

Band Pass Filter

BPF-EDU1641

Surface Mount

Important Note

This model has been designed, built and tested in our engineering department. Performance data represents model capability. At present it is a non-catalog model. On request, we can supply a final specification sheet, part number and price/delivery information.



Please click "Back", and then click "Contact Us" for Applications support.

HQ1157

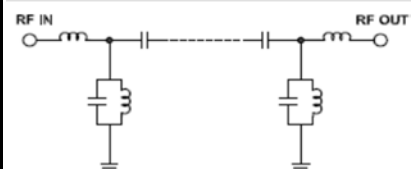
ELECTRICAL SPECIFICATIONS 50Ω @ +25°C

Parameter	Min.	Typ.	Max.	Units
Passband (Loss < 4 dB)	135.25		137.75	MHz
Centre frequency		136.5		MHz
Low Band (Loss > 40 dB)	DC	105		MHz
Low Band (Loss > 20 dB)	DC	114		MHz
High Band (Loss > 20 dB)		160	1000	MHz
High Band (Loss > 40 dB)		176	1000	MHz
Passband VSWR		1.5		(:1)
Stopband VSWR		17		(:1)

Functional Schematic

MAXIMUM RATINGS

Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power Input	200mW



PIN CONNECTIONS

Input	1
Output	8
Ground	2-7, 9-14



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RF/IF MICROWAVE COMPONENTS

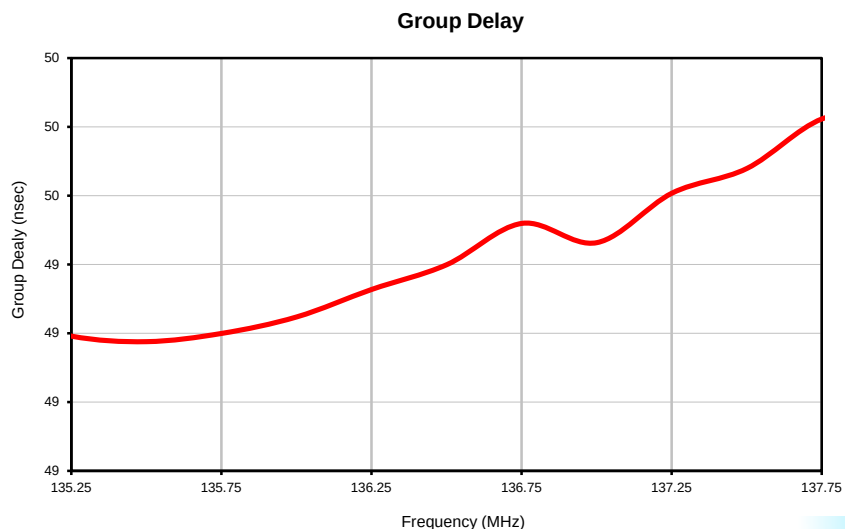
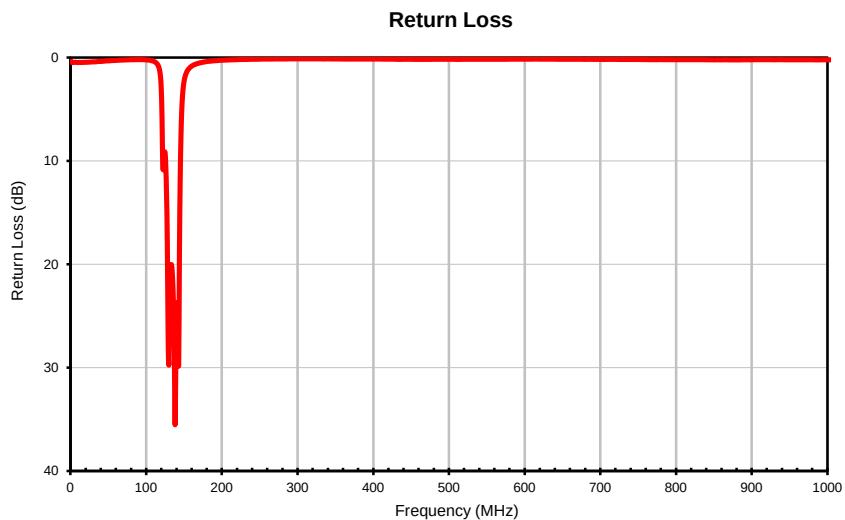
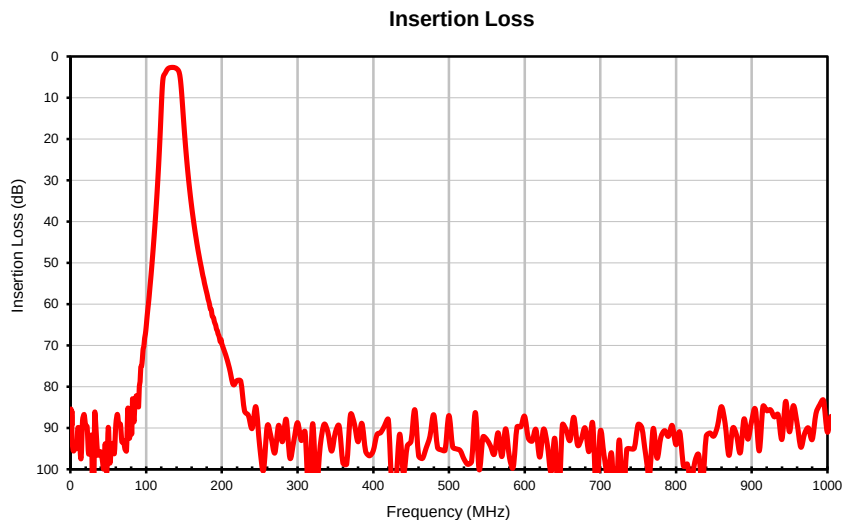


