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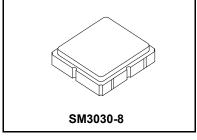




RFM products are now Murata products.

## **SF2126E**

## 725.00 MHz **SAW Filter**



## · Low-loss SAW Filter for Wimax Application

- 3.0 x 3.0mm Surface Mount Case
- 50Ω Input/Output Impedance

## **Absolute Maximum Ratings**

| Rating                                                       | Value           | Units |
|--------------------------------------------------------------|-----------------|-------|
| Input Power Level                                            | +15             | dBm   |
| DC Voltage on any Non-ground Terminal                        | 3               | V     |
| Operating Temperature Range                                  | -40 to +95      | °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 |       |

#### **Electrical Characteristics**

| Characteristic                        | Sym            | Notes | Min<br>(-40 to 95°C) | Тур | Max<br>(-30 to 85°C) | Max<br>(-40 to 95°C) | Units |
|---------------------------------------|----------------|-------|----------------------|-----|----------------------|----------------------|-------|
| Nominal Center Frequency              | f <sub>C</sub> |       |                      | 725 |                      |                      | MHz   |
| Frequency Range                       |                |       | 700                  |     |                      | 750                  | MHz   |
| Insertion Loss                        | IL             |       |                      | 2.6 | 3.0                  | 4.0                  |       |
| Amplitude Ripple, p-p, 700 to 750 MHz |                |       |                      | 1   | 1.5                  | 1.8                  |       |
| VSWR                                  |                |       |                      |     | 2.2                  | 2.5                  |       |
| Attenuation Referenced to 0 dB:       |                |       |                      |     |                      |                      |       |
| 500 to 600 MHz                        |                |       | 40                   |     |                      |                      | dB    |
| 601 to 650 MHz                        |                |       | 30                   |     |                      |                      | uБ    |
| 651 to 665 MHz                        |                |       | 20                   |     |                      |                      |       |
| 780 to 824 MHz                        |                |       | 15                   |     |                      |                      |       |
| 825 to 844 MHz                        |                |       | 30                   |     |                      |                      |       |
| 845 to 960 MHz                        |                |       | 40                   |     |                      |                      |       |
| Source Impedance                      | Z <sub>S</sub> |       |                      | 50  |                      |                      | Ω     |
| Load Impedance                        | Z <sub>L</sub> |       |                      | 50  |                      |                      | Ω     |

| Case Style                                                       | SM3030-8 3.0 x 3.0 mm Nominal Footprint |
|------------------------------------------------------------------|-----------------------------------------|
| Lid Symbolization, Y=year, WW=week, S=shift, dot=pin 1 indicator | 648, YWWS                               |
| Standard Reel Quantity Reel Size 7 Inch                          | 500 Pieces/Reel                         |

### **Electrical Connections**

|                   | Connection | Terminals  |
|-------------------|------------|------------|
| Port 1            | Input      | 1          |
| Port 2            | Output     | 5          |
|                   | Ground     | All Others |
| Dot Indicates Pin | 1          |            |

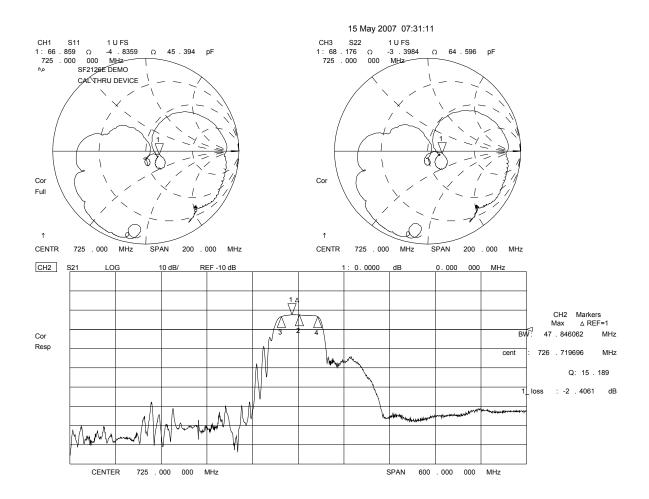
# NOTES:

