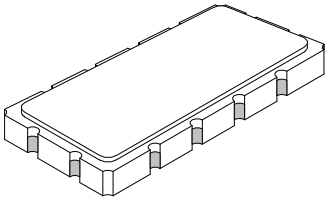
SF1124A 190 MHz SAW Filter

- *Designed for WCDMA 3G IF Applications*
- *Excellent Size-to-Performance Ratio*
- *Very Flexible Impedance Matching*
- *Balanced or Unbalanced Input and Output*
- *Hermetic 13.3 x 6.5 mm Surface-Mount Case*



See Associated Plots

Characteristic		Sym	Min	Typ	Max	Units	Notes
Nominal Center Frequency		fc		190.000		MHz	1
Passband	Insertion Loss at fc	IL		12	14.0	dB	
	1 dB Passband	BW_1	4.6	5.1		MHz	1, 2
	3 dB Passband	BW_3	5.1	5.7			
	Amplitude Ripple over fc ±2.4 MHz			.70	1.0	dB_{P-P}	
	Phase Variation over fc ±2.4 MHz			4	10	$°_{P-P}$	
	Group Delay Variation over fc ±2.4 MHz	GDV		75	120	ns_{P-P}	
Rejection	fc-4.1 to fc-3.65 and fc+3.4 to fc+3.8 MHz		10			dB	1, 2, 3
	fc-5.0 to fc-4.1 and fc+3.8 to fc+5.0 MHz		30				
	fc-10.0 to fc-5.0 and fc+5.0 to fc+10.0 MHz		40				
	fc-20.0 to fc-10.0 and fc+10.0 to fc+20.0 MHz		40				
	At 157.6 MHz		40				
	At 165.7 MHz		40				
	fc-60 MHz to fc-20 MHz		40				
	fc+20 MHz to fc+60 MHz		40				
Part to Part Average Group Delay Variation					±5	nsec	4
Operating Temperature Range		T_A	-10	+25	+85	°C	1
Frequency Temperature Coefficient		FTC		-18		ppm/°C	

Matching to Unbalanced or Balanced Impedance	External L-C
Case Style	SMP-53 13.3 x 6.5 mm Nominal Footprint
Lid Symbolization (YY = year, WW = week) See note 4	RFM SF1124A YYWW

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 Connections

Connection	Terminals
Port 1 Hot	11
Port 1 Gnd Return	12
Port 2 Hot	5
Port 2 Gnd Return	6
Case Ground	All others

Notes:
1. All specifications apply filter soldered to the RFM 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, fc.
3. Rejection is measured as attenuation below the minimum IL point in the passband. Rejection in final user application is dependent on PCB layout and external impedance matching design. See Application Note No. 42 for details.
4. Part to part absolute delay measurement records the absolute delay mean across 1dB passband.
5. "LRIP" or "L" after the part number indicates "low rate initial production" and "ENG" or "E" indicates "engineering prototypes."
6. The design, manufacturing process, and specifications of this filter are subject to change.
7. 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.
8. US and international patents may apply.
9. RFM, stylized RFM logo, and RF Monolithics, Inc. are registered trademarks of RF Monolithics, Inc.
10.
11. Electrostatic Sensitive Device. Observe precautions for handling.

