



AEC-Q200

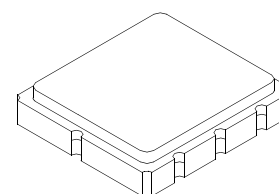
This component was always RoHS compliant from the first date of manufacture.

- **Ideal Front-End Filter for European Wireless Receivers**
- **Low-Loss, Coupled-Resonator Quartz Design**
- **Simple External Impedance Matching**
- **Complies with Directive 2002/95/EC (RoHS)**
- **Tape and Reel Standard per ANSI/EIA-481**



RF3336D

**868.35 MHz
SAW Filter**



**SM3838-8 Case
3.8 x 3.8**

The RF3336D is a low-loss, compact, and economical surface-acoustic-wave (SAW) filter designed to provide front-end selectivity in 868.35 MHz receivers. Receiver designs using this filter include superhet with 10.7 MHz or 500 kHz IF, direct conversion and superregen. Typical applications of these receivers are wireless remote-control and security devices operating in Europe under ETSI I-ETS 300 220, in Germany under FTZ 17 TR 2100, in the United Kingdom under DTI MPT 1340 (for automotive only), in France under PTT Specifications ST/PAA/TPA/AGH/1542, and in Scandinavia.

This coupled-resonator filter (CRF) uses selective null placement to provide suppression, typically greater than 40 dB, of the LO and image spurious responses of superhet receivers with 10.7 MHz IF. RFMi's advanced SAW design and fabrication technology is utilized to achieve high performance and very low loss with simple external impedance matching.

| Characteristic | | Sym | Notes | Minimum | Typical | Maximum | Units |
|--|--|------------------|-------|------------------|---------|---------|---------------------|
| Center Frequency @ 25°C | Absolute Frequency | f _C | | | 868.35 | | MHz |
| Insertion Loss | | IL | | | 2.7 | 4.0 | dB |
| 3 dB Bandwidth | | BW ₃ | | 500 | 650 | 900 | kHz |
| Attenuation: (relative to ILmin) | 10 - 700 MHz | | | 50 | 55 | | dB |
| | 700 - 830 MHz | | | 40 | 45 | | |
| | 830 - 850 MHz | | | 35 | 40 | | |
| | 850 - 864.4 MHz | | | 20 | 25 | | |
| | 870.4 - 877.4 MHz | | | 21 | 26 | | |
| | 877.4 - 882.4 MHz | | | 15 | 19 | | |
| | 882.4 - 900 MHz | | | 28 | 35 | | |
| | 900 - 1000 MHz | | | 40 | 45 | | |
| Temperature | Freq. Temp. Coefficient | FTC | | | 0.032 | | ppm/°C ² |
| Frequency Aging | Absolute Value during the First Year | fA | | | <±10 | | ppm/yr |
| Impedance @ f _C | Input Z _{IN} = R _{IN} /C _{IN} | Z _{IN} | | 35.6Ω // 2.06pF | | | |
| | Output Z _{OUT} = R _{OUT} /C _{OUT} | Z _{OUT} | | 35.8Ω // 2.19pF | | | |
| Lid Symbolization (Y=Year, WW=Week, S=Shift) | | 699, YWWS | | | | | |
| Standard Reel Quantity | Reel Size 7 Inch | | | 500 Pieces/Reel | | | |
| | Reel Size 13 Inch | | | 3000 Pieces/Reel | | | |



CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.