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Typical Performance Data

FREQUENCY (MHz)	INSERTION LOSS (dB)	RETURN LOSS (dB)	FREQUENCY (MHz)	GROUP DELAY (nsec)
0.30	87.38	0.39	130.00	54.65
24.00	96.31	0.43	131.00	52.65
50.00	89.83	0.30	132.00	51.34
90.00	84.91	0.18	134.00	49.34
105.00	55.96	0.24	135.00	49.07
114.00	34.34	0.55	135.25	48.99
119.00	16.83	1.87	135.50	48.97
121.00	8.61	5.82	135.75	49.00
125.00	4.13	9.16	136.00	49.06
135.25	2.68	21.90	136.25	49.16
136.50	2.71	25.24	136.50	49.25
137.75	2.76	32.41	136.75	49.40
144.00	4.16	18.85	137.00	49.33
147.00	9.14	5.22	137.25	49.51
152.00	21.62	1.69	137.50	49.60
160.00	36.19	0.83	137.75	49.78
176.00	53.89	0.42	138.00	49.81
230.00	85.85	0.17	138.25	50.10
255.00	100.33	0.13	138.50	50.29
665.00	87.40	0.15	139.00	50.60
765.00	101.41	0.19	139.25	50.90
800.00	94.04	0.19	139.50	51.35
900.00	88.33	0.20	139.75	52.21
1000.00	90.97	0.20	140.00	53.24