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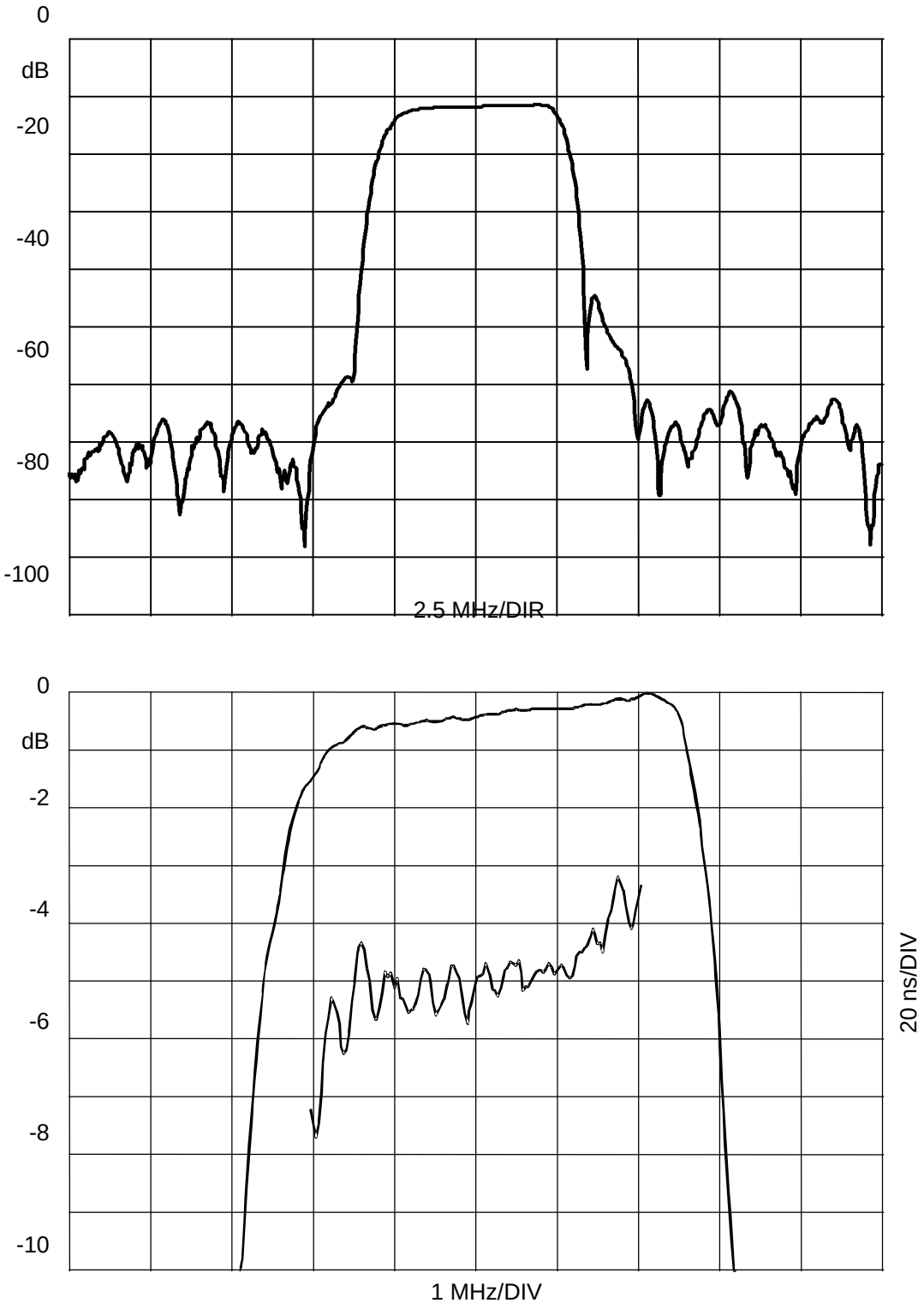
SF1124A 190 MHz SAW Filter



