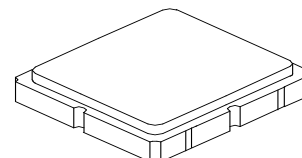


- *Designed for 345 MHz Low-power Wireless Applications*
- *Advanced LiTaO₃ Design for Low Insertion Loss*
- *Direct Match to 50 ohms*
- *Hermetically-sealed Surface Mount package*
- *Complies with Directive 2002/95/EC (RoHS)*
- *Moisture Sensitivity Level: 1*

RF1353D

**345.00 MHz
SAW Filter**



SM3838-6 Case

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		Ω
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

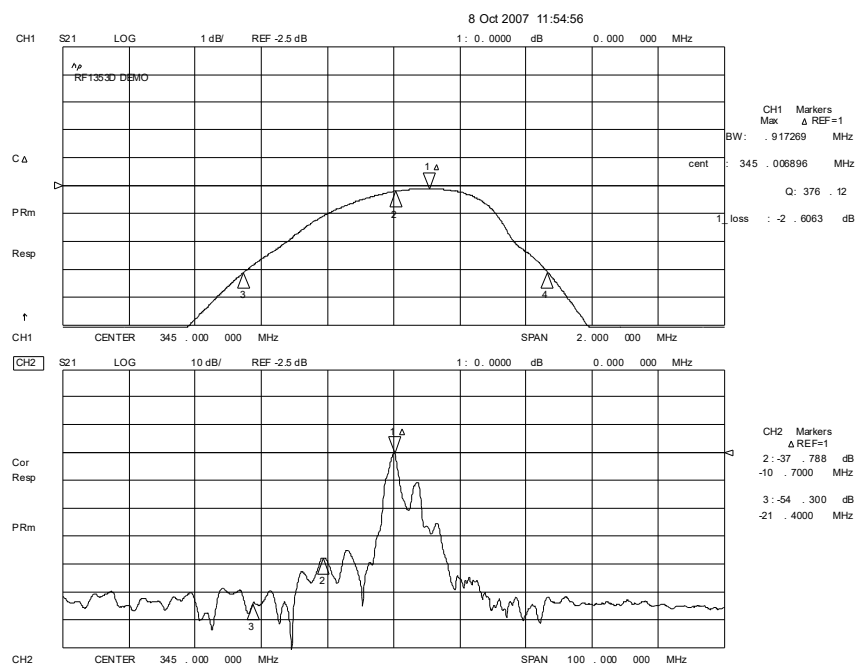


CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.

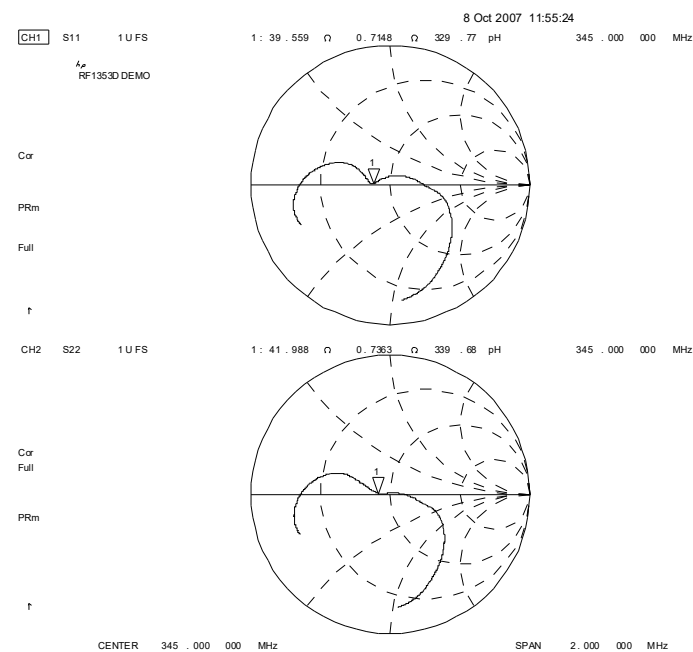
NOTES:

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

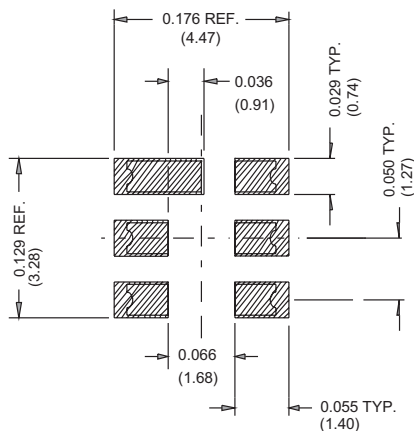
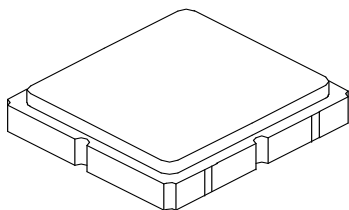


