

Band Pass Filter

RBP-EDU1596

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.

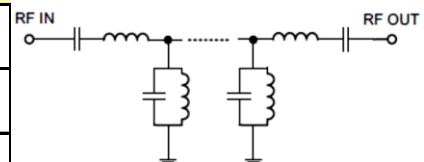
GP731

ELECTRICAL SPECIFICATIONS 50Ω @ +25°C

Parameter	Min.	Typ.	Max.	Units
Passband (Loss < 3 dB)	110		205	MHz
Centre frequency		158		MHz
Low Band (Loss > 40 dB)	DC	55		MHz
Low Band (Loss > 20 dB)	55	70		MHz
High Band (Loss > 20 dB)		290	375	MHz
High Band (Loss > 40 dB)		375	1500	MHz
Passband VSWR		1.6		(:1)
Stopband VSWR		18		(:1)

Functional Schematic

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



PIN CONNECTIONS

Input	2
Output	6
Ground	1,3,4,5,7,8



P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661 For detailed performance specs & shopping online at www.minicircuits.com



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RF/IF MICROWAVE COMPONENTS



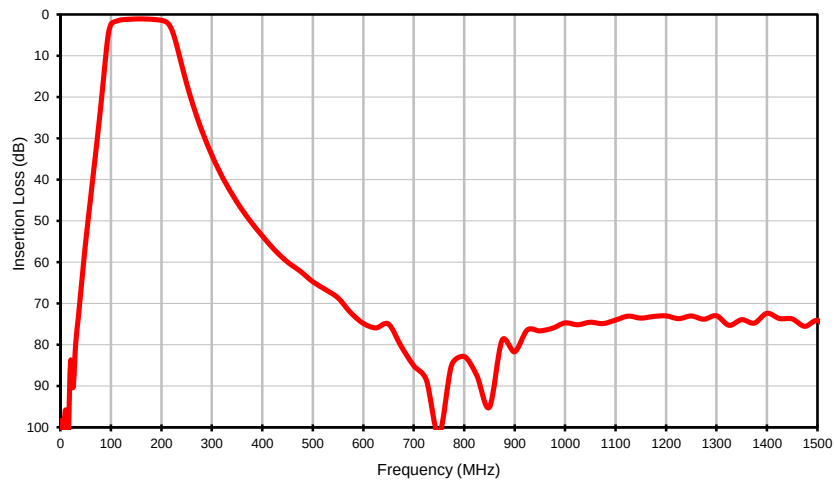
REV. X1
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Typical Performance Data

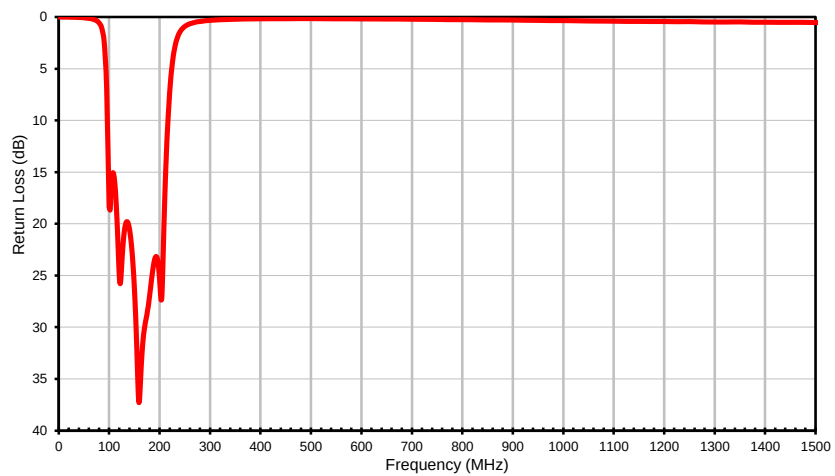
FREQUENCY (MHz)	INSERTION LOSS (dB)	RETURN LOSS (dB)	FREQUENCY (MHz)	GROUP DELAY (nsec)
1	110.61	0.00	110	15.36
10	95.77	0.00	115	13.71
35	73.76	0.03	120	12.53
55	49.48	0.10	125	11.49
60	44.09	0.14	130	10.71
70	33.26	0.26	135	10.09
85	15.89	1.06	140	9.69
100	2.35	20.32	145	9.33
110	1.64	15.87	150	9.07
158	1.07	26.89	153	8.96
205	1.56	19.43	158	8.78
225	5.22	4.25	160	8.73
250	16.72	0.85	163	8.69
290	31.19	0.34	168	8.59
325	40.33	0.23	170	8.59
375	49.85	0.18	175	8.59
450	59.97	0.15	180	8.67
500	64.72	0.16	185	8.79
800	82.84	0.30	190	9.00
1000	74.70	0.40	195	9.31
1200	73.00	0.52	198	9.57
1300	72.97	0.54	200	9.81
1400	72.38	0.57	202	10.06
1500	74.09	0.59	205	10.55

