



AEC-Q200

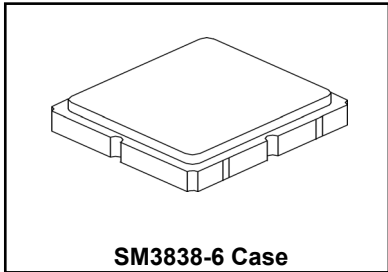
This component was always RoHS compliant from the first date of manufacture.

- **Advanced LiTaO₃ Design for Low Insertion Loss**
- **Hermetically-sealed Surface Mount package**
- **Complies with Directive 2002/95/EC (RoHS)**

RoHS
Compliant

RF3631D

427.5 MHz
SAW Filter



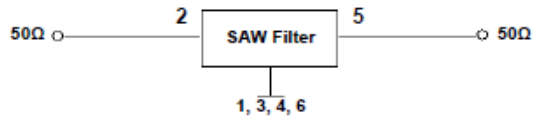
Absolute Maximum Ratings

| Rating | Value | Units |
|---------------------------------|-------------|-------|
| Maximum Input Power | +10 | dBm |
| DC Voltage between Terminals | 3 | VDC |
| Operable Temperature Range | -40 to +125 | °C |
| Specification Temperature Range | -40 to +85 | °C |
| Storage Temperature Range | -40 to +85 | °C |

| Characteristic | Sym | Notes | Minimum | Typical | Maximum | Units |
|---|-------|-------|----------------------------------|---------|---------|----------|
| Center Frequency | f_c | | | 427.5 | | MHz |
| 1.0 dB Bandwidth | | | | 19.5 | | dB |
| 3.0 dB Bandwidth | | | | 23.6 | | |
| Insertion Loss 420 to 435 MHz | IL | | | 1.5 | 3.0 | |
| Attenuation (reference from 0 dB): | | | | | | dB |
| 10 to 360 MHz | | | 50 | 56 | | |
| 360 to 400 MHz | | | 47 | 53 | | |
| 487 to 600 MHz | | | 47 | 51 | | |
| 600 to 1000 MHz | | | 43 | 48 | | |
| Source Impedance | | | | 50 | | Ω |
| Load Impedance | | | | 50 | | |
| Case | | | SM3838-6, 3.8 x 3.8 mm Footprint | | | |
| Lid Symbolization (YY=Year, WW=week, S=shift) | | | B55, <u>YWWS</u> | | | |