Filter Input/Output Impedance Plots



SM3838-6 Case

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



PCB Footprint

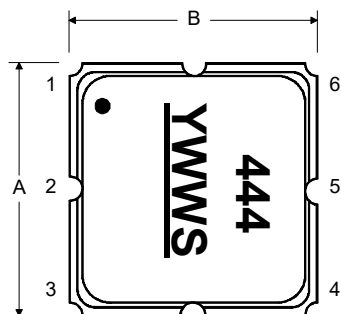
Case Dimensions

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	0.0748	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

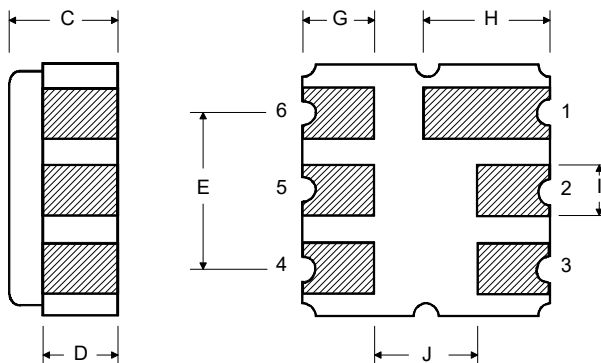
Case Material

Materials	
Solder Pad Plating	0.3 to 1.0 μ m Gold over 1.27 to 8.89 μ m Nickel
Lid Plating	2.0 to 3.0 μ m Nickel
Body	Al ₂ O ₃ Ceramic

