## **Bandpass Filter**

EBPF-368-1+

CASE STYLE: HE1354

 $50\Omega$ 225 to 512 MHz

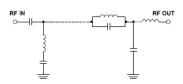
#### **Features**

- · Miniature shielded package
- · Low insertion loss
- High rejection

#### **Applications**

- Defense/Military
- . Military Radio Communications

#### **Functional Schematic**



			•				
Parameter		F#	Frequency (MHz)	Min.	Тур.	Max.	Unit
Pass Band	Insertion Loss Return Loss	F1-F2 F1-F2	225 - 512 225 - 512	— 12	1.2 —	2.5 —	dB dB
Stop Band, Lower	Rejection	F3-F4	30 - 108	25	30	_	dB
Stop Band, Upper	Rejection	F5-F6 F6-F7	620 - 1000 1000 - 2000	20 —	30 20	_	dB dB

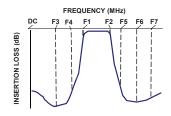
**Electrical Specifications** 

Maximum Ratings						
Operating Temperature	-40°C to 85°C					
Storage Temperature	-55°C to 100°C					
RF Power Input	0.5 W					

Permanent damage may occur if any of these limits are exceeded.

#### Typical Performance Data at 25°C

#### **Typical Frequency Response**



#### +RoHS Compliant

The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications



A. Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.

B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.

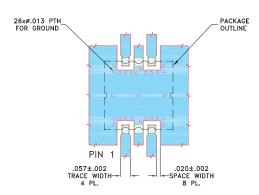
C. The parts covered by this specification document are subject to Mini-Circuits standard limited warranty and terms and conditions (collectively, "Standard Terms"); Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the Standard Terms and the exclusive rights and remedies thereunder, please visit Mini-Circuits website at www.minicircuits.com/MCLStore/terms.jsp

#### **Pad Connections**

INPUT	1
OUTPUT	6
GROUND	2,5
NOT USED	3,4

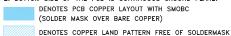
#### Demo Board MCL P/N: TB-XXXX+ Suggested PCB Layout (PL-680)

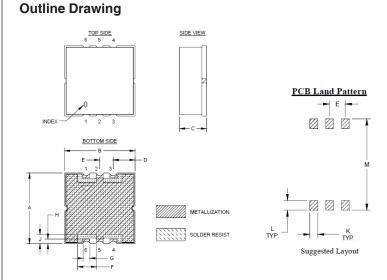
SUGGESTED MOUNTING CONFIGURATION FOR HE1354 CASE STYLE



#### NOTES:

- 1. TRACE WIDTH IS SHOWN FOR ROGERS (RO4350B) WITH DIELECTRIC THICKNESS .030"±.002". COPPER: 1/2 0Z. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED. 2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.





#### Outline Dimensions (inch )

A . <b>394</b> 10.01	.394	C <b>.150</b> 3.81	.122	.075	.098	G <b>.038</b> 0.97	.026	.051	K . <b>038</b> 0.97
.046	M . <b>434</b> 11.02								Wt. grams 0.7

Note: Please refer to case style drawing for details

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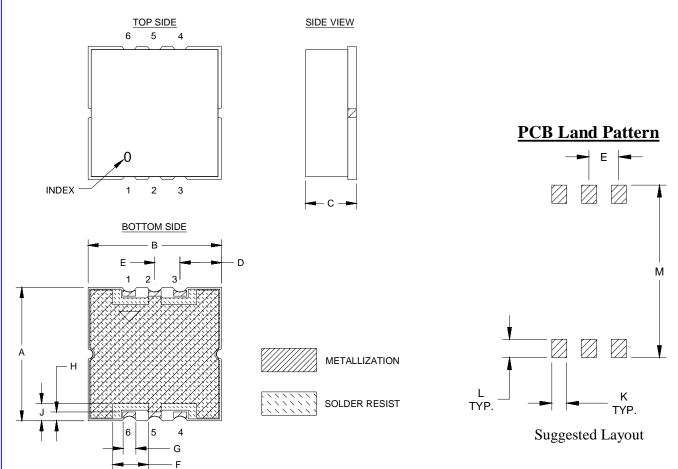
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## Case Style



