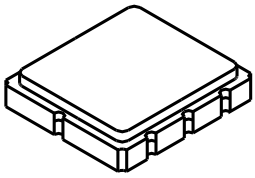
RFMi
A BRAND OF AKOUSTIS

RoHS compliant

RF1353C

345.00 MHz SAW Filter

- ***Designed for 345 MHz Wireless Applications***
- ***Advanced (Lithium Tantalate) LiTaO3 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)***
- ***Tape and Reel Standard per ANSI/EIA-481***
- ***Moisture Sensitivity Level: 1***



SM5050-8 Case

Absolute Maximum Ratings

Rating	Value	Units
Maximum Input Power	+10	dBm
Maximum DC Voltage Between Terminals	30	VDC
Case Temperature	-40 to +85	°C
SOlder Reflow Temperature, 5 Cycles Maximum	260° C for 10 seconds	

Characteristic		Sym	Notes	Minimum	Typical	Maximu	Units
Nominal Operating Frequency		f_C			345		MHz
Passband	Insertion Loss	IL				4.5	dB
	3.0 dB Bandwidth			f_C±70	f_C±430	f_C±1100	kHz
Rejection	f_C-10.7 MHz			15			dB
	f_C-21.4 MHz			40			dB
Matching	Untuned response				50		Ω
Ambient Temperature	Operating Range			-10		70	°C
Footprint: 5.0 X 5.0 mm		SM5050-8					
Lid Symbolization (YY=Year, WW=week, S=shift)		446,YWWS					

Electrical Connections

Connection	Terminals
RF Input	2
RFOutput	6
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.

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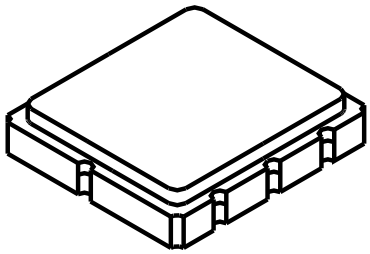
SM5050-8 Case

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



Case Dimensions

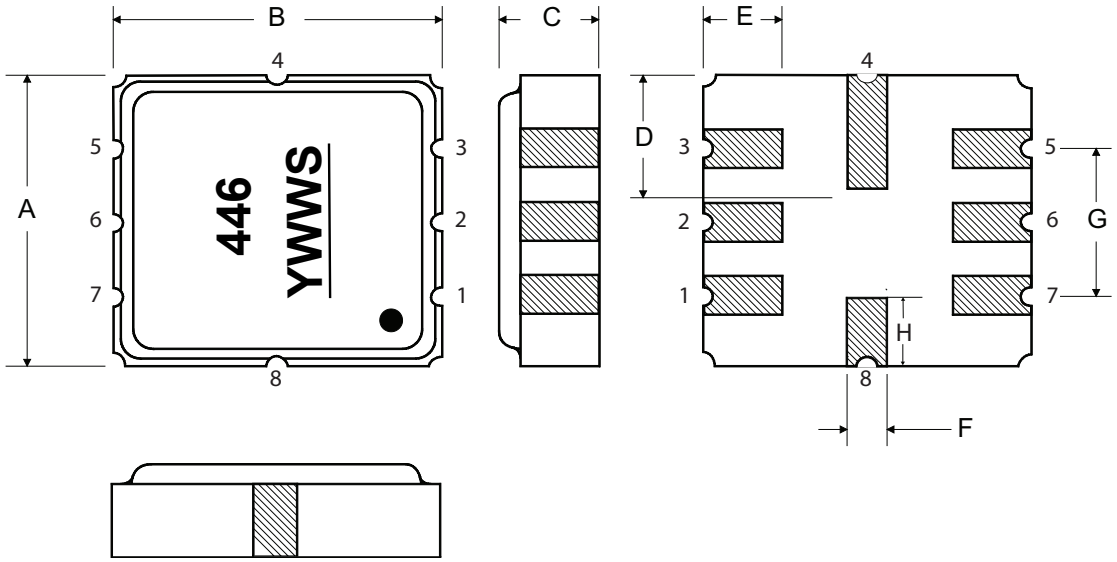
Dimension	mm			Inches		
	Min	Nom	Max	Min	Nom	Max
A	4.8	5.0	5.2		0.1968	
B	4.8	5.0	5.2		0.1968	
C			1.7			0.0669
D		2.08			0.0818	
E		1.17			0.046	
F		0.64			0.0252	
G	2.39	2.54	2.69		0.100	