Typical Performance Curves



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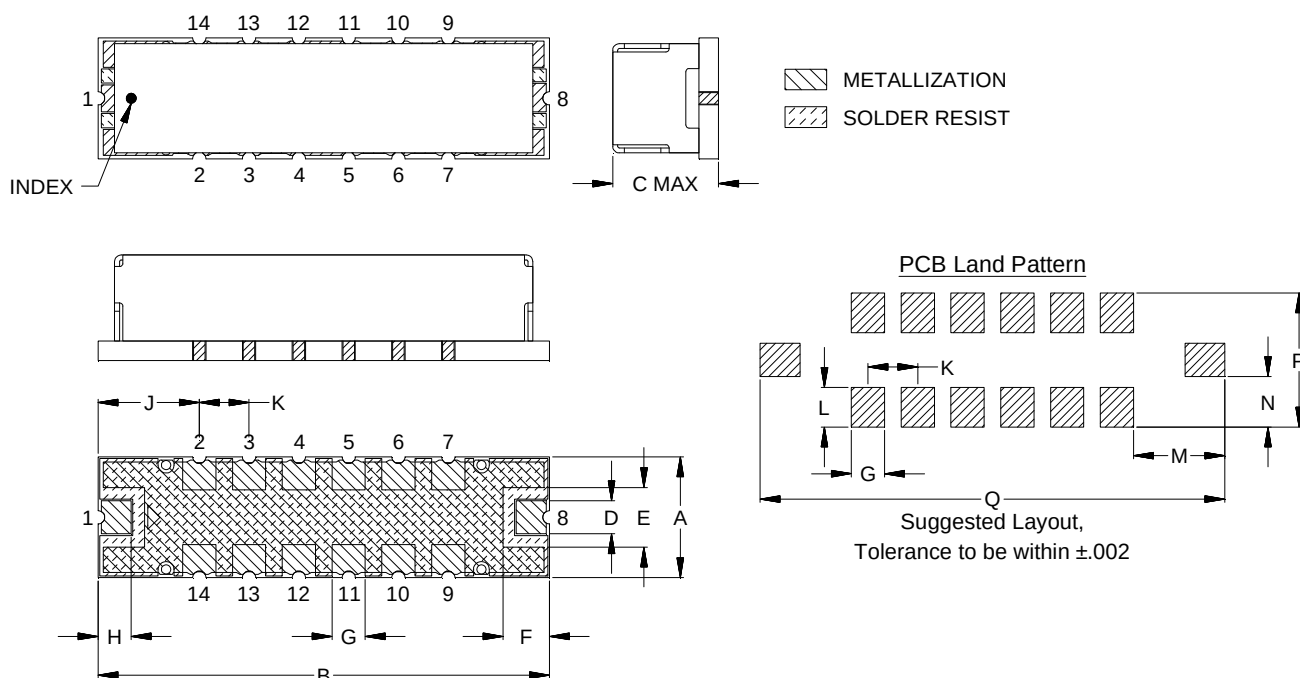
RF/IF MICROWAVE COMPONENTS



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Outline Dimensions

HQ1157



CASE#	A	B	C	D	E	F	G	H	J	K	L	M
HQ1157	.365 (9.27)	1.360 (34.54)	.350 (8.89)	.100 (2.54)	.180 (4.57)	.140 (3.56)	.100 (2.54)	.100 (2.54)	.305 (7.75)	.150 (3.81)	.120 (3.05)	.275 (6.99)

CASE#	N	P	Q	WT.GRAM
HQ1157	.152 (3.87)	.405 (10.29)	1.400 (35.56)	4.0

Dimensions are in inches (mm). Tolerances: 2Pl. ± .03; 3Pl. ± .015

Notes:

- Case material: Nickel-Silver alloy.
- Base: Printed wiring laminate.
- Termination finish:
For RoHS Case Styles: 3-5 μ inch (.08-.13 microns) Gold over 120-240 μ inch (3.05-6.10 microns) Nickel plate.
For RoHS-5 Case Styles: Tin-Lead plate.