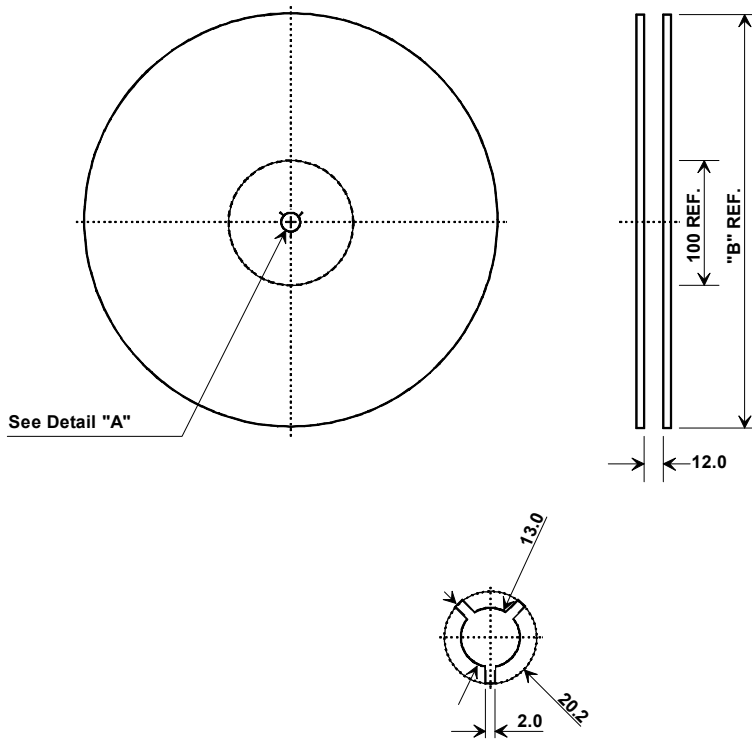
TOP VIEW



BOTTOM VIEW



Tape and Reel Specifications

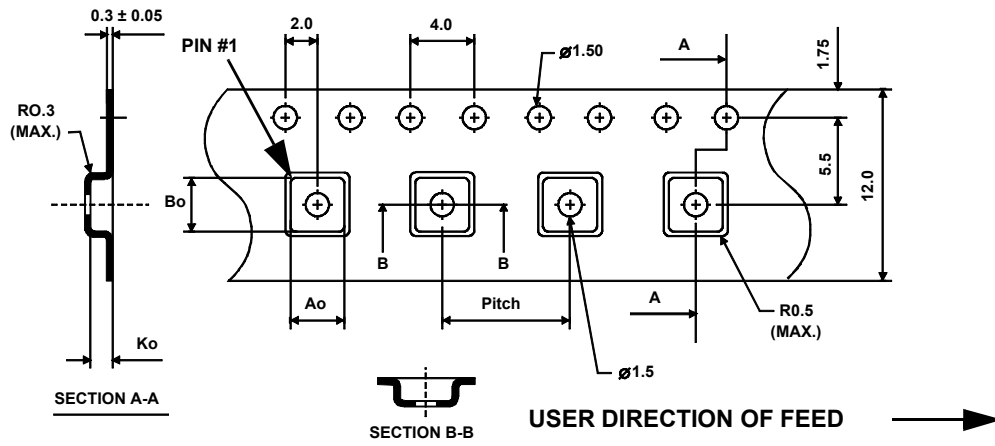


Tape and Reel Standard per ANSI/EIA-481

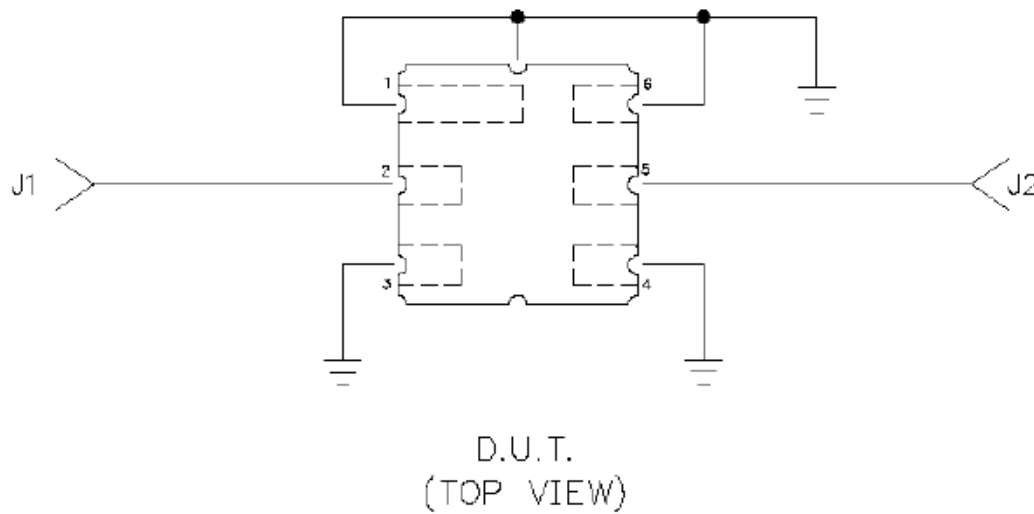
“B “ Nominal Size		Quantity Per Reel
Inches	millimeters	
7	178	500
13	330	3000

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

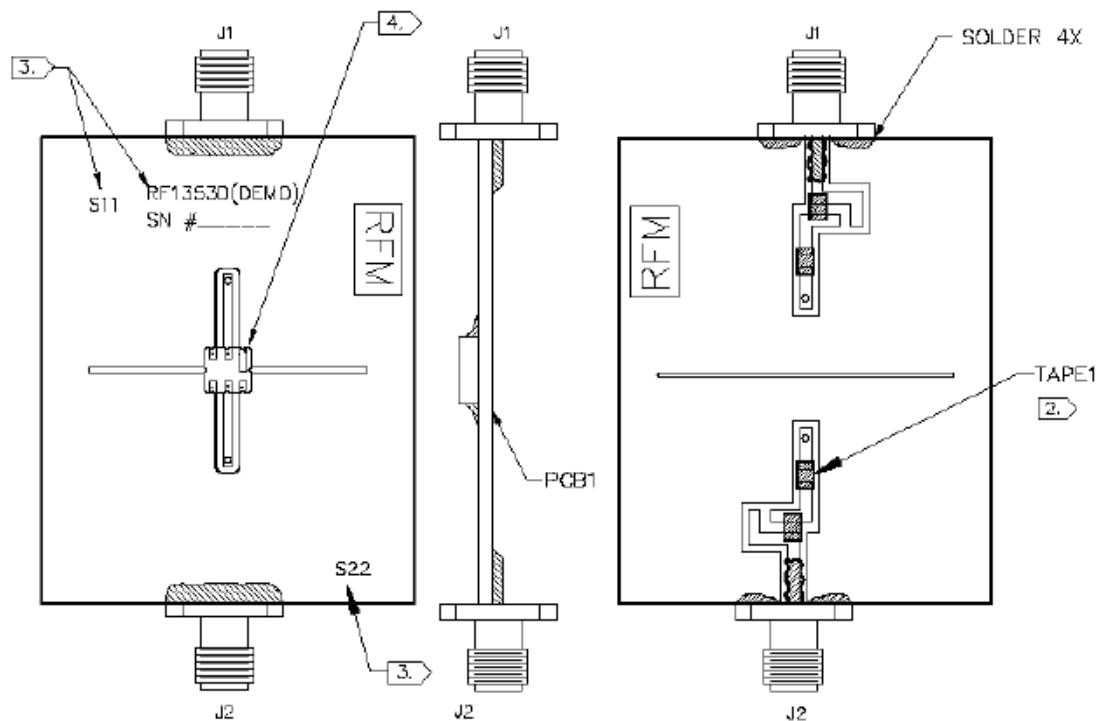


Assembly Diagram, RF1353D



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.



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