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



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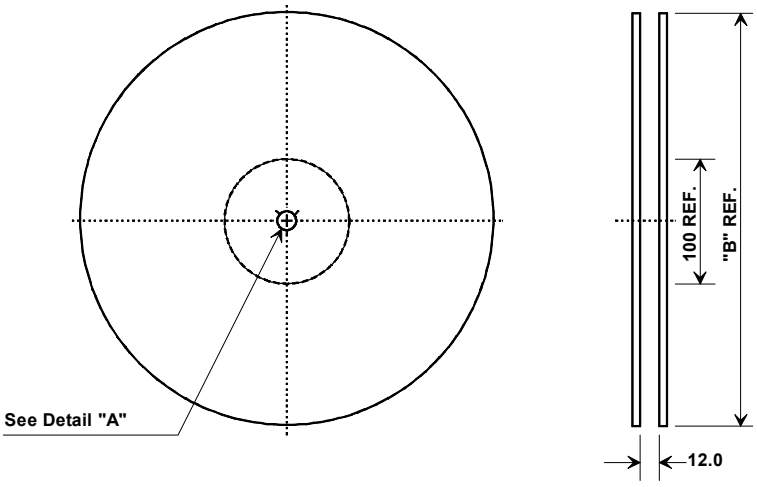
Tape and Reel Specifications

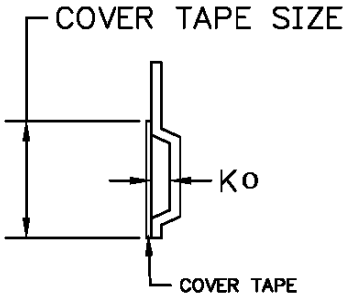


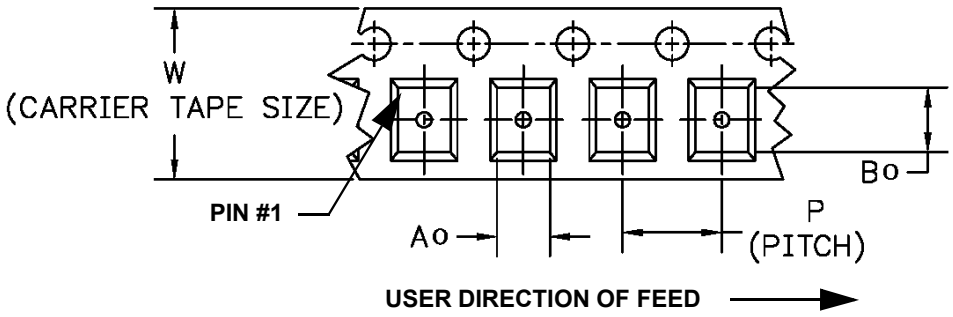
Tape and Reel Standard per ANSI/EIA-481

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

COMPONENT ORIENTATION and DIMENSIONS

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





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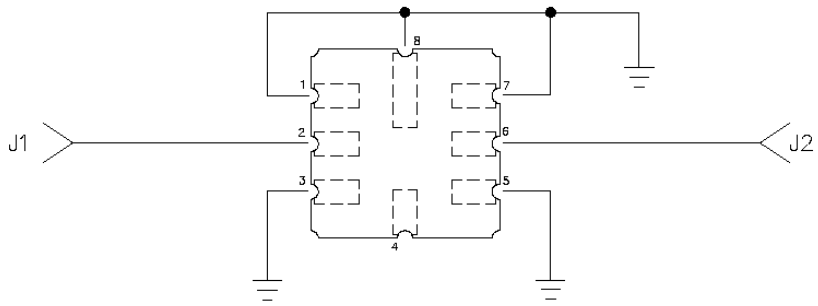
REV	ECN NO.	DESCRIPTION	APP/DATE
A	11Ø15	RELEASE	25sepØ2