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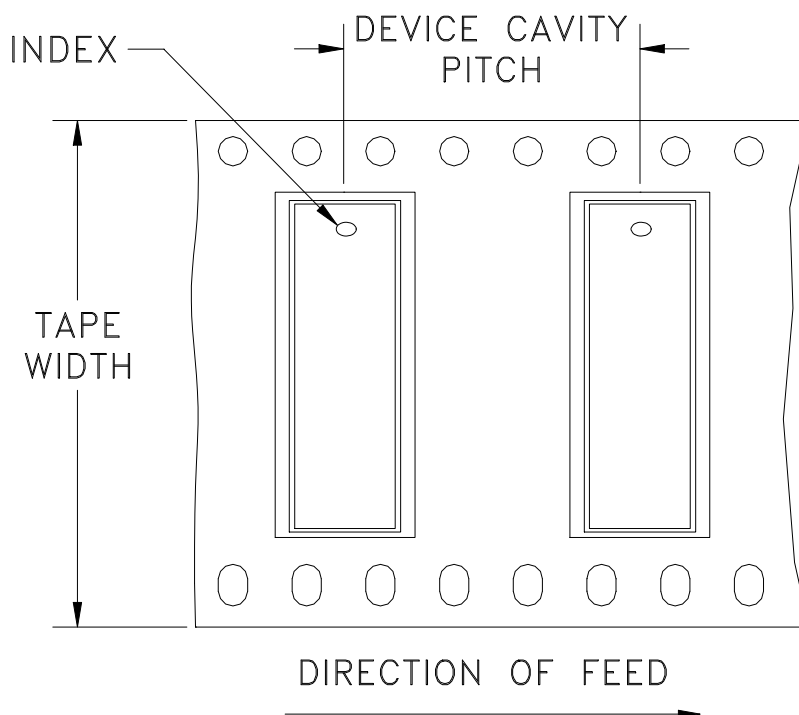


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RF/IF MICROWAVE COMPONENTS

Tape & Reel Packaging TR-F83

DEVICE ORIENTATION IN T&R



Tape Width, mm	Device Cavity Pitch, mm	Reel Size, inches	Devices per Reel
56	16	13	100

Mini-Circuits carrier tape materials provide protection from ESD (Electro-Static Discharge) during handling and transportation. Tapes are static dissipative and comply with industry standards EIA-481/EIA-541.

Go to: www.minicircuits.com/pages/pdfs/tape.pdf

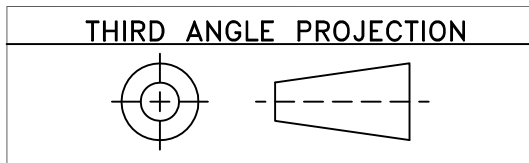


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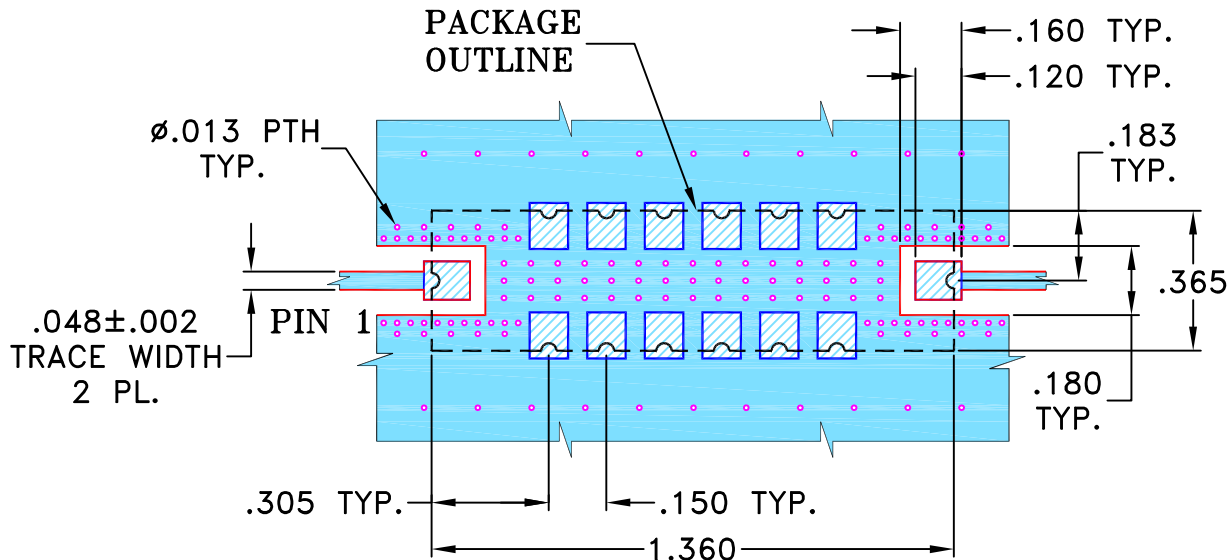
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REVISIONS					
REV	ECN No.	DESCRIPTION	DATE	DR	AUTH
OR	M101212	NEW RELEASE (FROM RAVON)	11/05	DK	YB
A	M108938	SWITCH HATCHES	12/06	DK	HH
B	M118075	CHANGE LINE PLACES	06/08	HB	HH
C	M173459	CORRECTED CASE STYLE & TB PART#	03/27/19	ITG	IL

