |  |  |
| Standard Reel Quantity                                           | Reel Size 7 Inch                        | 500 Pieces/Reel  |  |  |  |  |
|                                                                  | Reel Size 13 Inch                       | 3000 Pieces/Reel |  |  |  |  |

|        | Connection      | Terminals  |
|--------|-----------------|------------|
| Port 1 | Balanced Input  | 1,2        |
| Port 2 | Balanced Output | 5,6        |
|        | Ground          | All Others |

Dot Indicates Pin 1



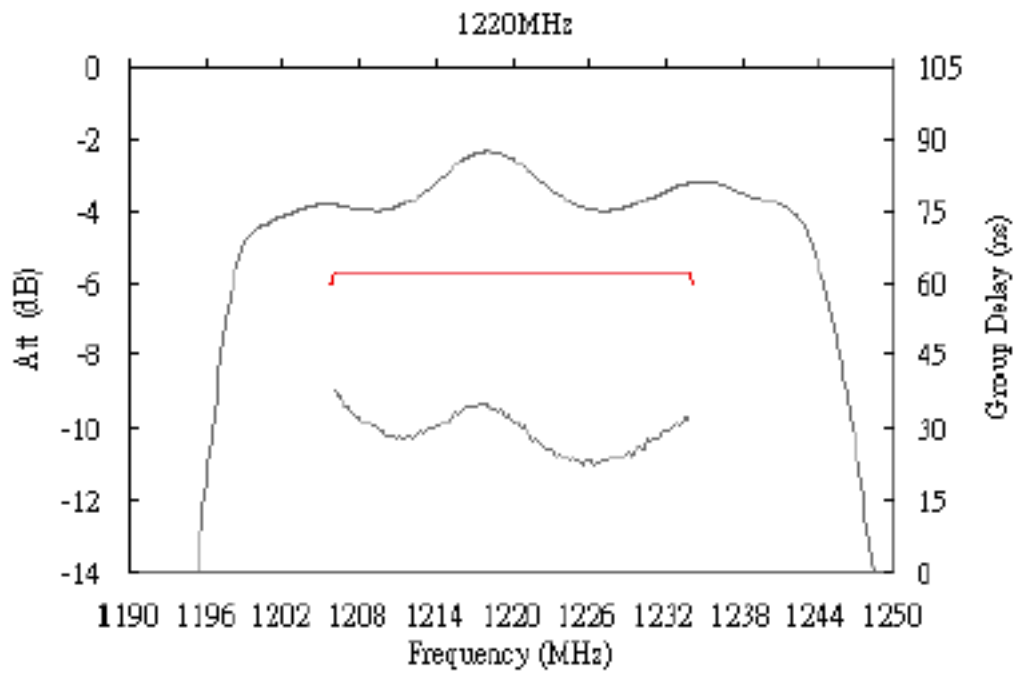
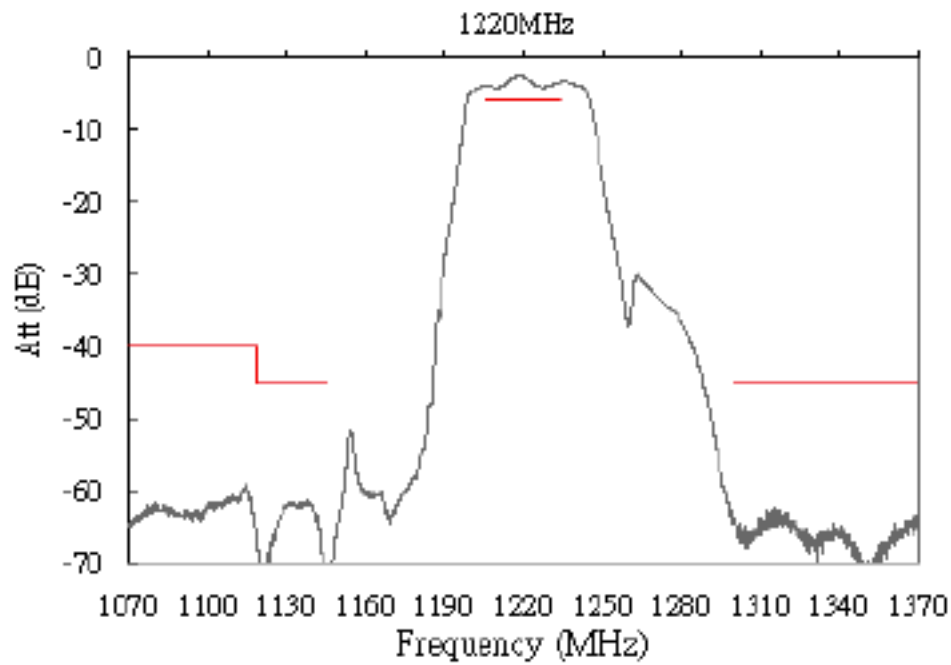
**CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.**