D.U.T.
(TOP VIEW)

DRAWN BY/DATE:	J.F.Christopherson 25sepØ2	TITLE:	ASSEMBLY DIAGRAM, RF1353C_TD (DEMO)				
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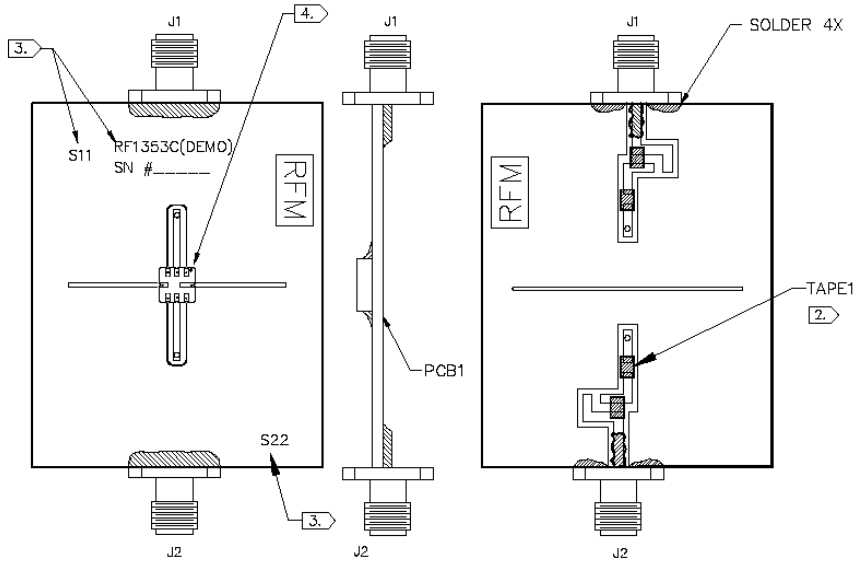
NOTES:
1. SOLDER MOUNT FLTR1 AND CONNECTORS TO PCB1
2. SOLDER TAPE1 FOUR PLACES AS SHOWN.
3. ATTACH LABELS AS SHOWN.
4. NOTE PROPER ORIENTATION OF SAW DEVICE.