Electrical Connections

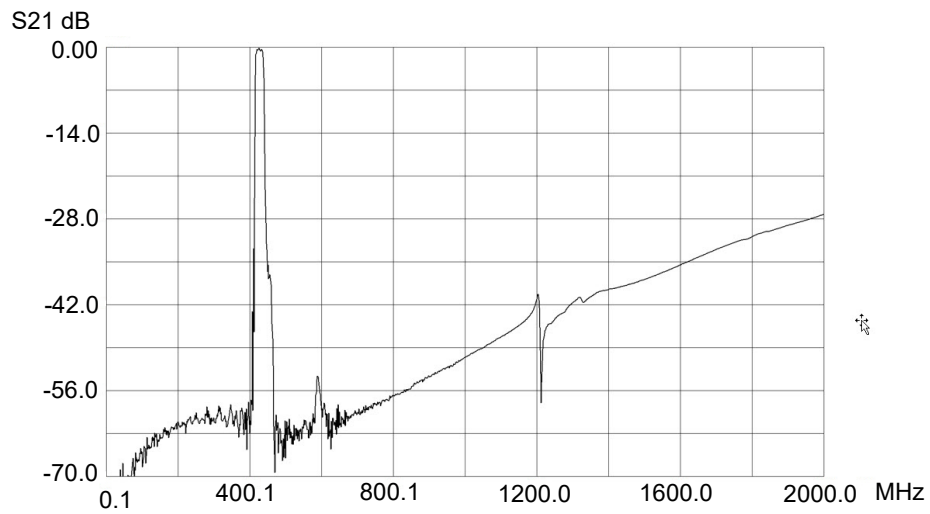
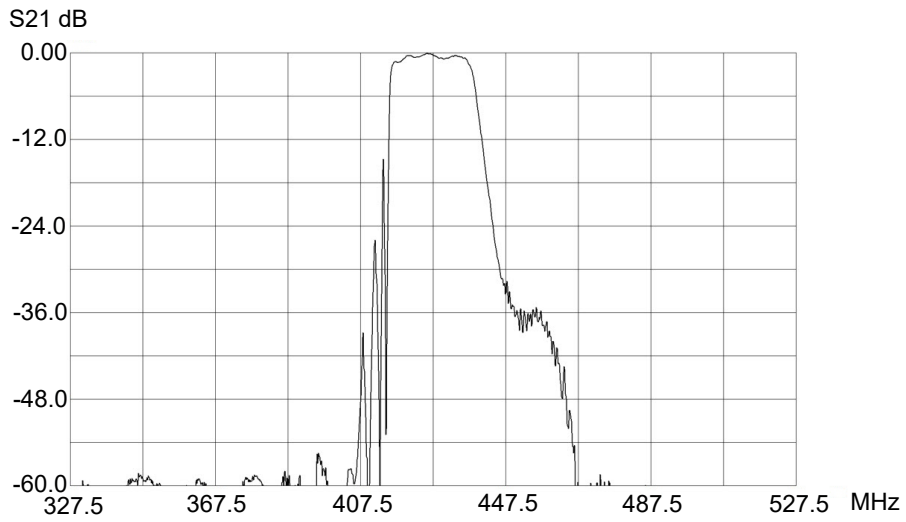
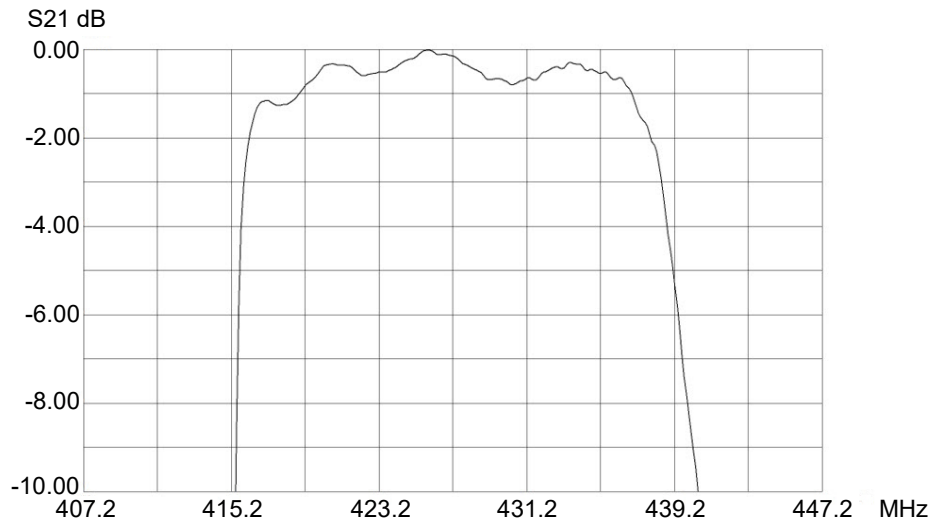
| Connection | Terminals |
|-------------|------------|
| RF Input | 2 |
| RFOutput | 5 |
| Case Ground | All Others |



CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.

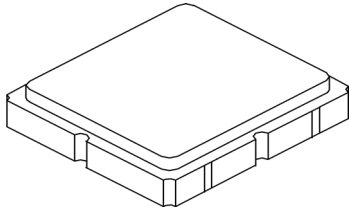
NOTES:

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.



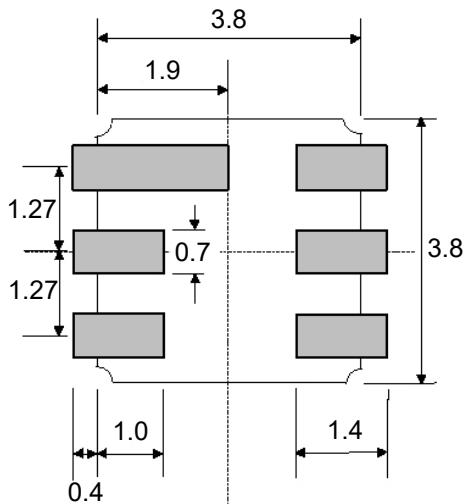
SM3838-6 Case

6-Terminal Ceramic Surface-Mount Case 3.8 X 3.8 mm Nominal Footprint



Case Dimensions

| Dimension | mm | | | Inches | | |
|-----------|------|------|------|--------|-------|-------|
| | Min | Nom | Max | Min | Nom | Max |
| A | 3.60 | 3.80 | 4.00 | 0.142 | 0.150 | 0.157 |
| B | 3.60 | 3.80 | 4.00 | 0.142 | 0.150 | 0.157 |
| C | 1.10 | 1.30 | 1.50 | 0.043 | 0.050 | 0.060 |
| D | 0.95 | 1.10 | 1.25 | 0.037 | 0.043 | 0.049 |
| E | 2.39 | 2.54 | 2.69 | 0.094 | 0.100 | 0.106 |
| G | 0.90 | 1.00 | 1.10 | 0.035 | 0.040 | 0.043 |
| H | 1.90 | 2.00 | 2.10 | 0.748 | 0.079 | 0.083 |
| I | 0.50 | 0.60 | 0.70 | 0.020 | 0.024 | 0.028 |
| J | 1.70 | 1.80 | 1.90 | 0.067 | 0.071 | 0.075 |
| K | - | - | 1.43 | - | - | 0.056 |