Typical Performance Curves

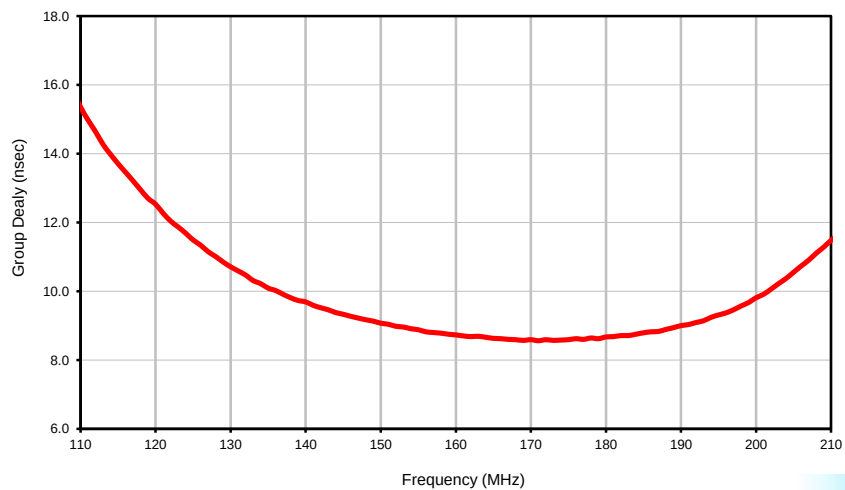
Insertion Loss



Return Loss

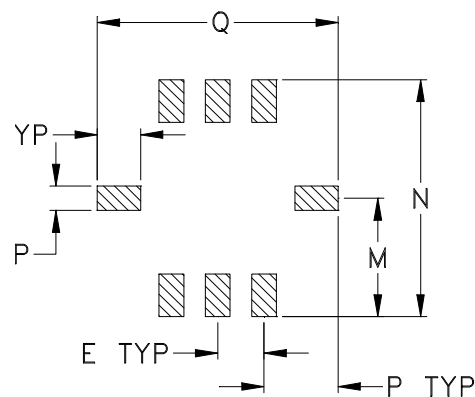
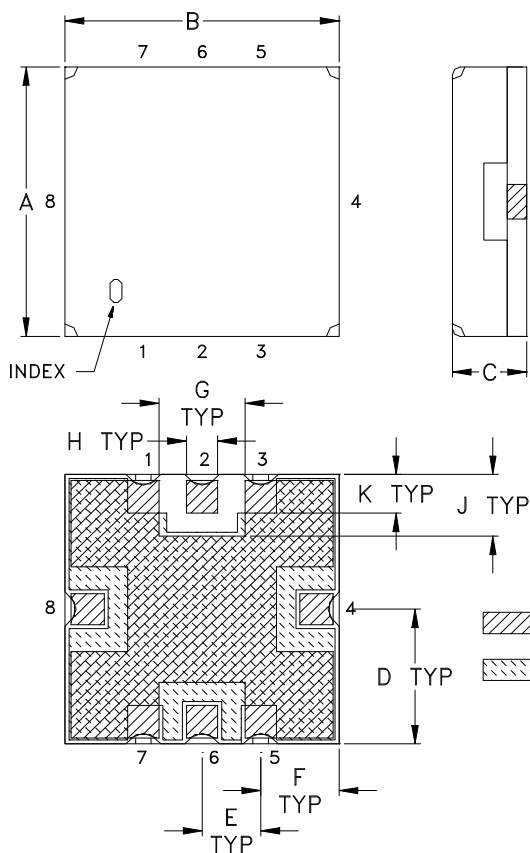