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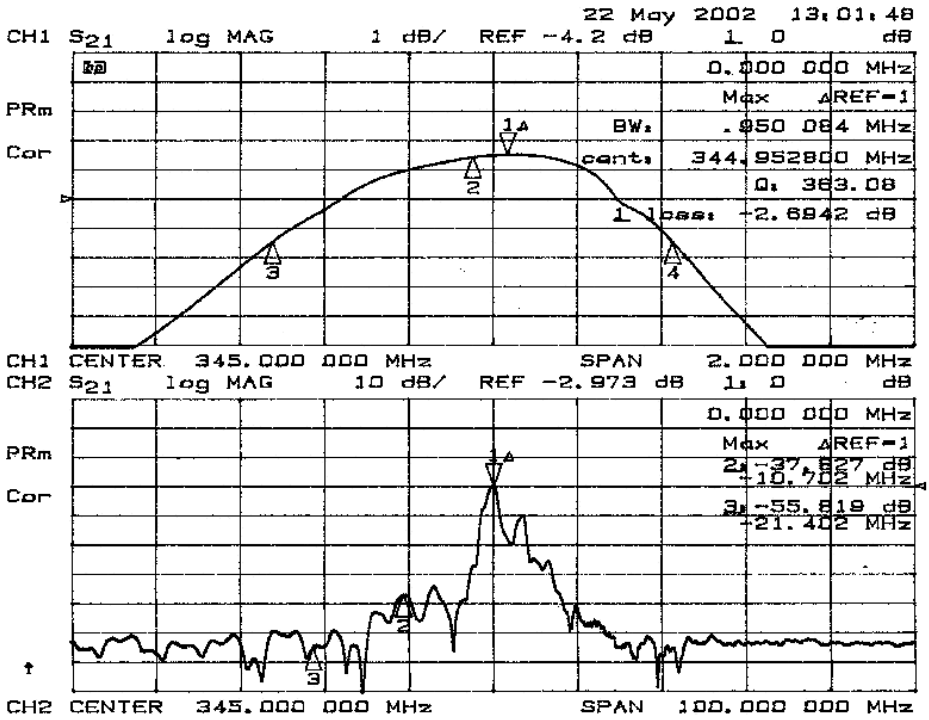
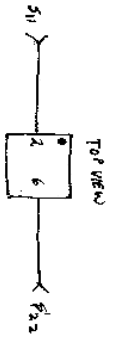
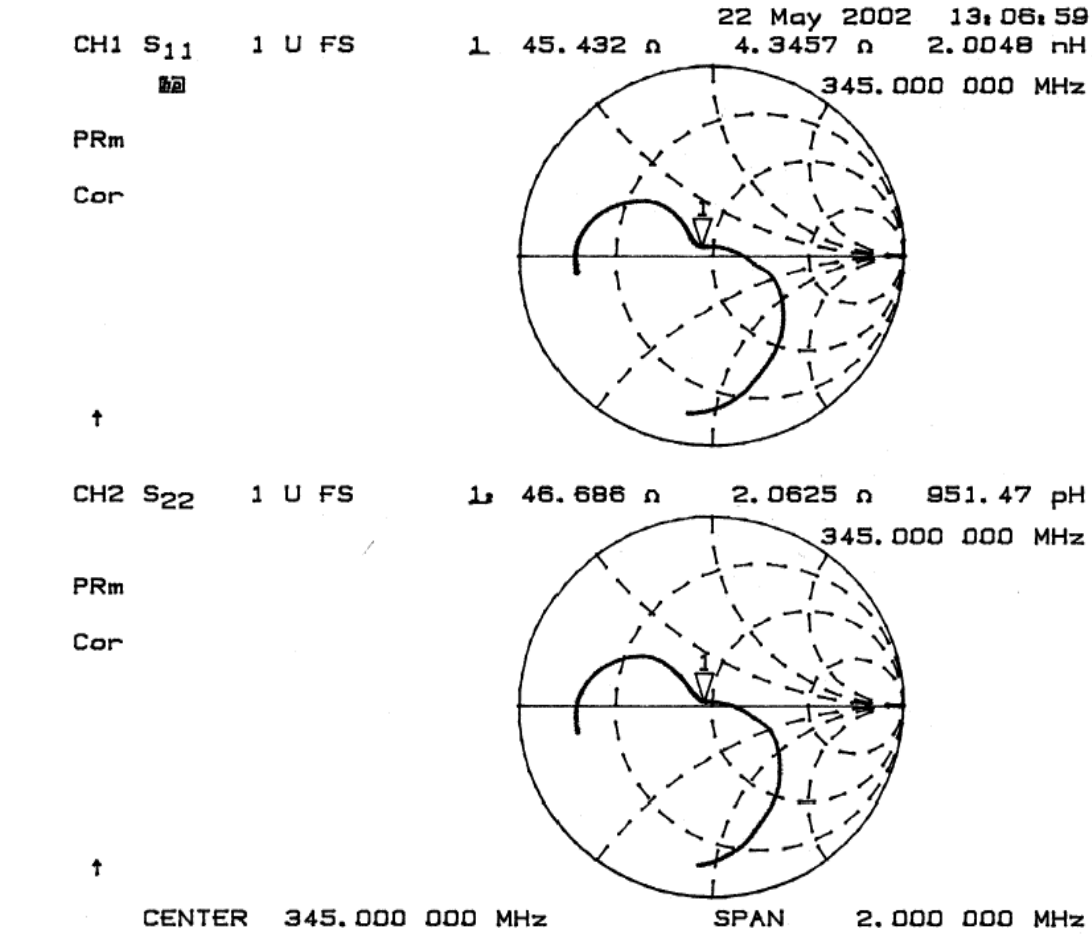
RF1353C