#### NOTES:

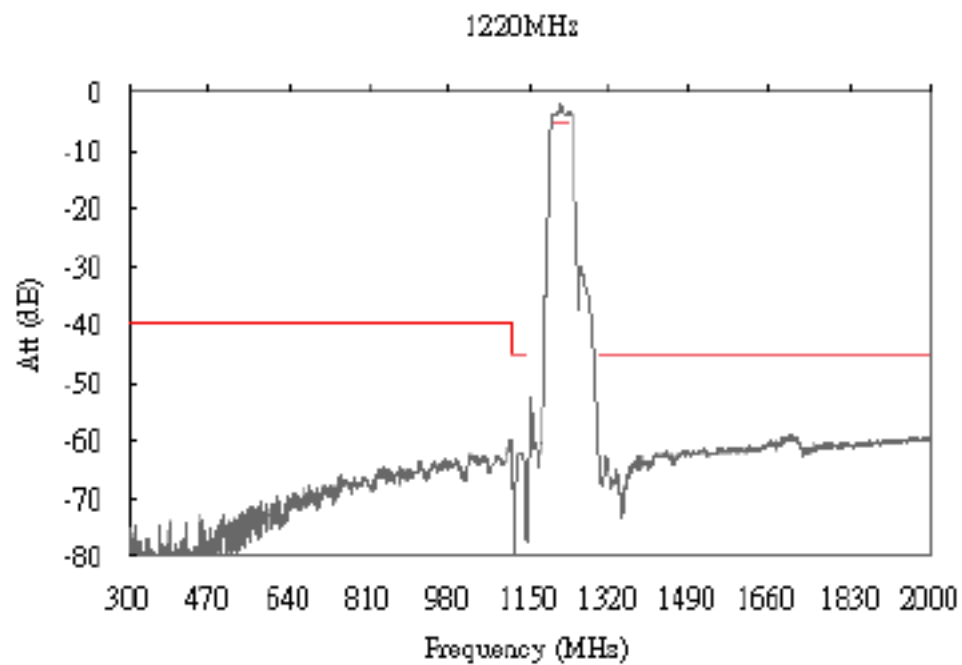
1. The design, manufacturing process, and specifications of this device are subject to change.
2. US or International patents may apply.

#### D. Transfer Function :

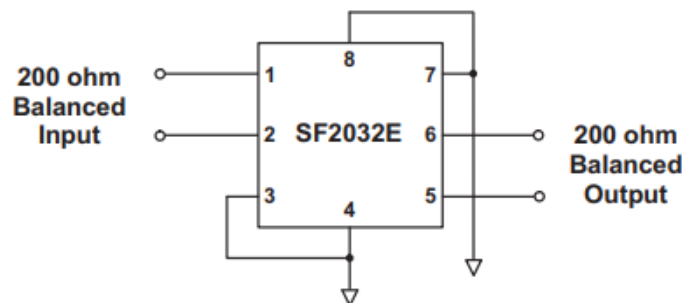
Narrowband



## Wideband

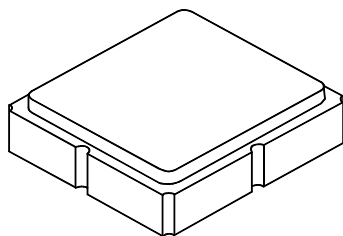


## SF2032E Test Circuit



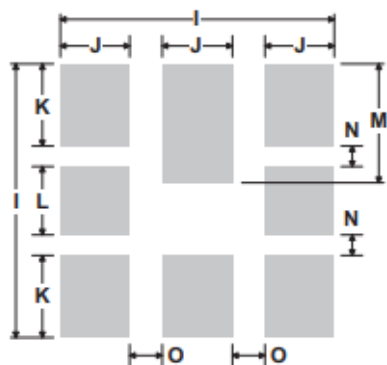
## 8-Terminal Ceramic Surface-Mount Case

