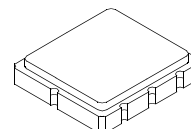


**RF1353C**

- **Designed for 345 MHz Wireless Applications**
- **Advanced (Lithium Tantalate) LiTaO<sub>3</sub> design for low Insertion Loss**
- **Designed for match to 50 ohms, no external LC required**
- **Hermetically sealed Surface Mount package**
- **Complies with Directive 2002/95/EC (RoHS)**

**345.00 MHz  
SAW Filter****SM5050-8 Case****Absolute Maximum Ratings**

| Rating                       | Value      | Units |
|------------------------------|------------|-------|
| Maximum Input Power          | +10        | dBm   |
| DC Voltage Between Terminals | 30         | VDC   |
| Case Temperature             | -40 to +85 | °C    |

**Electrical Characteristics**

| Characteristic                                | Sym             | Notes | Minimum      | Typical       | Maximum        | Units    |
|-----------------------------------------------|-----------------|-------|--------------|---------------|----------------|----------|
| Nominal Operating Frequency                   | $f_c$           |       |              | 345           |                | MHz      |
| Passband Insertion Loss                       | IL              |       |              |               | 4.5            | dB       |
| 3.0 dB Bandwidth                              |                 |       | $F_c \pm 70$ | $F_c \pm 430$ | $F_c \pm 1100$ | kHz      |
| Rejection $F_c - 10.7$ MHz                    |                 |       | 15           |               |                | dB       |
| $F_c - 21.4$ MHz                              |                 |       | 40           |               |                | dB       |
| Matching Untuned response                     |                 |       |              | 50            |                | $\Omega$ |
| Ambient Temperature Operating Range           |                 |       | -10          |               | 70             | °C       |
| Footprint Size: 5.0 X 5.0                     | SM5050-8        |       |              |               |                |          |
| Lid Symbolization (YY=Year, WW=week, S=shift) | RFM, 446, YYWWS |       |              |               |                |          |

**Electrical Connections**

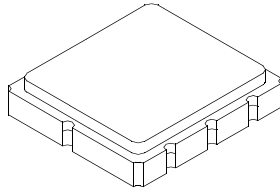
| Connection  | Terminals  |
|-------------|------------|
| RF Input    | 2          |
| RFOutput    | 6          |
| Case Ground | All Others |

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

- 1.) All specifications apply over the operating temperature range with filter soldered to the specified demonstration board unless noted otherwise.
- 2.) Ultimate rejection is dependent on PCB layout.
- 3.) Specifications subject to change without notice.
- 4.) Electrostatic Sensitive Device. Observe precautions for handling.
- 5.) US and international patents may apply.
- 6.) RFM, RFM logo, and RF Monolithics, Inc. are registered trademarks of RF Monolithics, Inc.

