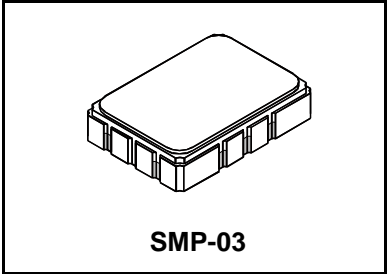




SF1141B

**75.00 MHz
SAW Filter**



- **Designed for SDARS IF Receiver**
- **Low Insertion Loss**
- **5.0 X 7.0 mm Surface-Mount Case**
- **Differential Input and Output**
- **Complies with Directive 2002/95/EC (RoHS)**

Absolute Maximum Ratings

Rating	Value	Units
Maximum Incident Power in Passband	+10	dBm
Max. DC voltage between any 2 terminals	30	VDC
Storage Temperature Range	-40 to +85	°C
Max Soldering Profile	265°C for 10 s	

Electrical Characteristics

Characteristic	Sym	Notes	Min	Typ	Max	Units
Nominal Center Frequency	f_c	1	75.000			MHz
Passband Insertion Loss at f_c	IL	1, 2		12.5	16.0	dB
1dB Passband	BW_{1dB}		± 6.35	± 7.43		MHz
Fast Amplitude Ripple over $f_c \pm 6.35$ MHz					1.5	dB _{p-p}
Group Delay Variation over $f_c \pm 6.35$ MHz	GDV			75	200	ns _{p-p}
Rejection $f_c - 100$ to $f_c - 10.95$ and $f_c + 18.8$ to $f_c + 100$ MHz		1, 2, 3	40	45		dB
$f_c + 10.95$ to $f_c + 18.8$ MHz			30	36		
Operating Temperature Range	T_A	1	-40		+85	°C
Differential Input and Output Impedance	250 ohms					
Case Style	SMP-03 7 x 5 mm Nominal Footprint					
Lid Symbolization (YY=year, WW=week, S=shift) See note 4	RFM SF1141B YYWWS					

Electrical Connections

Connection	Terminals
Port 1 Hot	10
Port 1 Ground Return	1
Port 2 Hot	5
Port 2 Ground Return	6
Case Ground	All Others

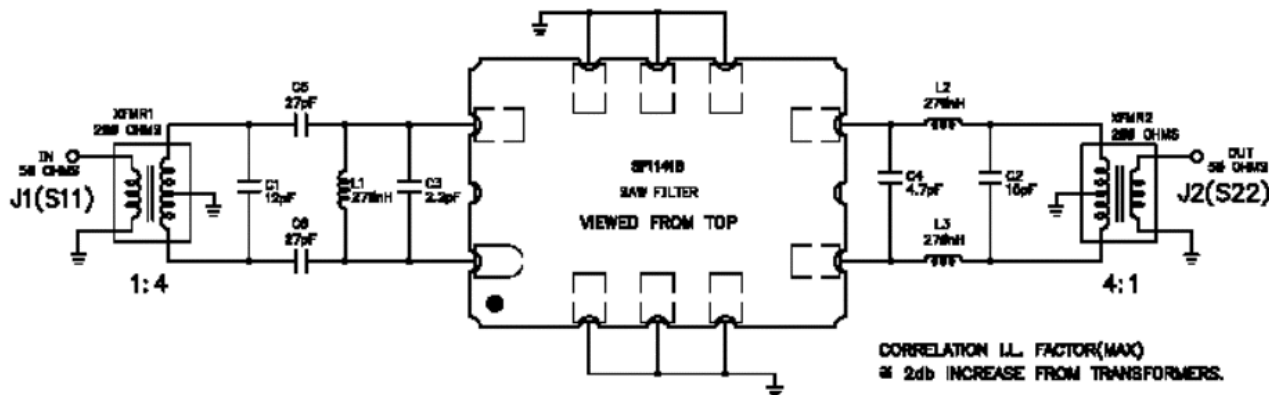
Notes:

1. Unless noted otherwise, all specifications apply over the operating temperature range with filter soldered to the specified demonstration board with impedance matching to 50 Ω and measured with 50 Ω network analyzer.
2. Unless noted otherwise, all frequency specifications are referenced to the nominal center frequency, f_c .
3. The design, manufacturing process, and specifications of this filter are subject to change.
4. Either Port 1 or Port 2 may be used for either input or output in the design. However, impedances and impedance matching may vary between Port 1 and Port 2, so that the filter must always be installed in one direction per the circuit design.
5. US and international patents may apply.
6. ©Copyright 1999, RF Monolithics Inc.
7. Electrostatic Sensitive Device. Observe precautions for handling.