Group Delay



Outline Dimensions

GP731



CASE #	A	B	C	D	E	F	G	H	J	K	L	M
GP731	.350 (8.89)	.350 (8.89)	.100 (2.54)	.175 (4.45)	.075 (1.91)	.100 (2.54)	.110 (2.79)	.040 (1.02)	.080 (2.03)	.050 (1.27)	.040 (1.02)	.195 (4.95)

CASE #	N	P	Q	R	WT. GRAM
GP731	.390 (9.91)	.120 (3.05)	.390 (9.91)	.070 (1.78)	.4 +0.3 -0.0

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

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.



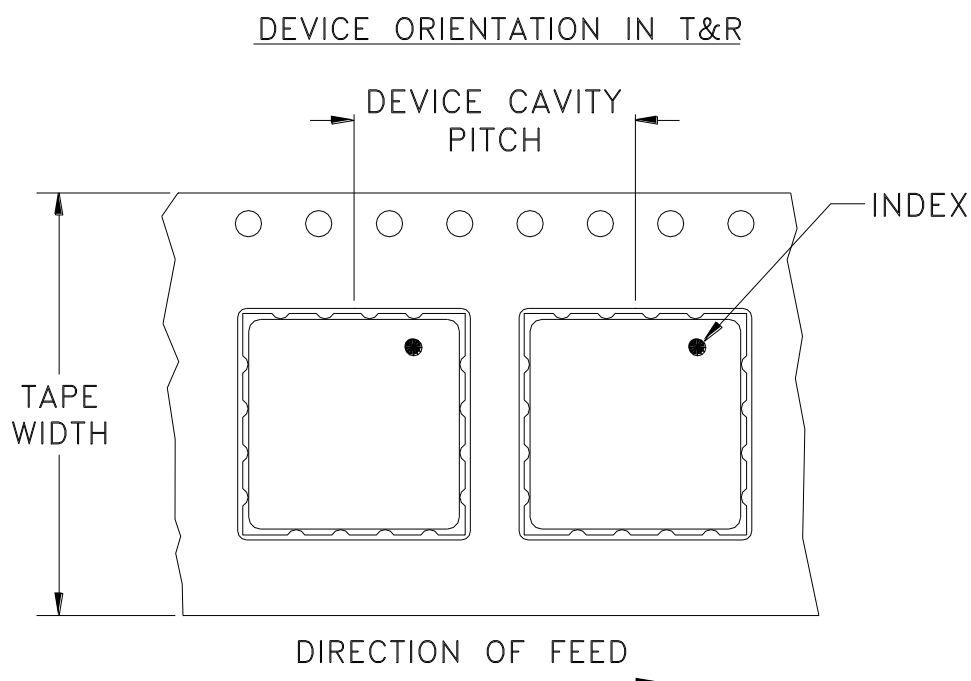
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RF/IF MICROWAVE COMPONENTS

Tape & Reel Packaging TR-F78



Tape Width, mm	Device Cavity Pitch, mm	Reel Size, inches	Devices per Reel see note
16	12	7	10
			20
			50
			100
			200
		13	500, 1000

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



Distribution Centers NORTH AMERICA

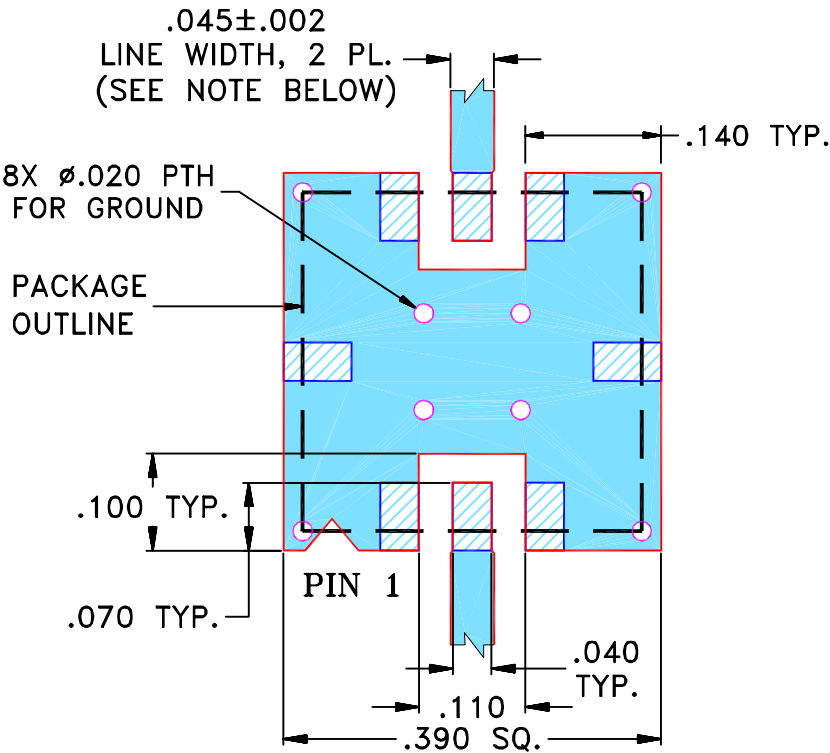
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THIRD ANGLE PROJECTION