## SM5050-8 Case

8-Terminal Ceramic Surface-Mount Case  
5.0 X 5.0 mm Nominal Footprint



Case Dimensions

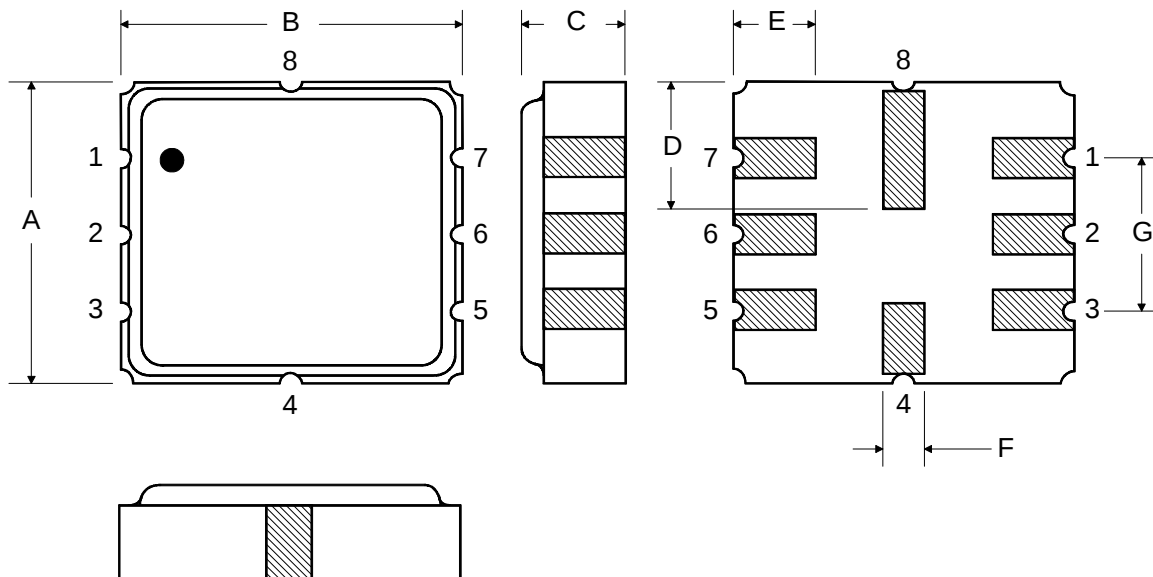
| Dimension | mm   |      |      | Inches |        |        |
|-----------|------|------|------|--------|--------|--------|
|           | Min  | Nom  | Max  | Min    | Nom    | Max    |
| A         | 4.8  | 5.0  | 5.2  |        | 0.1968 |        |
| B         | 4.8  | 5.0  | 5.2  |        | 0.1968 |        |
| C         |      |      | 1.7  |        |        | 0.0669 |
| D         |      | 2.08 |      |        | 0.0818 |        |
| E         |      | 1.17 |      |        | 0.046  |        |
| F         |      | 0.64 |      |        | 0.0252 |        |
| G         | 2.39 | 2.54 | 2.69 |        | 0.100  |        |

Electrical Connections

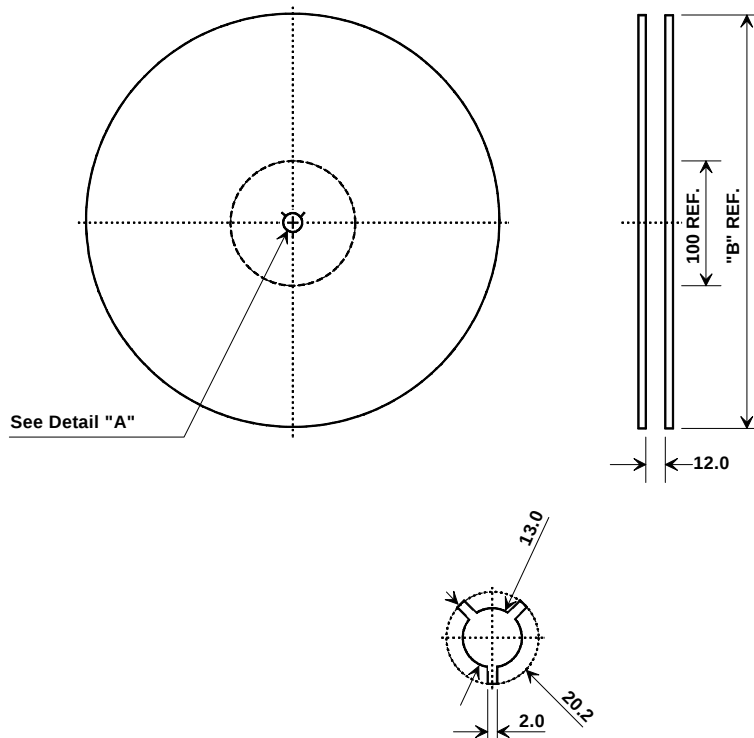
| Connection             |                     | Terminals        |
|------------------------|---------------------|------------------|
| Port 1                 | Differential Input  | 1, 2             |
| Port 2                 | Differential Output | 5, 6             |
|                        | Ground              | All others       |
| Single Ended Operation |                     | Return is ground |
| Differential Operation |                     | Return is hot    |
| Dot indicates Pin 1    |                     |                  |