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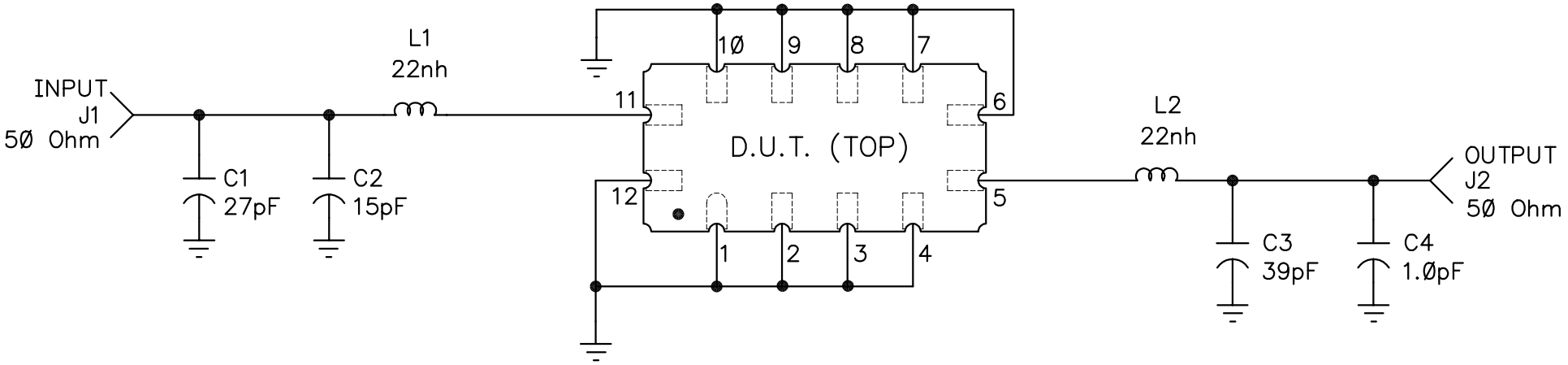
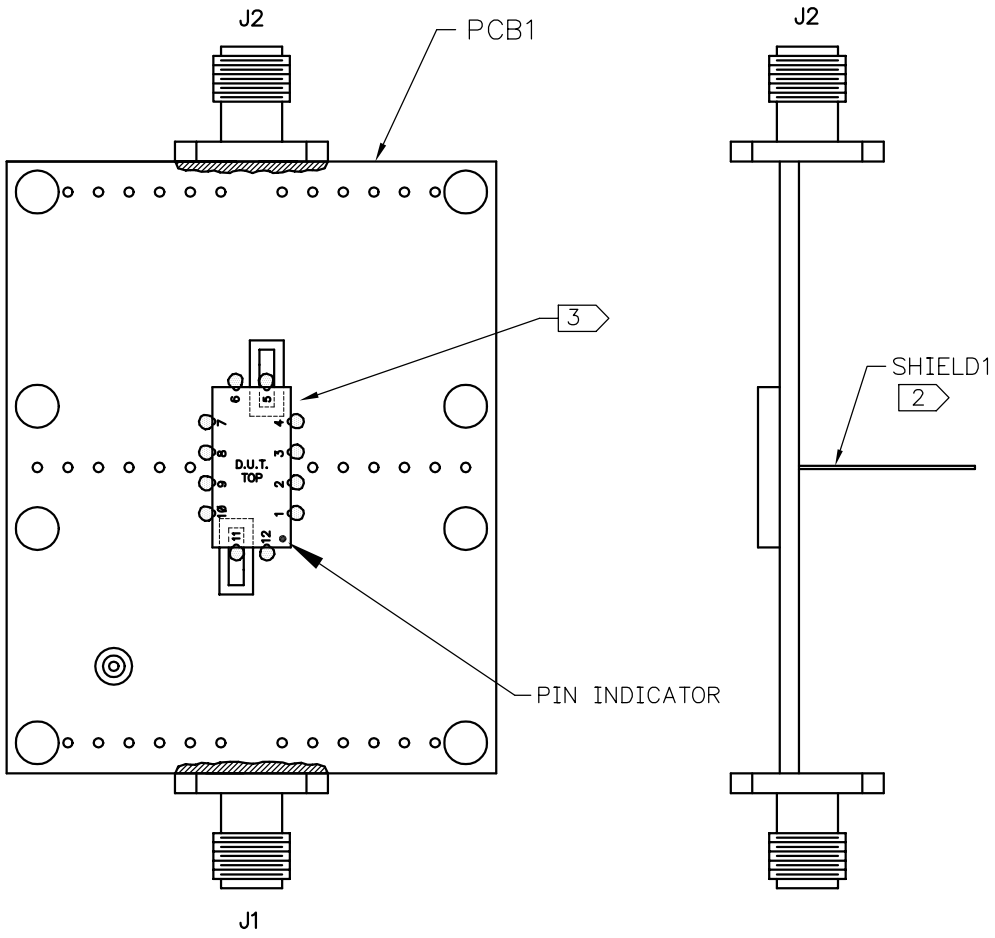
REV	ECN NO.	DESCRIPTION	APP/DATE
A	9188	INITIAL RELEASE	29nov00



