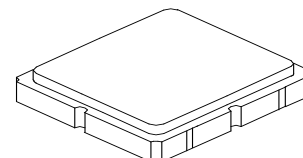


**RF1353D**

**345.00 MHz  
SAW Filter**



**SM3838-6 Case**

- *Designed for 345 MHz Low-power Wireless Applications*
- *Advanced LiTaO<sub>3</sub> Design for Low Insertion Loss*
- *Direct Match to 50 ohms*
- *Hermetically-sealed Surface Mount package*
- *Complies with Directive 2002/95/EC (RoHS)*
- *Moisture Sensitivity Level: 1*

**Absolute Maximum Ratings**

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

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:						dB
$f_C - 10.7$ MHz			15			
$f_C - 21.4$ MHz			40			
Direct Input/Output Match:				50		$\Omega$
Operating Temperature Range			-10		70	°C
Case			SM3838-6, 3.8 x 3.8 mm Footprint			
Lid Symbolization (YY=Year, WW=week, S=shift)			444, <u>YWWS</u>			

**Electrical Connections**

Connection	Terminals
RF Input	2
RFOutput	5
Case Ground	All Others

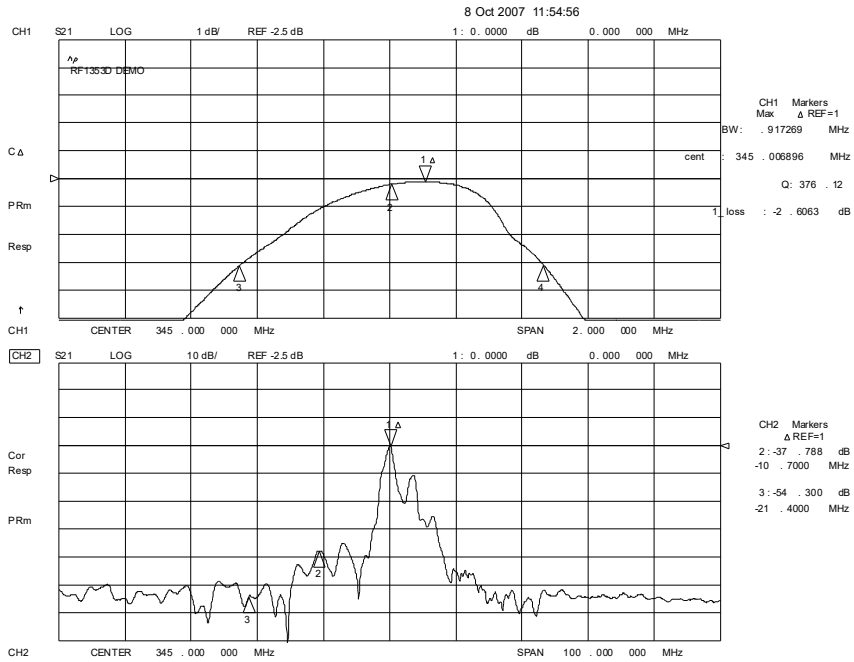


**CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.**

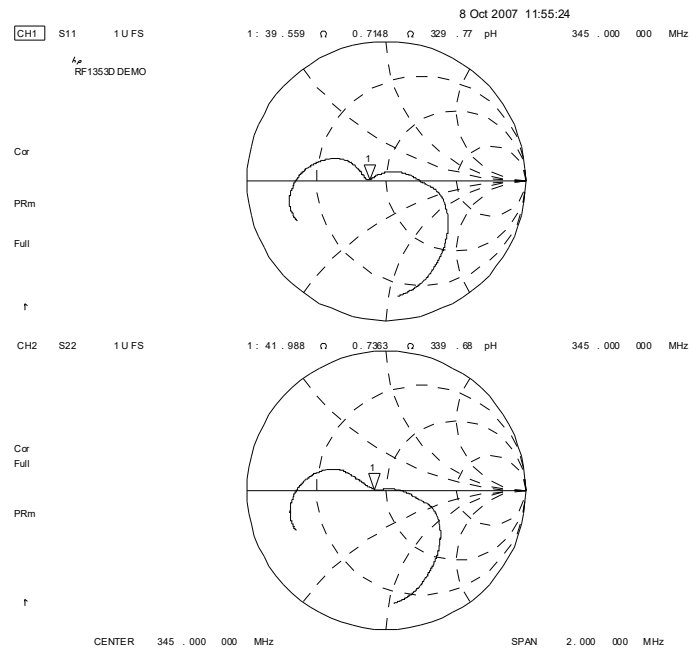
**NOTES:**

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.