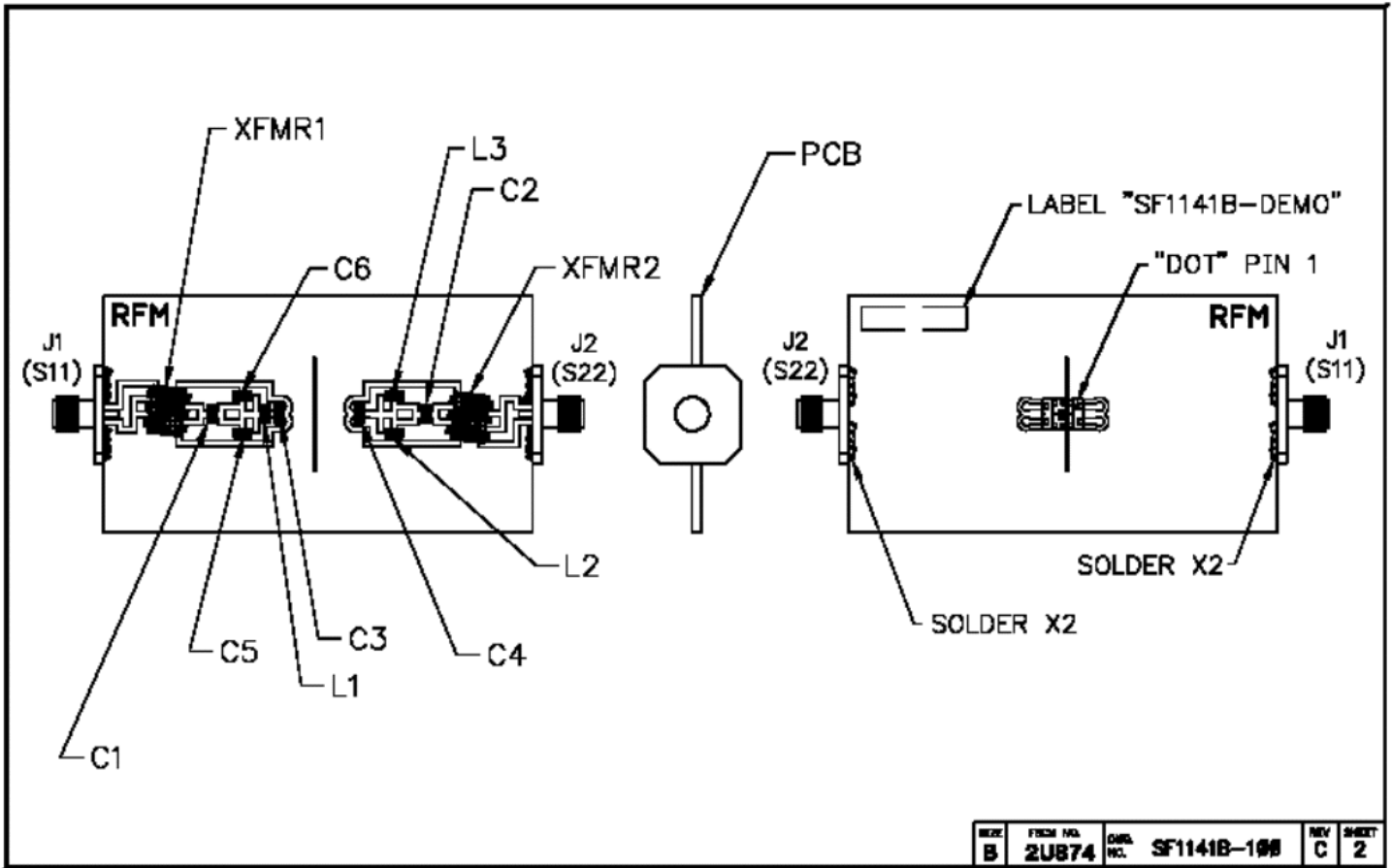
NOTES:

- 1 USE A WRIST STRAP WHEN SOLDERING TRANS 1, AND TRANS 2 TO PCB.
(CUT LEADS .87 IN.)
- 2 MOUNT AND SOLDER ALL COMPONENTS ON PCB.
- 3 CUT CENTER CONDUCTORS FROM J1 AND J2 TO .18 IN.
- 4 MOUNT J1 AND J2 AS SHOWN (SOLDER BACKSIDE ALSO).
- 5 LABEL DEMO BOARD ACCORDINGLY.
- 6 MOUNT "FILTER" ON TOPSIDE OF PCB AS SHOWN.

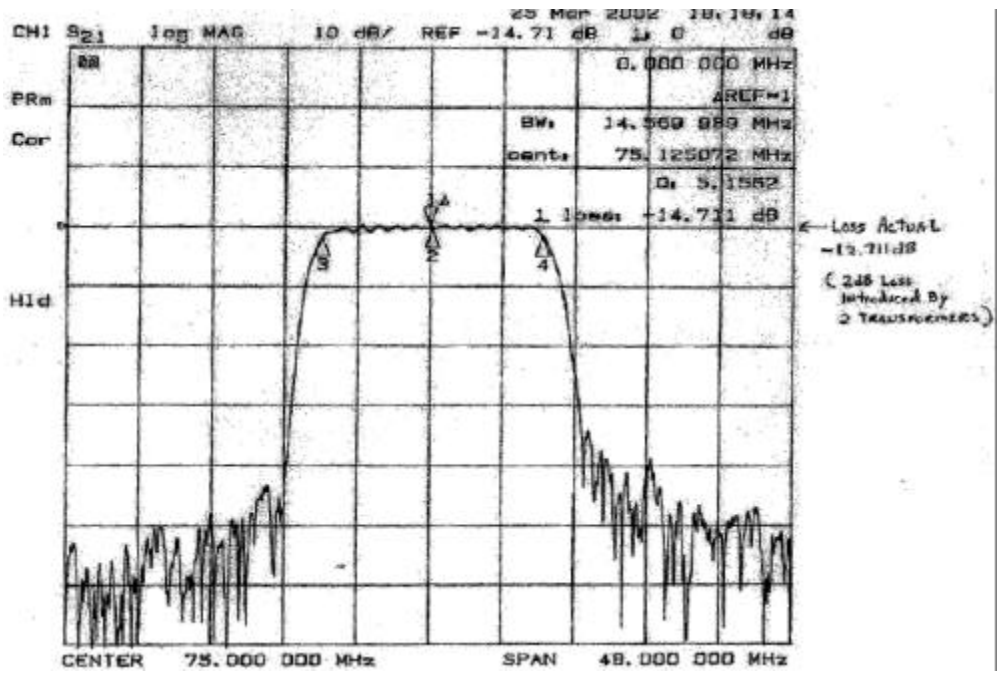
REV	QTY	DESCRIPTION	DATE
A	9248	INITIAL RELEASE	11dec88
B	18558	REVISED	30apr92
C	11876	REVISED	28nov92



MATERIAL FINISH:	<p>UNLESS SPECIFIED OTHERWISE DIMENSIONS ARE IN INCHES(mm) DIMENSIONS AND TOLERANCES PER ANSI Y14.5-1988 DRAWING PREPARED IN ACCORDANCE WITH MIL-STD-883C LINEAR DIMENSIONAL TOLERANCES AS FOLLOWS: DIM = ±.010 DIM = ±.005 DIM = ±.0025 ANGULAR = ±30° GENERAL MACHINED SURFACE FINISH 63 ✓</p>	<p>DESIGNER: J.F. Christopherson DATE: 11dec88</p>	<p>RFM RFMonolithics, Inc. DALLAS, TEXAS 75244 USA</p>
	<p>ALL INFORMATION CONTAINED BY THIS DOCUMENT IS CONFIDENTIAL AND PROPRIETARY TO RF MONOLITHICS, INC. ALL RIGHTS RESERVED. USE, REPRODUCTION AND SALE OF THIS DOCUMENT ARE PROHIBITED BY RF MONOLITHICS, INC.</p>	<p>TITLE: ASSY DIAGRAM, DEMO BOARD, SF1141B, S, TD</p>	
		<p>SIZE: B FORM NO.: 210874 DWG. NO.: SF1141B-100</p>	<p>REV: C SHEET: 1/2</p>