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

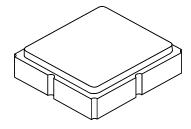
- Unless noted otherwise, all specifications apply over the operating temperature range with filter soldered to the specified demonstration board with impedance matching to 50  $\Omega$  and measured with 50  $\Omega$  network analyzer.
- Unless noted otherwise, all frequency specifications are referenced to the nominal center frequency, fc.
- The design, manufacturing process, and specifications of this filter are subject to change.
- US and international patents may apply.

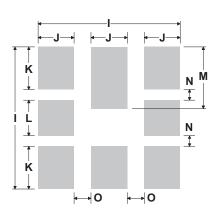
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## **Frequency Characteristics:**



# 8-Terminal Ceramic Surface-Mount Case 3.0 X 3.0 mm Nominal Footprint





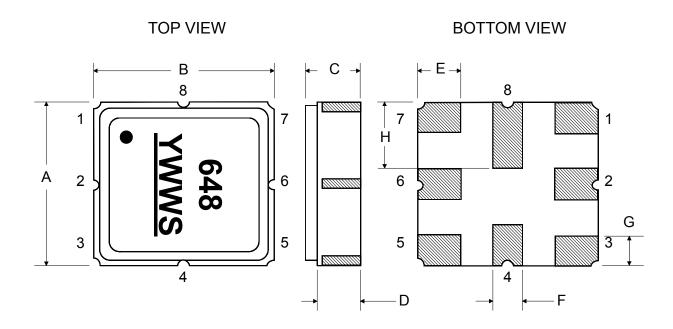
**PCB Footprint Top View** 

## **Case and PCB Footprint Dimensions**

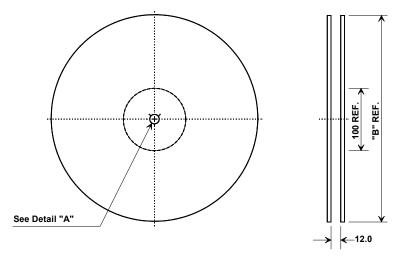
| Dimension    | mm   |      |      | Inches |       |       |
|--------------|------|------|------|--------|-------|-------|
| Dillielision | Min  | Nom  | Max  | Min    | Nom   | Max   |
| Α            | 2.87 | 3.0  | 3.13 | 0.113  | 0.118 | 0.123 |
| В            | 2.87 | 3.0  | 3.13 | 0.113  | 0.118 | 0.123 |
| С            | 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 |
| Н            | 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 |       |
| М            |      | 1.39 |      |        | 0.055 |       |
| N            |      | 0.23 |      |        | 0.009 |       |
| 0            |      | 0.38 |      |        | 0.015 |       |

### **Case Materials**

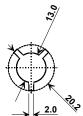
| Materials             |                                                |  |  |  |
|-----------------------|------------------------------------------------|--|--|--|
| Solder Pad<br>Plating | 0.3 to 1.0 μm Gold over 1.27 to 8.89 μm Nickel |  |  |  |
| Lid Plating           | 2.0 to 3.0 µm Nickel                           |  |  |  |
| Body                  | Al <sub>2</sub> O <sub>3</sub> Ceramic         |  |  |  |
| Pb Free               |                                                |  |  |  |



## **Tape and Reel Specifications**



| 6      | 'B"         | Quantity Per Reel |
|--------|-------------|-------------------|
| Inches | millimeters | <b>4</b>          |
| 7      | 178         | 500               |
| 13     | 330         | 3000              |



### **COMPONENT ORIENTATION and DIMENSIONS**

| Carrier Tape Dimensions |         |
|-------------------------|---------|
| Ao                      | 3.35 mm |
| Во                      | 3.35 mm |
| Ko                      | 1.40 mm |
| Pitch                   | 8.0 mm  |
| W                       | 12.0 mm |