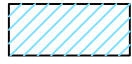
**SUGGESTED MOUNTING CONFIGURATION
FOR HQ1157 CASE STYLE, rf PIN CONNECTION**



NOTE:

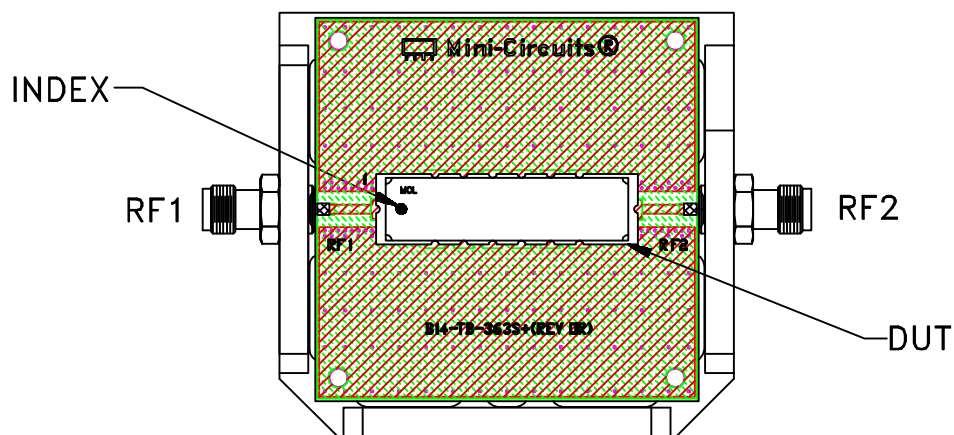
- TRACE WIDTH IS SHOWN FOR FR4 WITH DIELECTRIC THICKNESS .025"±.002". COPPER: 1/2 OZ. EACH SIDE.
FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.
- BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.

 DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)