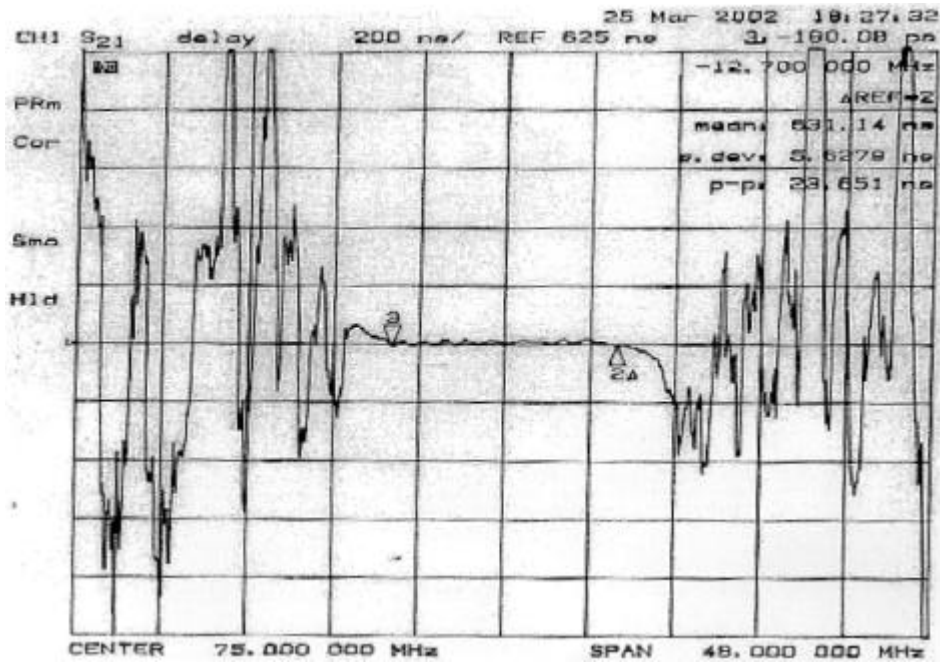
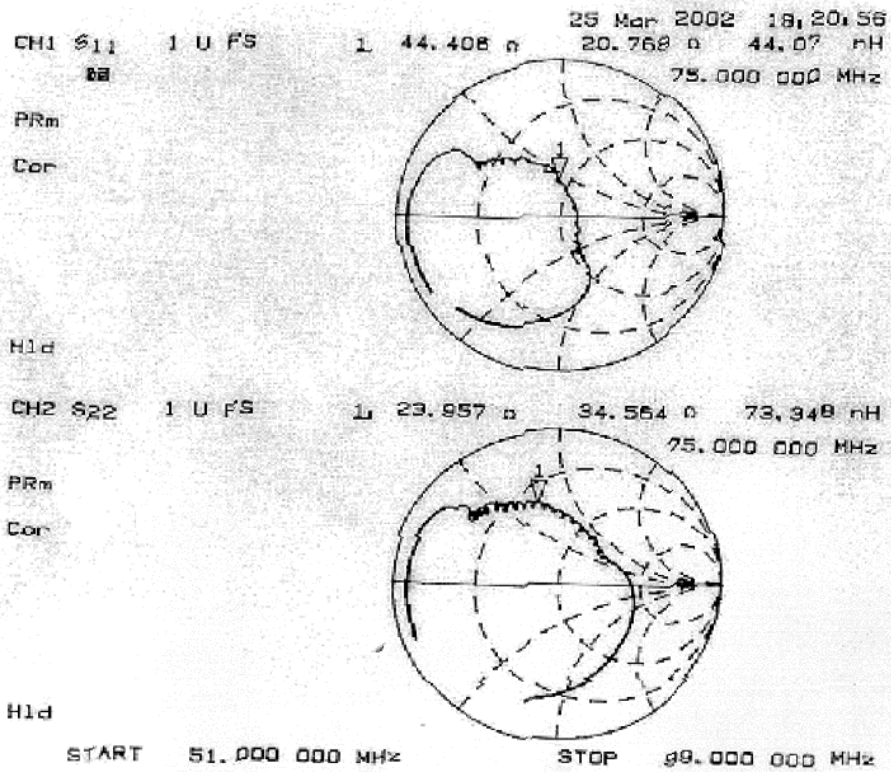