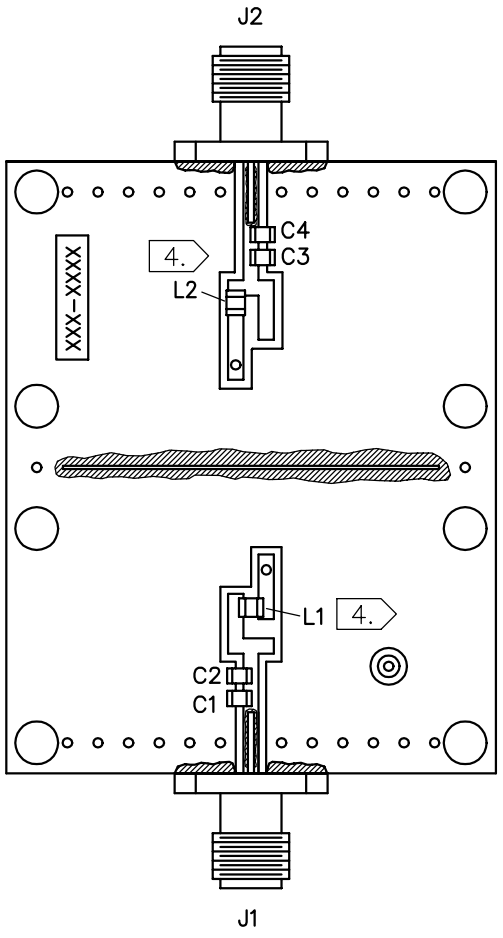
DRAWN BY/DATE: J.F.Christopherson 29nov00		TITLE: SF1124A DEMO PCB					
RF Monolithics, Inc. DALLAS, TEXAS 75244	CHECKED/APPROVED	SIZE **A**	CODE IDENT **2U874**	DWG. NO. SF1124A-000		REV A	SHEET 1/3

NOTES:

1. SOLDER MOUNT COMPONENTS & CONNECTORS TO PCB1.
2. SOLDER SHIELD1 AS SHOWN AND TRIM TAB FROM SHIELD SO THAT IT IS FLUSH WITH PCB.
3. ORIENT THE FLTR1 AND SOLDER IT DOWN TO THE BOARD AS SHOWN.
4. L1 AND L2 INDUCTORS ARE 9Ø° TO EACH OTHER.