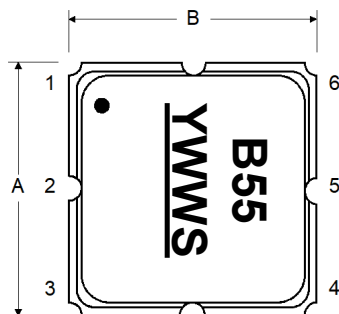


PCB Footprint

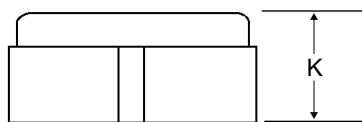
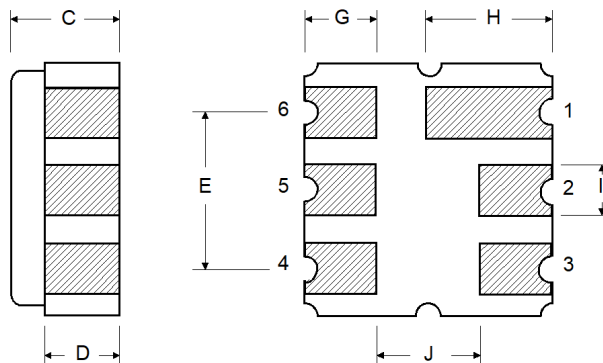
Case Material

| 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 |

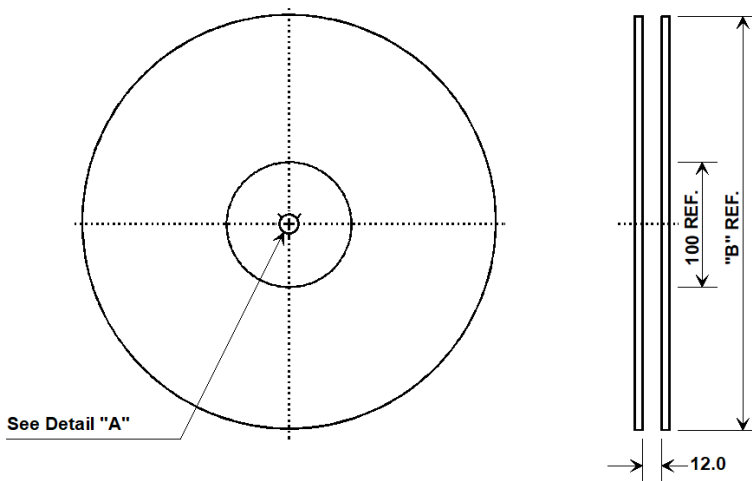
TOP VIEW



BOTTOM VIEW

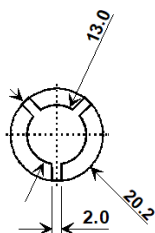


Tape and Reel Specifications



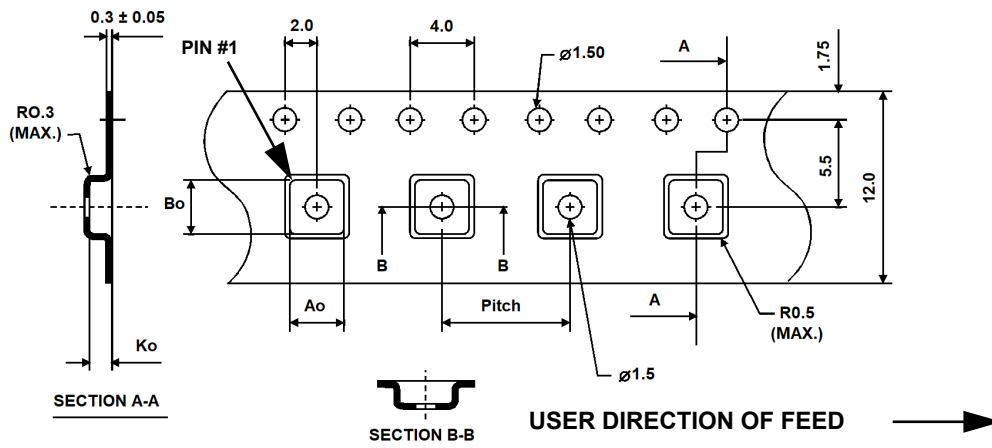
Tape and Reel Standard per ANSI/EIA-481

| "B" Nominal Size | | Quantity Per Reel |
|------------------|-------------|-------------------|
| Inches | millimeters | |
| 7 | 178 | 500 |
| 13 | 330 | 3000 |



COMPONENT ORIENTATION and DIMENSIONS

| Carrier Tape Dimensions | |
|-------------------------|---------|
| Ao | 4.25 mm |
| Bo | 4.25 mm |
| Ko | 1.30 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.