REV	FORM NO.	QWL NO.	REV	SHEET
B	2UB74	SF1141B-199	C	2

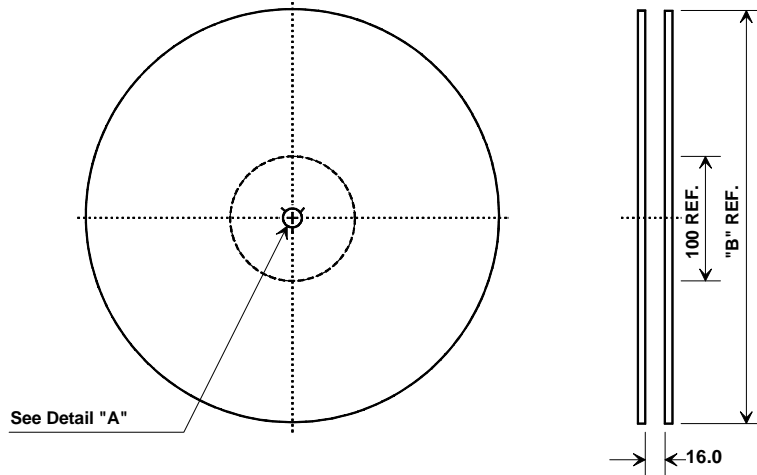


75.00 MHz

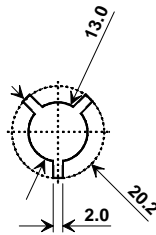
SAW Filter



Tape and Reel Specifications

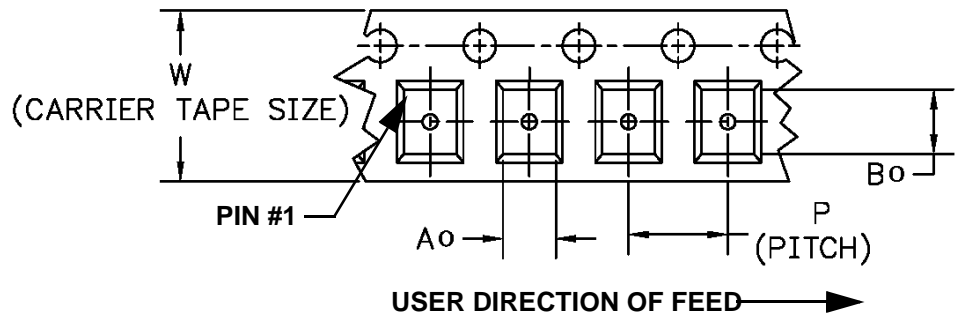
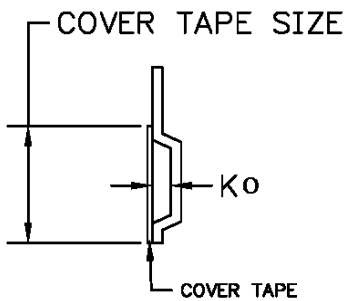


"B "		Quantity Per Reel
Inches	millimeters	
7	178	500
13	330	2000



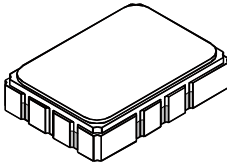
COMPONENT ORIENTATION and DIMENSIONS

Carrier Tape Dimensions		Tolerance
Ao	5.5 mm	± 0.1mm
Bo	7.5 mm	± 0.1mm
Ko	2.0 mm	± 0.1mm
Pitch	8.0 mm	± 0.1mm
W	16.0 mm	± 0.2mm