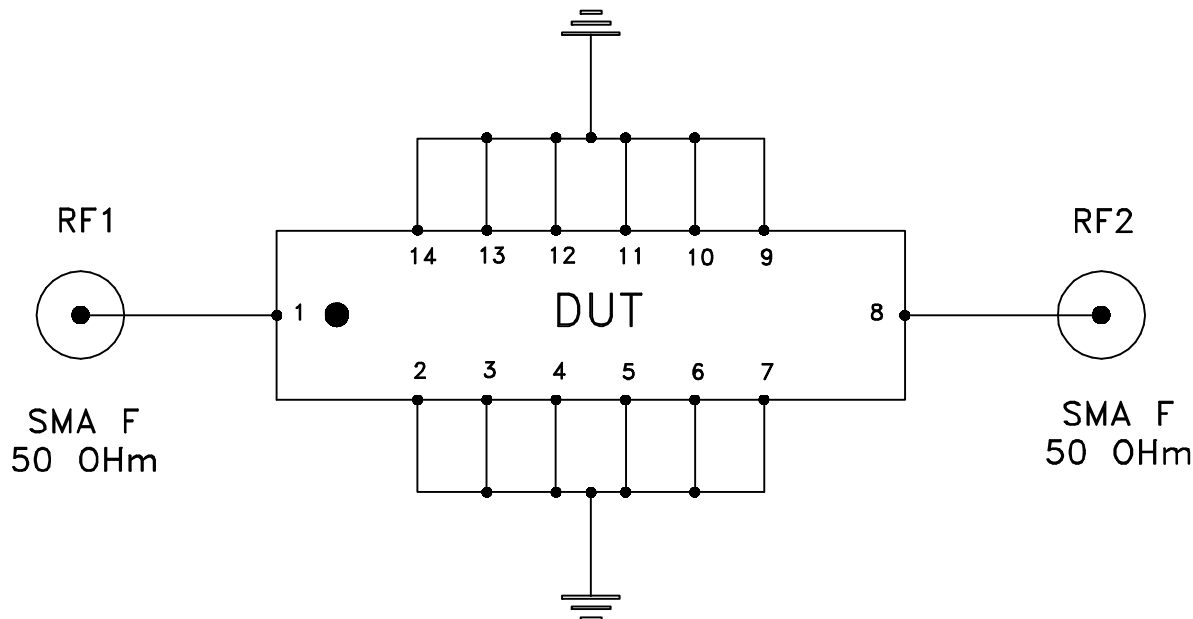
 DENOTES COPPER LAND PATTERN FREE OF SOLDERMASK

UNLESS OTHERWISE SPECIFIED		INITIALS		DATE		Mini-Circuits® 13 Neptune Avenue Brooklyn NY 11235									
DIMENSIONS ARE IN INCHES		DRAWN	HB (RAVON)	12 JUN 2008		PL, rf, HQ1157, TB-363+, 50 OHM									
TOLERANCES ON:		CHECKED	RZ (RAVON)	12 JUN 2008											
2 PL DECIMALS ±		APPROVED	HH (RAVON)	12 JUN 2008											
3 PL DECIMALS ± .005															
ANGLES ±															
FRACTIONS ±															
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ASHEETA1.DWG REV:A DATE:01/12/95						FILE:		98PL227		SCALE:		2:1		SHEET: 1 OF 1	

Evaluation Board and Circuit



TB-363+



Schematic Diagram

Notes:

1. 50 Ohm SMA Female connectors.
2. PCB Material: ROGERS R04350 or equivalent,
Dielectric Constant=3.48, Thickness=.030 inch.

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All Mini-Circuits products are manufactured under exacting quality assurance and control standards, and are capable of meeting published specifications after being subjected to any or all of the following physical and environmental test.

Specification	Test/Inspection Condition	Reference/Spec
Operating Temperature	-40° to 85° C Ambient Environment	Individual Model Data Sheet
Storage Temperature	-65° to 150° C Ambient Environment	Individual Model Data Sheet
Autoclave	15 psig, 100% RH, 121°C, 96 hours	JESD22-A102-C, Condition C
Temperature Cycling	-65° to 150°C, 100 cycles	JESD22-A104
Temperature Humidity	85°C/ 85% RH, 168 hours	JESD22-113
Solder Reflow Heat	Sn-Pb Eutetic Process: 240°C peak Pb-Free Process: 260°C peak	J-STD-020, Table 4-1, 4-2 and 5-2; Figure 5-1
Moisture Sensitivity: Level 1	Bake at 125°C for 24 hours Soak at 85°C/85% RH for 168 hours, Reflow 3 cycles at 240°C peak (Non-RoHS) or 260°C (RoHS)	J-STD-020
Solderability	10X magnification, 95% coverage	JESD22-B102, Method 1: Dip and Look Test
Mechanical Shock	50g, 11 ms, 1/2-sine, 18 shocks: 3 each direction, each of 3 axes	MIL-STD-202, Method 213, Condition A
Vibration (High Frequency)	20g peak, 10-2000 Hz, 12 times in each of three perpendicular directions (total 36)	MIL-STD-202, Method 204, Condition D