TEST SIDE



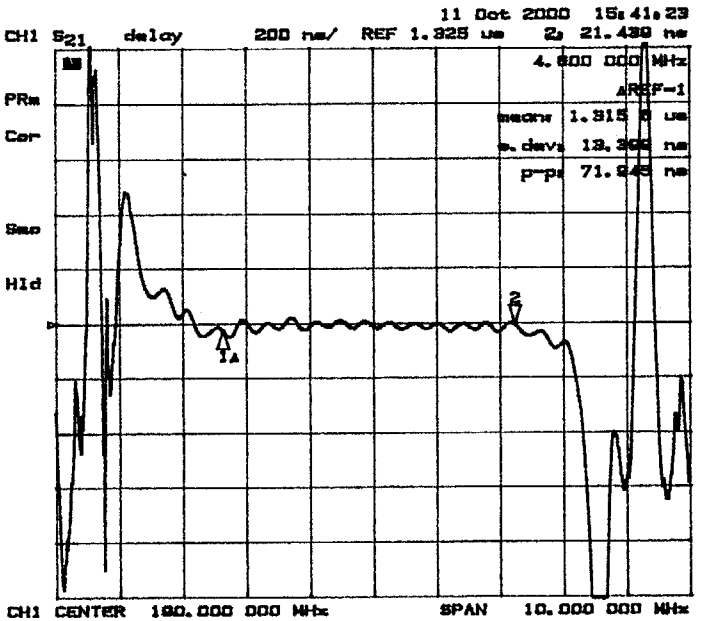
COMPONENT SIDE

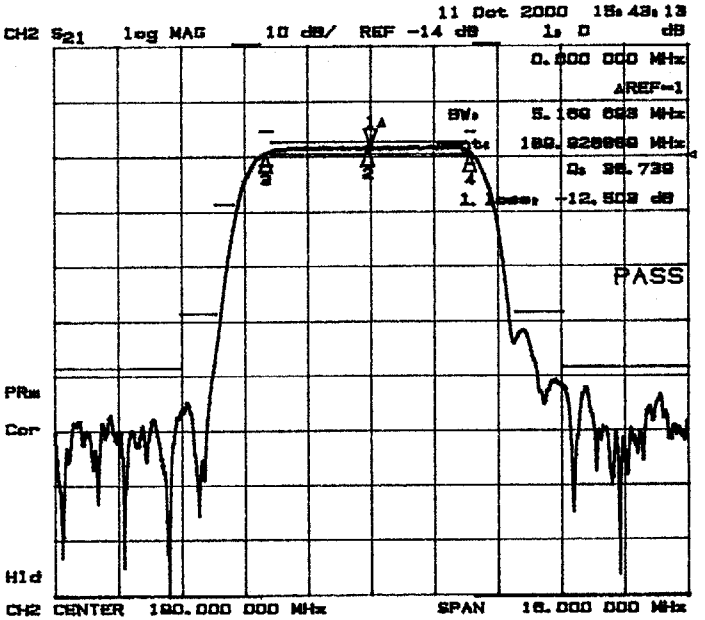
RF Monolithics, Inc. DALLAS, TEXAS 75244		SIZE A	CODE IDENT 2U874	DWG. NO. SF1124A-ØØØ	REV A	SHEET 2