### 3.0 X 3.0 mm Nominal Footprint



Case and PCB Footprint Dimensions

| Dimension | mm   |      |      | Inches |       |       |
|-----------|------|------|------|--------|-------|-------|
|           | Min  | Nom  | Max  | Min    | Nom   | Max   |
| A         | 2.87 | 3.0  | 3.13 | 0.113  | 0.118 | 0.123 |
| B         | 2.87 | 3.0  | 3.13 | 0.113  | 0.118 | 0.123 |
| C         | 1.14 | 1.27 | 1.40 | 0.045  | 0.050 | 0.055 |
| D         | 0.79 | 0.92 | 1.05 | 0.031  | 0.036 | 0.041 |
| E         | 0.62 | 0.75 | 0.88 | 0.024  | 0.029 | 0.034 |
| F         | 0.47 | 0.60 | 0.73 | 0.018  | 0.024 | 0.029 |
| G         | 0.47 | 0.60 | 0.73 | 0.018  | 0.024 | 0.029 |
| H         | 1.07 | 1.20 | 1.33 | 0.042  | 0.047 | 0.052 |
| I         |      | 3.19 |      |        | 0.126 |       |
| J         |      | 0.81 |      |        | 0.032 |       |
| K         |      | 0.96 |      |        | 0.038 |       |
| L         |      | 0.81 |      |        | 0.032 |       |
| M         |      | 1.39 |      |        | 0.055 |       |
| N         |      | 0.23 |      |        | 0.009 |       |
| O         |      | 0.38 |      |        | 0.015 |       |

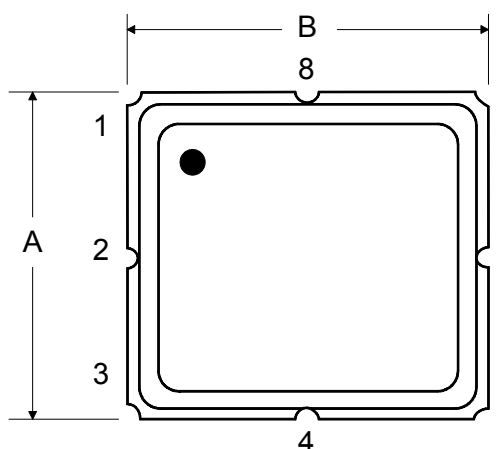


PCB Footprint Top View

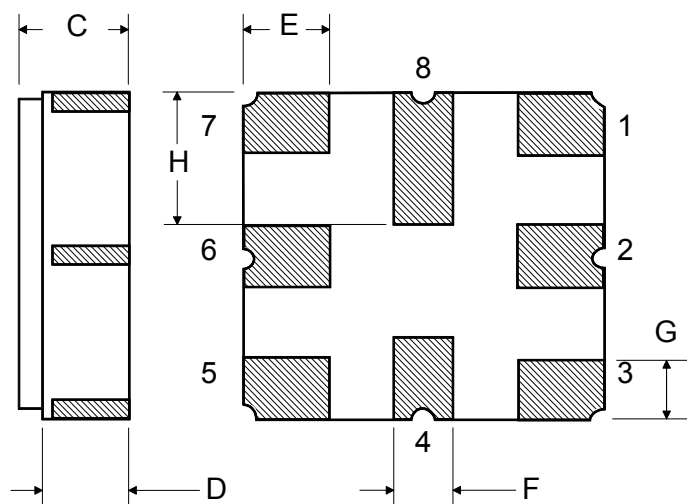
#### Case Materials

| 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                                      |
| Pb Free            |                                                                      |

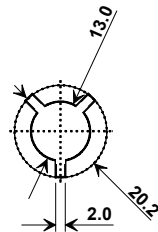
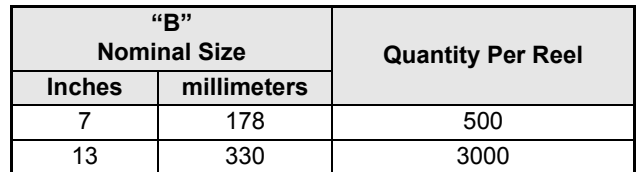
TOP VIEW