TOP VIEW

BOTTOM VIEW



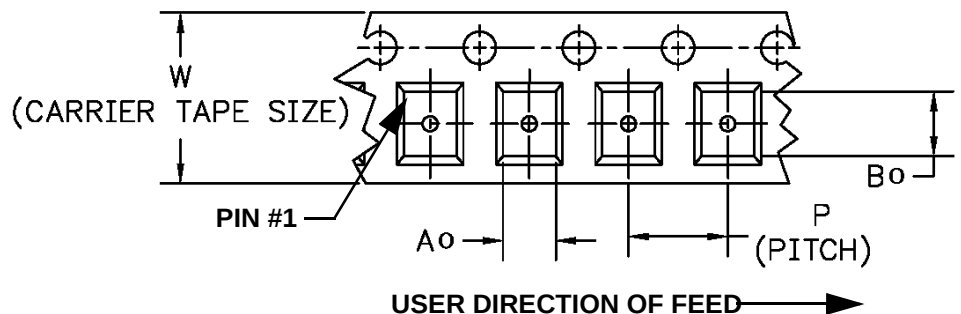
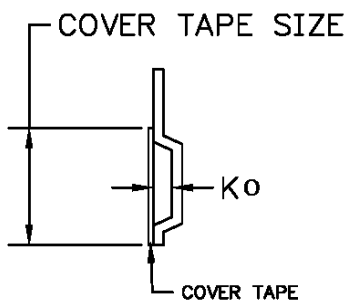
## Tape and Reel Specifications