HE1354

### **Outline Dimensions**



CASE #	A	В	С	D	Е	F	G	Н	J	K	L	M	WT. GRAMS
HE1354	.394 (10.01)	.394 (10.01)	.150 (3.81)	.122 (3.10)	.075 (1.90)	.098 (2.49)	.038 (0.97)	.026 (0.66)	.051 (1.29)	.038 (0.97)	.046 (1.17)	.434 (11.02)	0.7

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

#### **Notes:**

- 1. Case material: Nickel-Silver alloy.
- 2. Base: Printed wiring laminate.
- 3. Termination finish:

For RoHS Case Styles:  $3-5 \mu$  inch (.08-.13 microns) Gold over  $120-240 \mu$  inch (3.05-6.10 microns) Nickel plate. For RoHS-5 Case Styles: Tin-Lead plate.





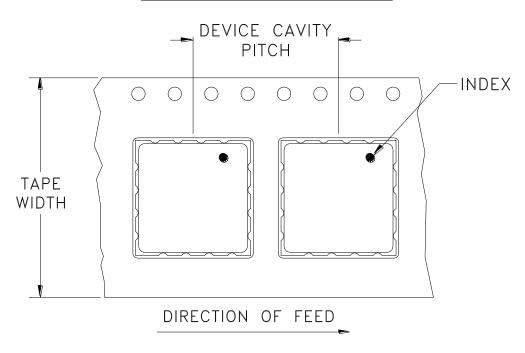
P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661 For detailed performance specs & shopping online see Mini-Circuits web site

The Design Engineers Search Engine Provides ACTUAL Data Instantly From MINI-CIRCUITS At: www.minicircuits.com

RF/IF MICROWAVE COMPONENTS

# Tape & Reel Packaging TR-F37

#### DEVICE ORIENTATION IN T&R



Tape Width, mm	Device Cavity Pitch, mm	Reel Size, inches	Devices p	per Reel
			Small	10
	16	7	quantity	20
2.4		1	standards	50
24			(see note)	100
		12	Standard	200
		13		500

Note: Please consult individual model data sheet to determine device per reel availability.

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



### Mini-Circuits

#### **Environmental Specifications**

### ENV03T2

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	-55° to 100° C Ambient Environment	Individual Model Data Sheet
HAST	130°C, 85% RH, 96 hours	JESD22-A110
Humidity	90 to 95% RH, 240 hours, 50°C	MIL-STD-202, Method 103, Condition A, Except 50°C and end-point electrical test done within 12 hours
Thermal Shock	-55° to 100°C, 100 cycles	MIL-STD-202, Method 107, Condition A-3, except +100°C
Solder Reflow Heat	Sn-Pb Eutectic Process: 225°C peak Pb-Free Process, 245°C peak	J-STD-020, Table 4-1, 4-2 and 5-2, Figure 5-1
Solderability	10X Magnification	J-STD-002, Para 4.2.5, Test S, 95% Coverage
Vibration (High Frequency)	20g peak, 20-2000 Hz, 4 times in each of three axes (total 12)	MIL-STD-883, Method 2007.3, Condition A
Mechanical Shock	50g, 11 ms, 1/2-sine, 18 shocks: 3 each direction, each of 3 axes	MIL-STD-202, Method 213, Condition A
Marking Resistance to Solvents	Isopropyl alcohol + mineral spirits at 25°C; terpene defluxer at 25°C; distilled water + proylene glycol monomethyl ether + monoethanolamine at 63°C to 70°C	MIL-STD-202, Method 215

ENV03T2 Rev: A

02/25/11

M130240 File: ENV03T2.pdf

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