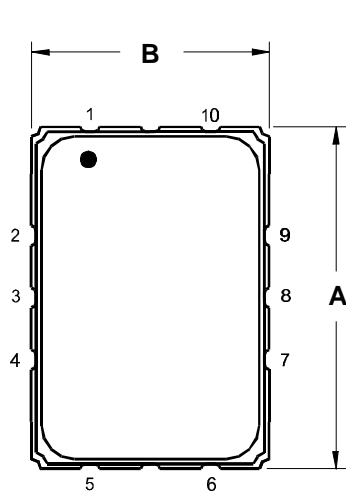
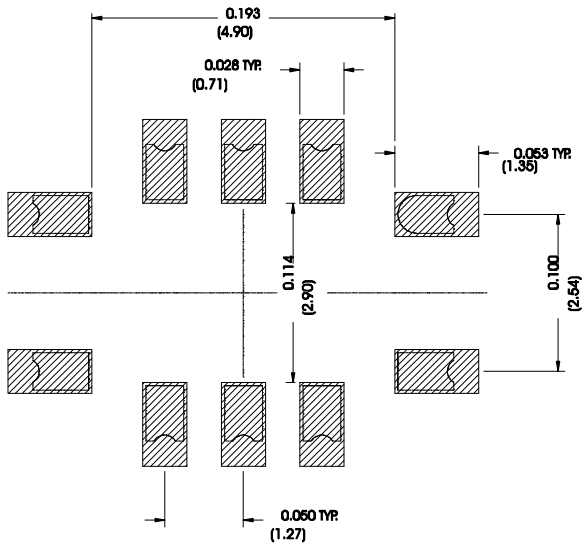


SMP-03 Case

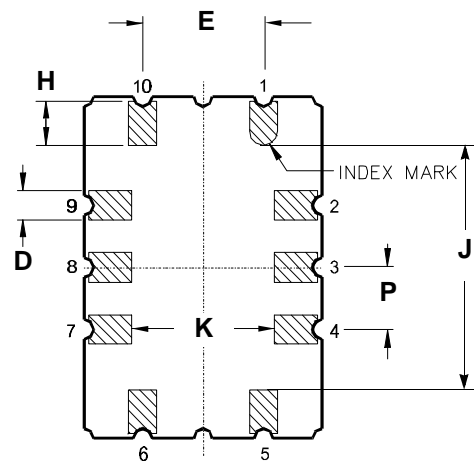
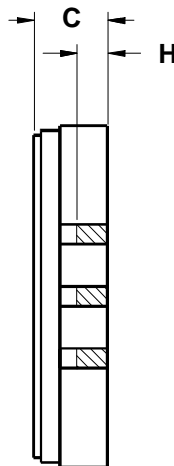
10-Terminal Ceramic Surface-Mount Case 7 x 5 mm Nominal Footprint



Recommended PCB Footprint



TOP VIEW



BOTTOM VIEW

Case Dimensions						
Dimension	mm			Inches		
	Min	Nom	Max	Min	Nom	Max
A	6.80	7.00	7.20	0.268	0.276	0.283
B	4.80	5.00	5.20	0.189	0.197	0.205
C		1.65	2.00		0.065	0.079
D	.47	0.60	.73	0.019	0.024	0.029
E	2.41	2.54	2.67	0.095	0.100	0.105
H	0.87	1.0	1.13	0.034	0.039	0.044
J	4.87	5.00	5.13	0.192	0.197	0.202
K	2.87	3.00	3.13	0.113	0.118	0.123
P	1.14	1.27	1.40	0.045	0.050	0.055

Materials	
Solder Pad Termination	Au plating 30 - 60 ulnches (76.2-152 uM) over 80-200 ulnches (203-508 uM) Ni.
Lid	Fe-Ni-Co Alloy Electroless Nickel Plate (8-11% Phosphorus) 100-200 ulnches Thick
Body	Al ₂ O ₃ Ceramic
Pb Free	

Electrical Connections		
Connection		Terminals
Port 1	Input or Return	10
	Return or Input	1
Port 2	Output or Return	5
	Return or Output	6
Ground		All others
Single Ended Operation		Return is ground
Differential Operation		Return is hot