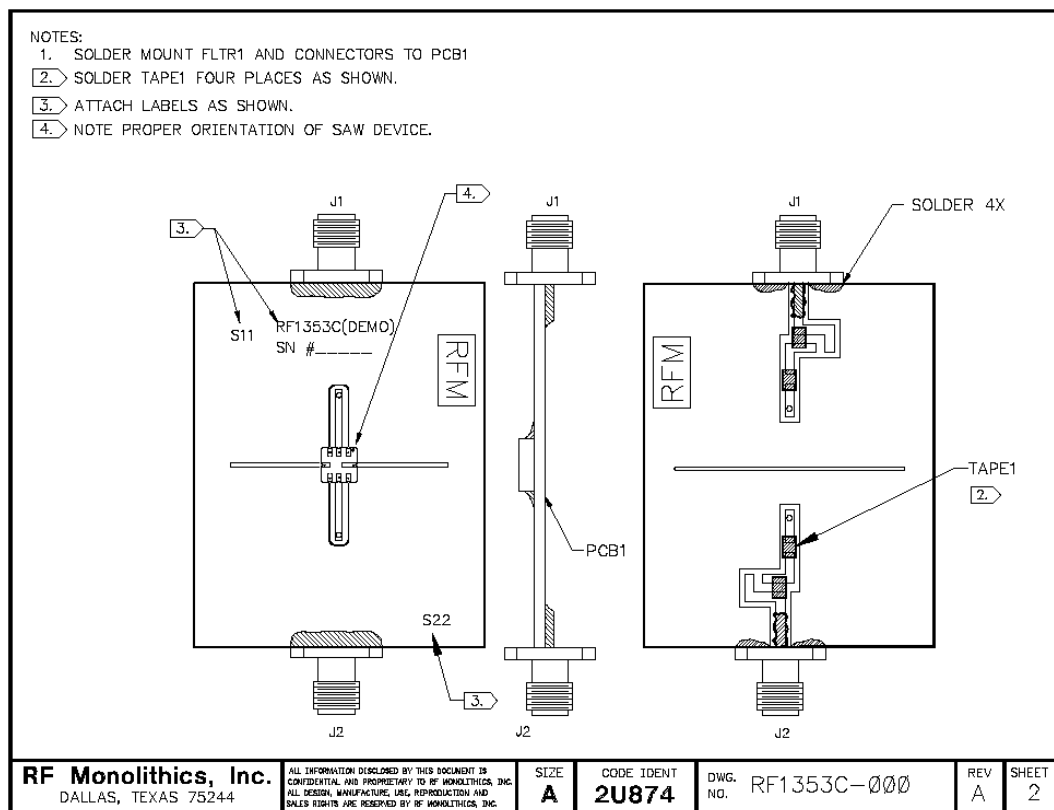
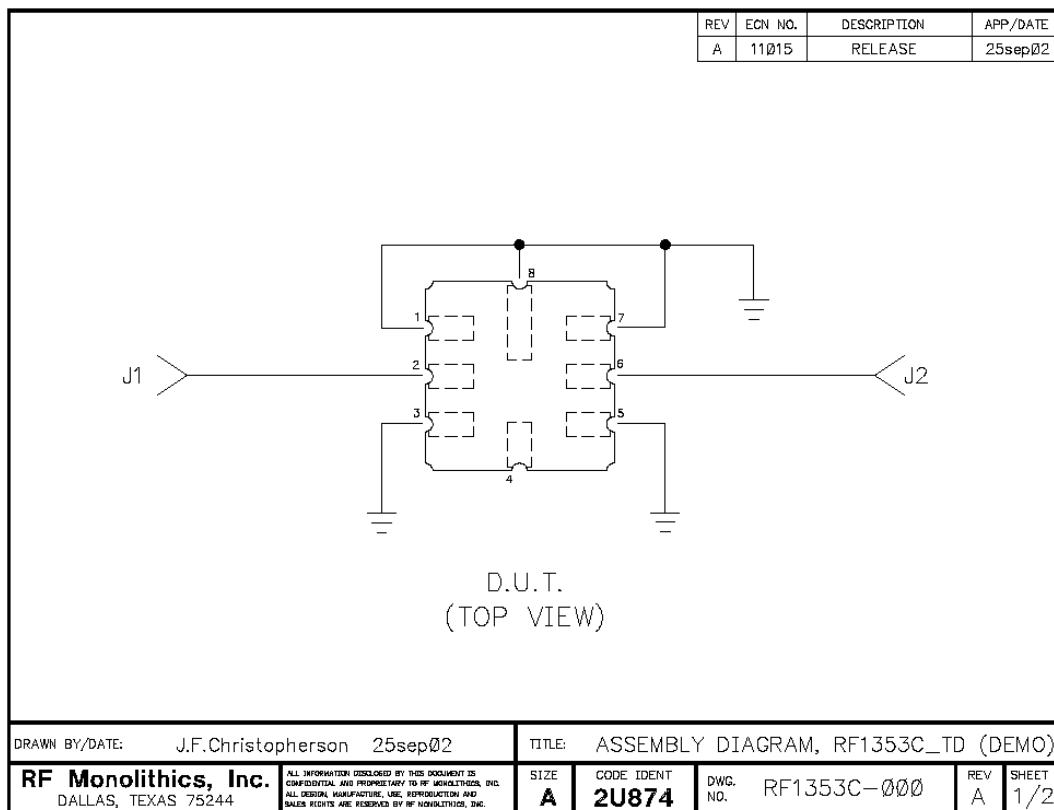


| "B" "  |             | Quantity Per Reel |
|--------|-------------|-------------------|
| Inches | millimeters |                   |
| 7      | 178         | 1000              |
| 13     | 330         | 3000              |

