

TMX U387

SAW Filter datasheet

3.8 x 3.8 x 1.2 mm, SMD

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SAW Bandpass Filters | Wireless Communications

Features

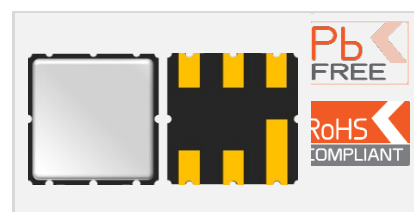
Features

- 433.42 MHz center frequency
- Ceramic package for Surface Mounted Technology
- Frequency Low Loss: 3.5 dB (typical)

Applications

- Remote control - RF
- Wireless applications:
 - Home appliances
 - Security systems

3.8 x 3.8 x 1.2 mm



Maximum Ratings

| Parameter | Min. | Typ. | Max. | Unit |
|---|------|------|------|------|
| Storage temperature range (T_{stg}) | -45 | | 85 | °C |
| Operating temperature range (T_A) | -10 | | 60 | °C |
| DC voltage (V_{DC}) | | | 12 | V |
| Input Power | | | 18 | dBm |

Frequency and Electrical Characteristics

| Parameter | Min. | Typ. ¹ | Max. | Unit |
|--|------|-------------------|------|---------------------|
| Source Impedance ² (Single ended) | | 50 | | Ω |
| Load Impedance ² (Single ended) | | 50 | | Ω |
| Center frequency (f_c) | | 433.42 | | MHz |
| Rejection | | | | |
| At $f_c - 21.4$ MHz (Image) | 36 | 45 | | dB |
| At $f_c - 10.7$ MHz (LO) | 20 | 25 | | dB |
| Ultimate | | 60 | | dB |
| Insertion Loss (IL) | | 3.5 | 5.0 | dB |
| Bandwidth @ 3 dB (BW, passband width) | 0.6 | 0.9 | | MHz |
| Temperature | | | | |
| Turnover temperature | 25 | | 55 | °C |
| Turnover frequency | | 433.42 | | MHz |
| Frequency temperature coefficient | | 0.032 | | ppm/°C ² |
| Frequency ageing | | | | |
| Absolute value during the first year | | 10 | | ppm/yr |

¹ Typical values are nominal performances at room temperature

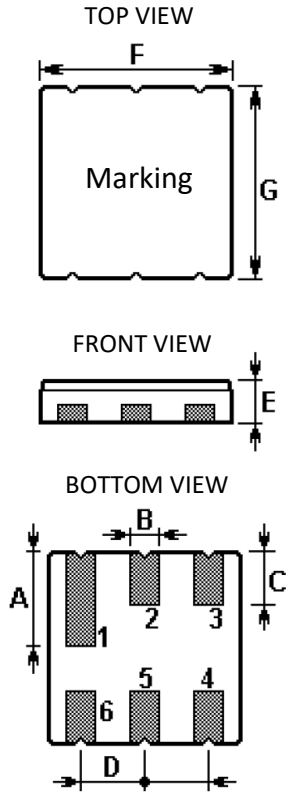
² External matching circuit is required (see drawing here under)

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Model Outline and Pin Connection

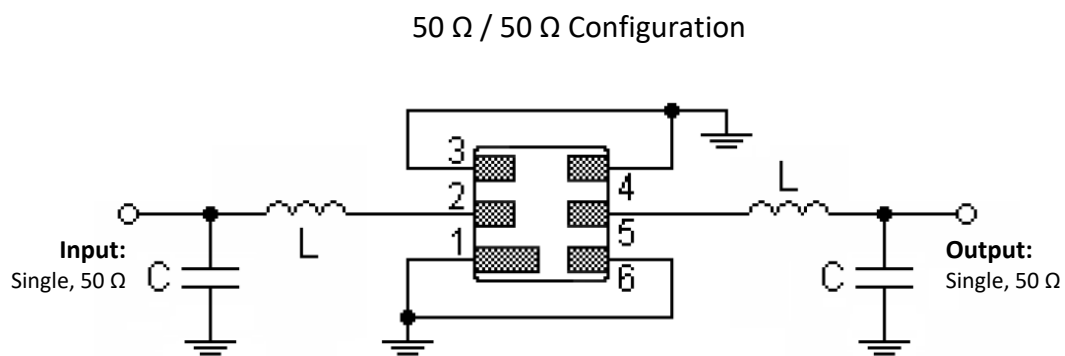


| Marking | Note |
|---------|--|
| Line 1 | U387 RakonXpress designation |
| Line 2 | UYWWZZ U = Production code Y = Last digit of the year WW = Number of week in the year ZZ = Internal Code (Wafer batch) |
| Line 3 | • • = Identify black dot |

| Pin | Connections |
|------------|-------------|
| 2 | Input |
| 5 | Output |
| 1, 3, 4, 6 | Ground |

| Code | Dimensions (mm) |
|------|-----------------|
| A | 1.9 |
| B | 0.64 |
| C | 1.0 |
| D | 1.27 |
| E | 1.2 |
| F | 3.8 |
| G | 3.8 |

Test Circuit



C = 13 pF and L = 3.0 nH. These components values have to be adjusted to the customer PC Board, due to parasitics inductors and capacitors.

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Typical S21 Response