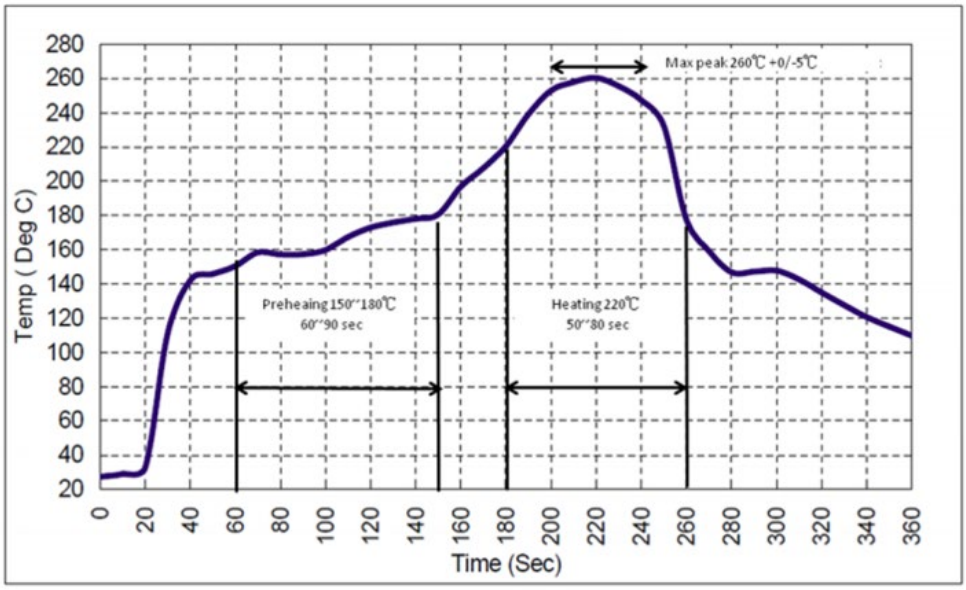

22 May 2002 13:01:48
CH1 S21 log MAG 1 dB/ REF -4.2 dB 1 0 dB
0.000 000 MHz
PRm
Max AREF=1
1A BW: .950 084 MHz
Cor
cent: 344.952800 MHz
Q: 363.08
1 loss: -2.6842 dB
CH1 CENTER 345.000 000 MHz SPAN 2.000 000 MHz
CH2 S21 log MAG 10 dB/ REF -2.973 dB 1: 0 dB
0.000 000 MHz
PRm
Max AREF=1
2: -37.627 dB
-10.702 MHz
Cor
3: -55.819 dB
-21.402 MHz
CH2 CENTER 345.000 000 MHz SPAN 100.000 000 MHz




22 May 2002 13:06:59
CH1 S11 1 U FS 1 45.432 Ω 4.3457 Ω 2.0048 nH
345.000 000 MHz
PRm
Cor
CH2 S22 1 U FS 1: 46.686 Ω 2.0625 Ω 951.47 pH
345.000 000 MHz
PRm
Cor
CENTER 345.000 000 MHz SPAN 2.000 000 MHz

Recommended Reflow Profile

1. Preheating shall be fixed at 150~180ºC for 60~90 seconds.
2. Ascending time to preheating temperature 150ºC shall be 30 seconds min.
3. Heating shall be fixed at 220ºC for 50~80 seconds and at 260ºC +0/-5ºC peak (10 seconds).
4. Time: 5 times maximum.



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