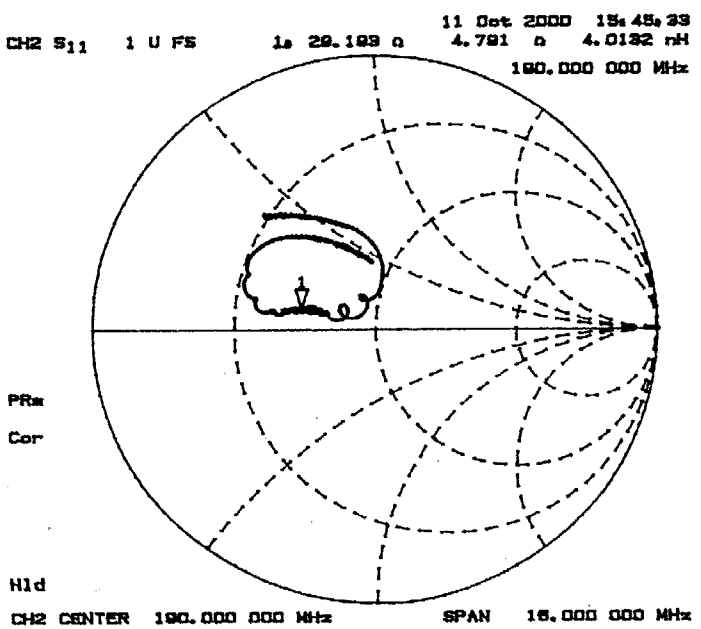
SF1124A
DEMO#4
10-11-00
RT

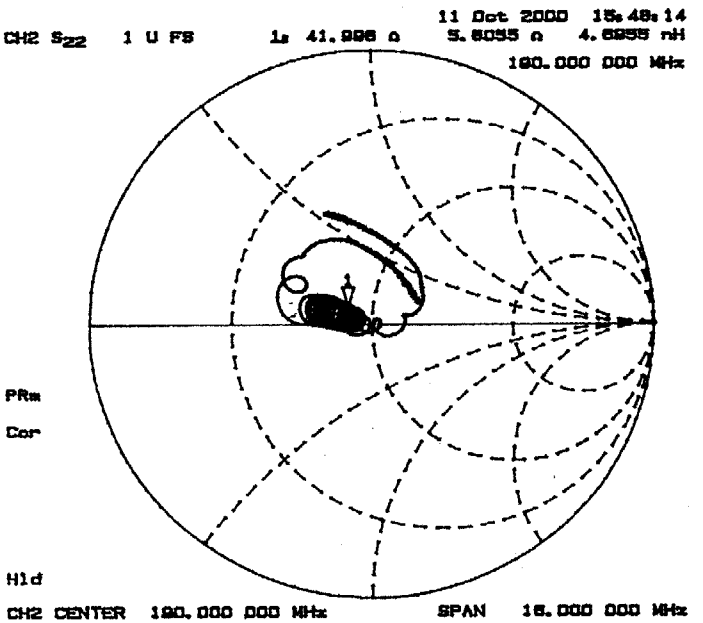
C1= 22pf
C2= 15pf
C3= 39pf
C4= 1 pf

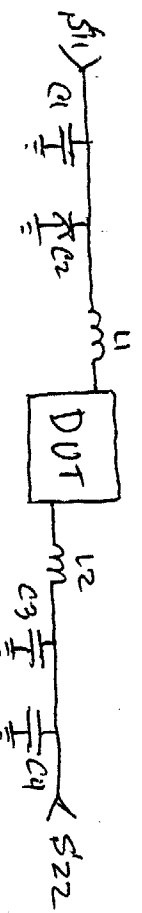
L1, L2 = 22nH





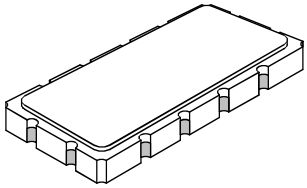






SMP-53 Case

12-Terminal Ceramic Surface-Mount Case
13.3 x 6.5 mm Nominal Footprint

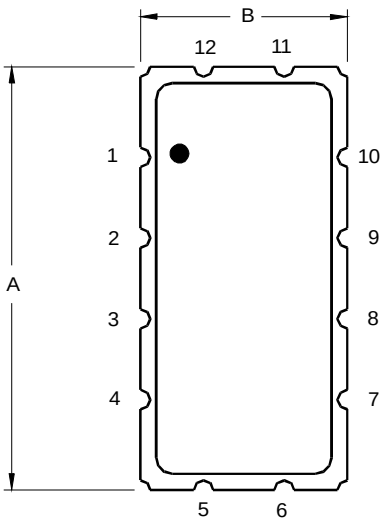


Case Dimensions

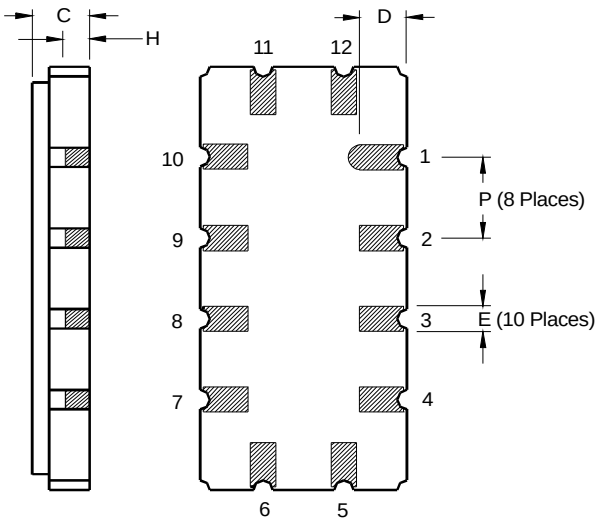
Dimension	mm			Inches		
	Min	Nom	Max	Min	Nom	Max
A	13.08	13.31	13.60	0.515	0.524	0.535
B	6.27	6.50	6.80	0.247	0.256	0.268
C		1.91	2.00		0.075	0.079
D		1.50			0.059	
E		0.79			0.031	
H		1.0			0.039	
P		2.54			0.100	

Electrical Connections

Connection		Terminals
Port 1	Input or Return	11
	Return or Input	12
Port 2	Output or Return	5
	Return or Output	6
Ground		All others
Single Ended Operation		**Return is ground**
Differential Operation		**Return is hot**



TOP VIEW



BOTTOM VIEW