# Filter Amplitude Response

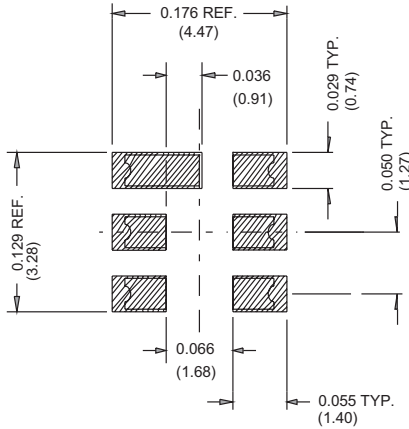
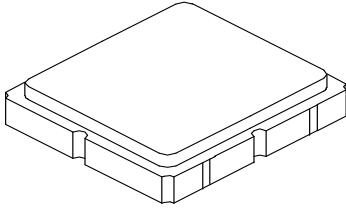


# Filter Input/Output Impedance Plots



# SM3838-6 Case

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



PCB Footprint

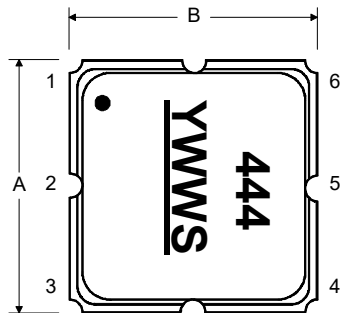
### Case Dimensions

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

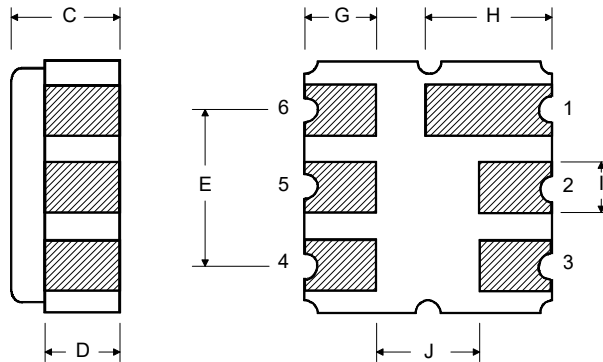
### Case Material

Materials	
Solder Pad Plating	0.3 to 1.0 $\mu\text{m}$ Gold over 1.27 to 8.89 $\mu\text{m}$ Nickel
Lid Plating	2.0 to 3.0 $\mu\text{m}$ Nickel
Body	$\text{Al}_2\text{O}_3$ Ceramic