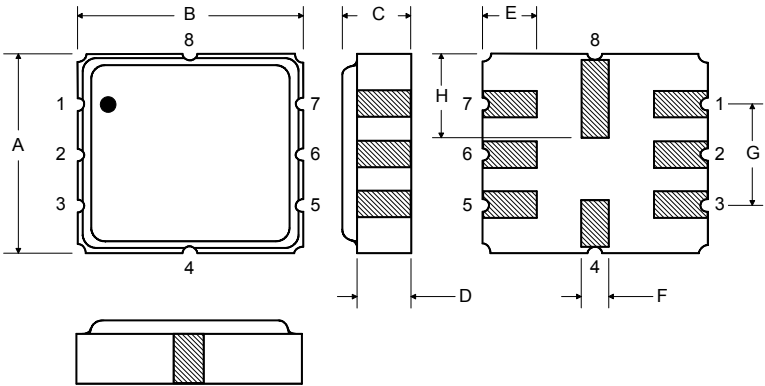
NOTES:

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

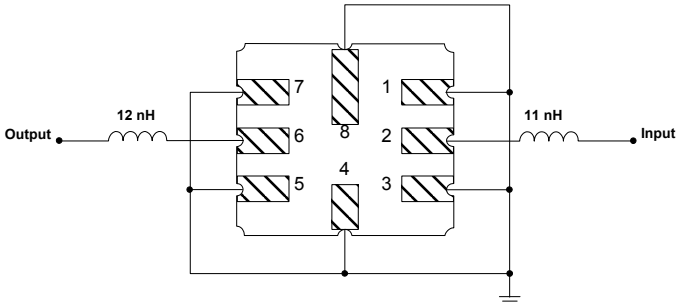
| Rating | Value | Units |
|----------------------------|------------------------------|--------|
| Input Power Level | 10 | dBm |
| DC Voltage | 12 | VDC |
| Storage Temperature | -40 to +125 | °C |
| Operable Temperature Range | -40 to +125 | °C |
| Soldering Temperature | (10 seconds / 5 cycles max.) | 260 °C |

Electrical Connections

| Pin | Connection |
|-----|---------------|
| 1 | Input Ground |
| 2 | Input |
| 3 | Ground |
| 4 | Case Ground |
| 5 | Output Ground |
| 6 | Output |
| 7 | Ground |
| 8 | Case Ground |



Matching Circuit to 50Ω



Case Dimensions

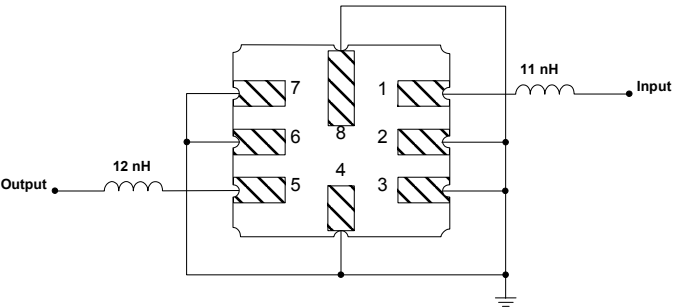
| Dimension | mm | | | Inches | | |
|-----------|------|------|------|--------|-------|-------|
| | Min | Nom | Max | Min | Nom | Max |
| A | 3.6 | 3.8 | 4.0 | 0.14 | 0.15 | 0.16 |
| B | 3.6 | 3.8 | 4.0 | 0.14 | 0.15 | 0.16 |
| C | 1.00 | 1.20 | 1.40 | 0.04 | 0.05 | 0.055 |
| D | 0.95 | 1.10 | 1.25 | 0.033 | 0.043 | 0.05 |
| E | 0.90 | 1.0 | 1.10 | 0.035 | 0.04 | 0.043 |
| F | 0.50 | 0.6 | 0.70 | 0.020 | 0.024 | 0.028 |
| G | 2.39 | 2.54 | 2.69 | 0.090 | 0.100 | 0.110 |
| H | 1.40 | 1.75 | 2.05 | 0.055 | 0.069 | 0.080 |

OPTIONAL

Electrical Connections

| Pin | Connection |
|-----|---------------|
| 1 | Input |
| 2 | Input Ground |
| 3 | Ground |
| 4 | Case Ground |
| 5 | Output |
| 6 | Output Ground |
| 7 | Ground |
| 8 | Case Ground |

Matching Circuit to 50Ω



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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