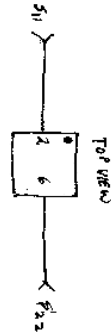
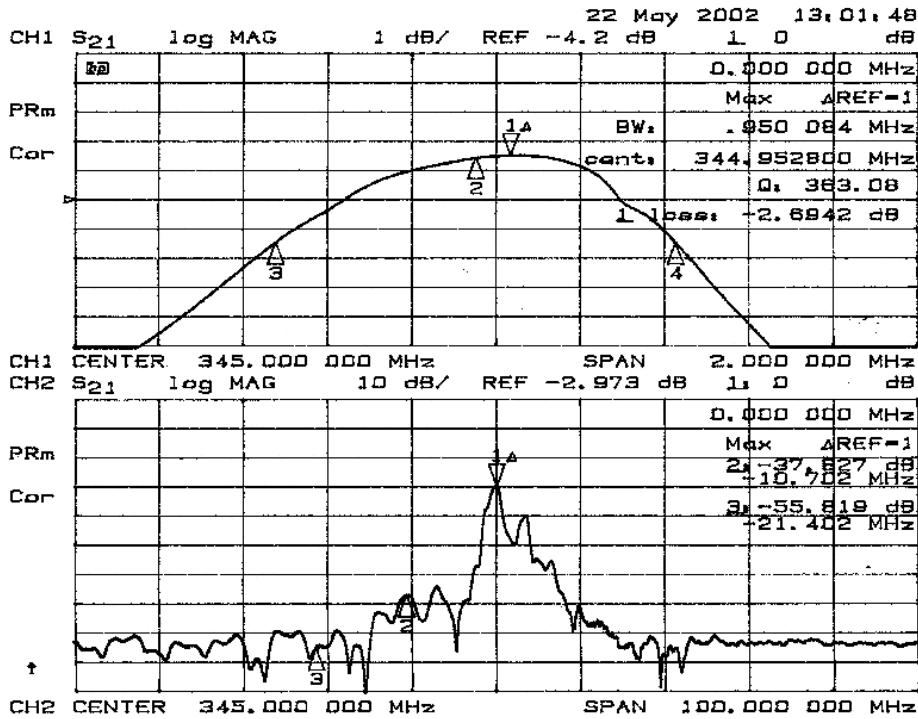
## COMPONENT ORIENTATION and DIMENSIONS

| Carrier Tape Dimensions |         |
|-------------------------|---------|
| Ao                      | 5.3 mm  |
| Bo                      | 5.3 mm  |
| Ko                      | 2.0 mm  |
| Pitch                   | 8.0 mm  |
| W                       | 12.0 mm |





RF1353C



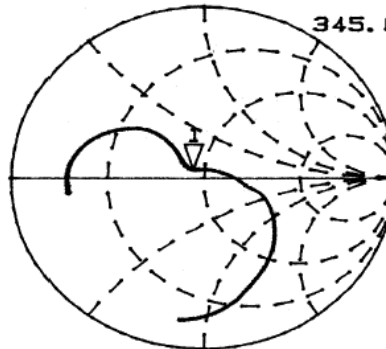
22 May 2002 13:06:59

CH1 S<sub>11</sub> 1 U FS 1 45.432 n 4.3457 n 2.0048 nH

345.000 000 MHz

PRm

Cor

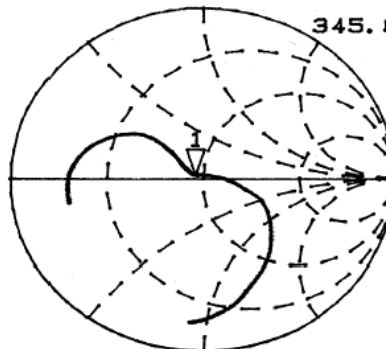


CH2 S<sub>22</sub> 1 U FS 1 46.686 n 2.0625 n 951.47 pH

345.000 000 MHz

PRm

Cor



CENTER 345.000 000 MHz SPAN 2.000 000 MHz