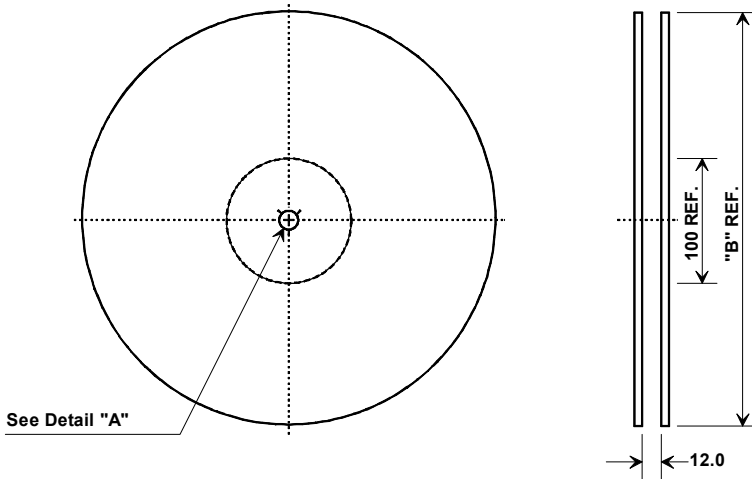
TOP VIEW



BOTTOM VIEW

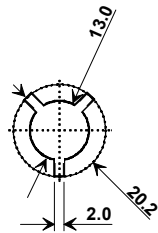


## Tape and Reel Specifications



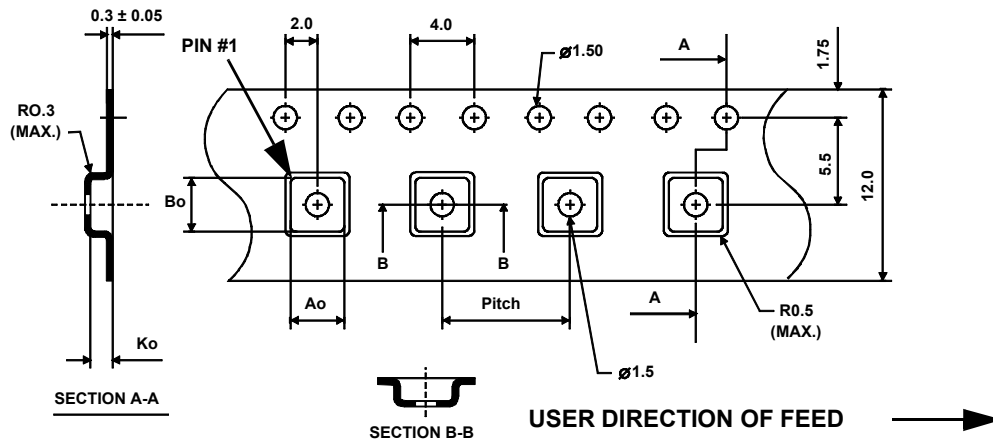
Tape and Reel Standard per ANSI/EIA-481

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

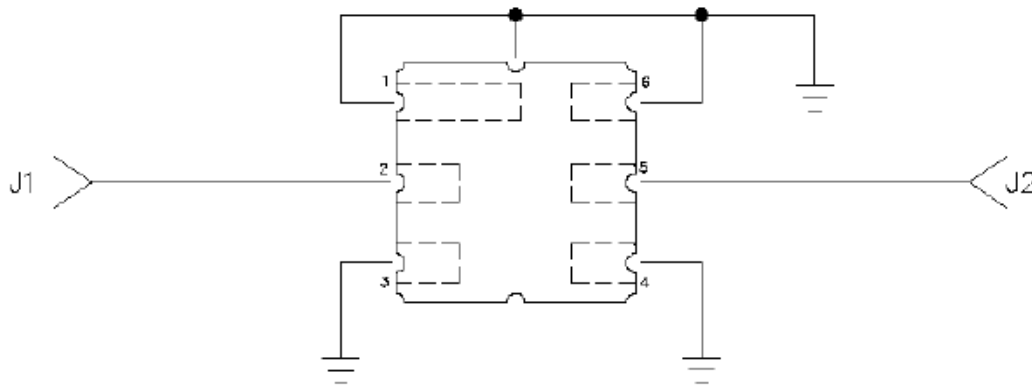


### COMPONENT ORIENTATION and DIMENSIONS

Carrier Tape Dimensions	
Ao	4.25 mm
Bo	4.25 mm
Ko	1.30 mm
Pitch	8.0 mm
W	12.0 mm



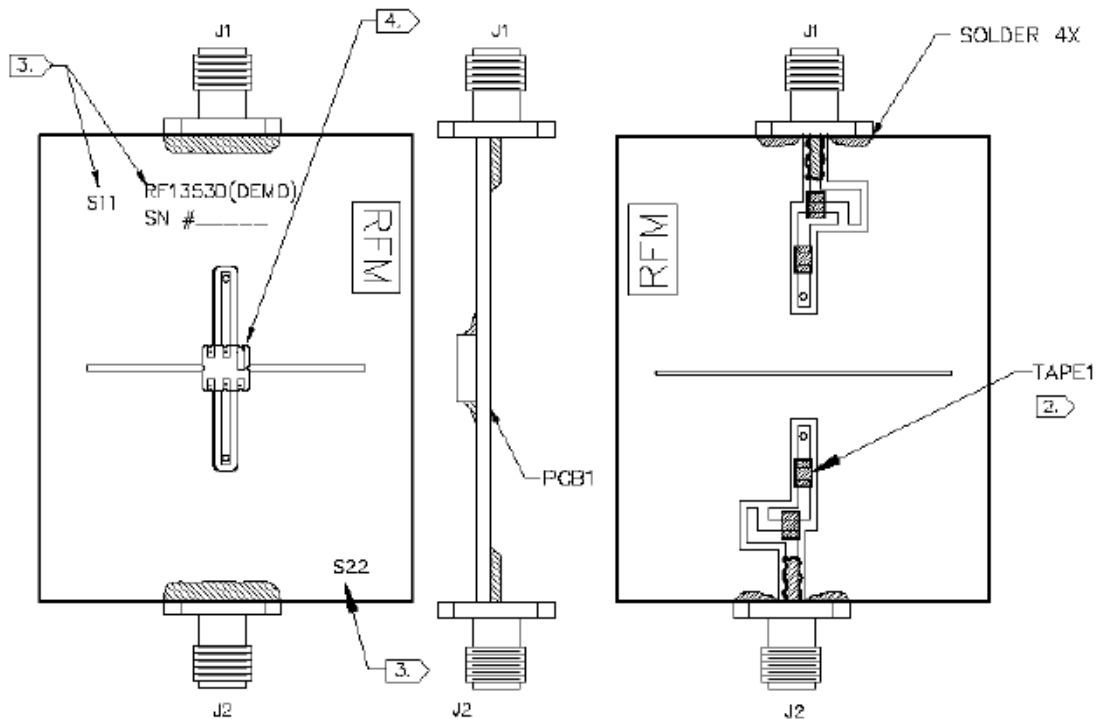
# Assembly Diagram, RF1353D



D.U.T.  
(TOP VIEW)

**NOTES:**

1. SOLDER MOUNT FLTR1 AND CONNECTORS TO PCB1
2. SOLDER TAPE1 FOUR PLACES AS SHOWN.
3. ATTACH LABELS AS SHOWN.
4. NOTE PROPER ORIENTATION OF SAW DEVICE.



## 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.