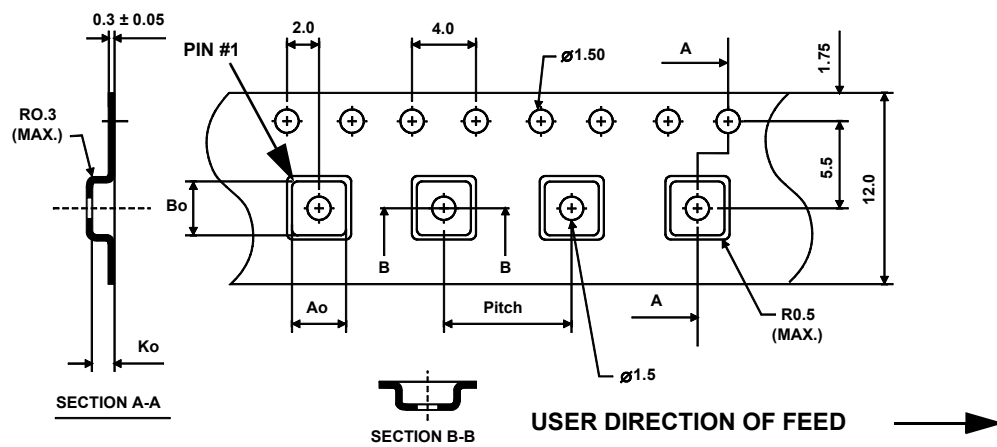
BOTTOM VIEW



## Tape and Reel Standard per ANSI/EIA-481

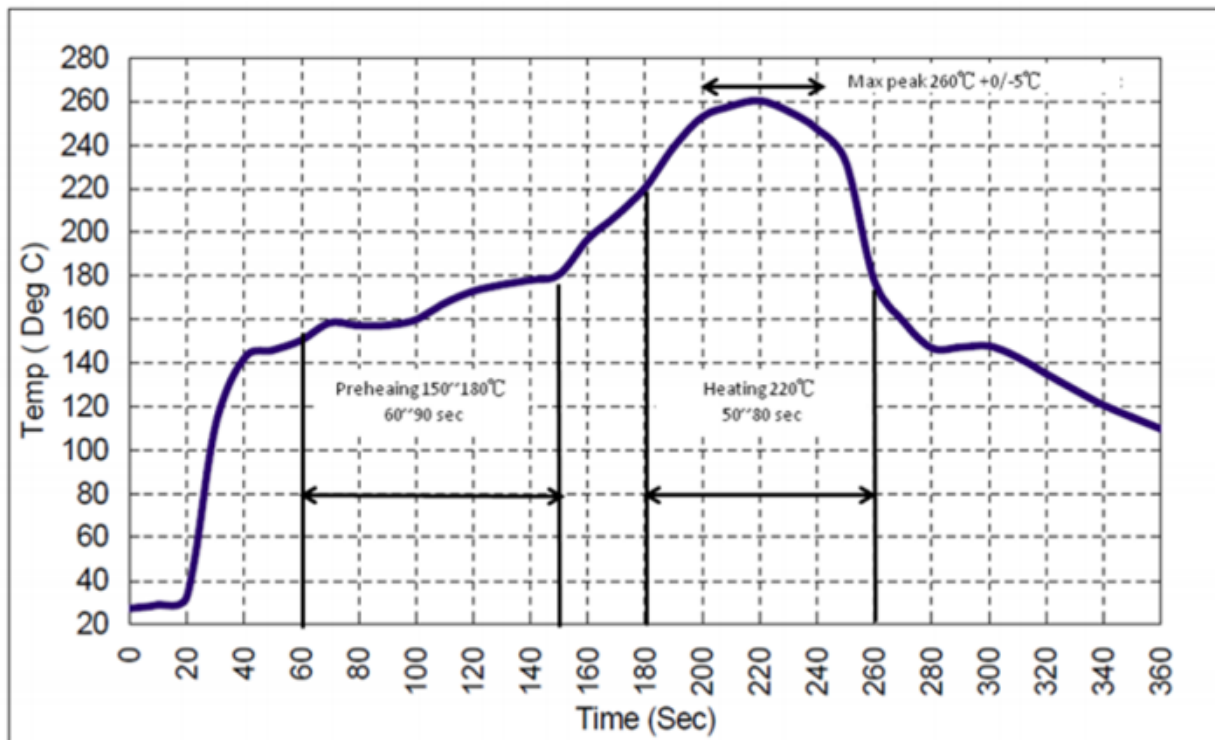


| Carrier Tape Dimensions |         |
|-------------------------|---------|
| Ao                      | 3.35 mm |
| Bo                      | 3.35 mm |
| Ko                      | 1.4 mm  |
| Pitch                   | 8.0 mm  |
| W                       | 12.0 mm |



## 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.



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