REVISIONS					
REV	ECN No.	DESCRIPTION	DATE	DR	AUTH
OR	R59289	NEW RELEASE (FROM RAVON)	02/05	DK	HH
A	M101151	ADDED "RBP" & CORRECTED PIN	10/10/05	MMG	DJ
		CONNECTION TO DESCRIPTION OF PL-DWG.			
B	M102713	UPDATED NOTES, ADDED "...WITH SMOBC"	01/20/06	GT	IL

SUGGESTED MOUNTING CONFIGURATION
FOR GP731 CASE STYLE, "qf" PIN CONNECTION.



- NOTES: 1. 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.
2. 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 SOLDER MASK

UNLESS OTHERWISE SPECIFIED	INITIALS		DATE
DIMENSIONS ARE IN INCHES TOLERANCES ON: 2 PL DECIMALS ± 3 PL DECIMALS ± .005 ANGLES ± FRACTIONS ±	DRAWN	DK (RAVON)	10 FEB 05
	CHECKED	RZ (RAVON)	10 FEB 05
	APPROVED	HH (RAVON)	10 FEB 05



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PL, qf, GP731, RBP, TB-332

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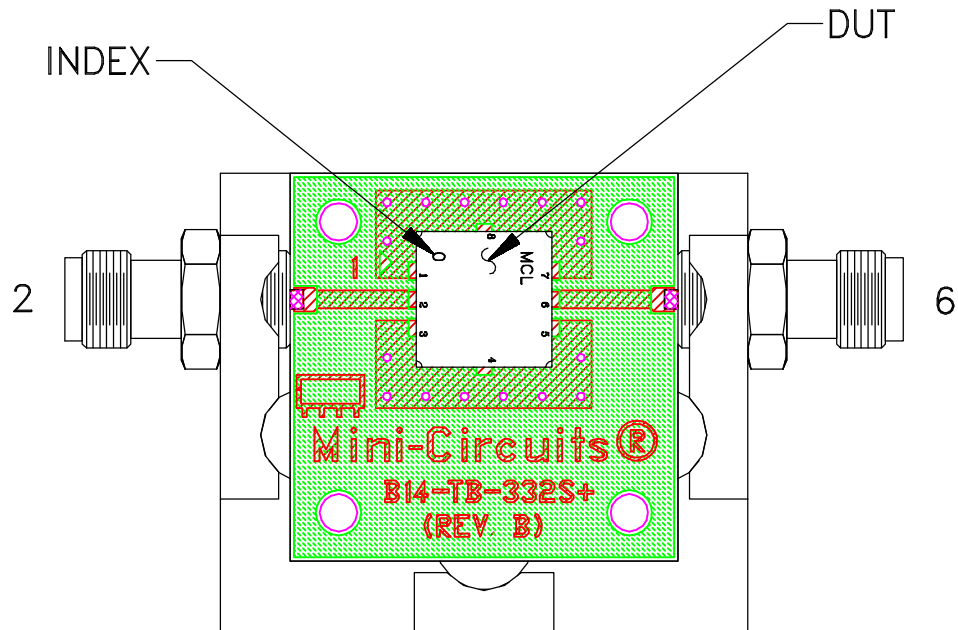
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ASHEETA1.DWG REV:A

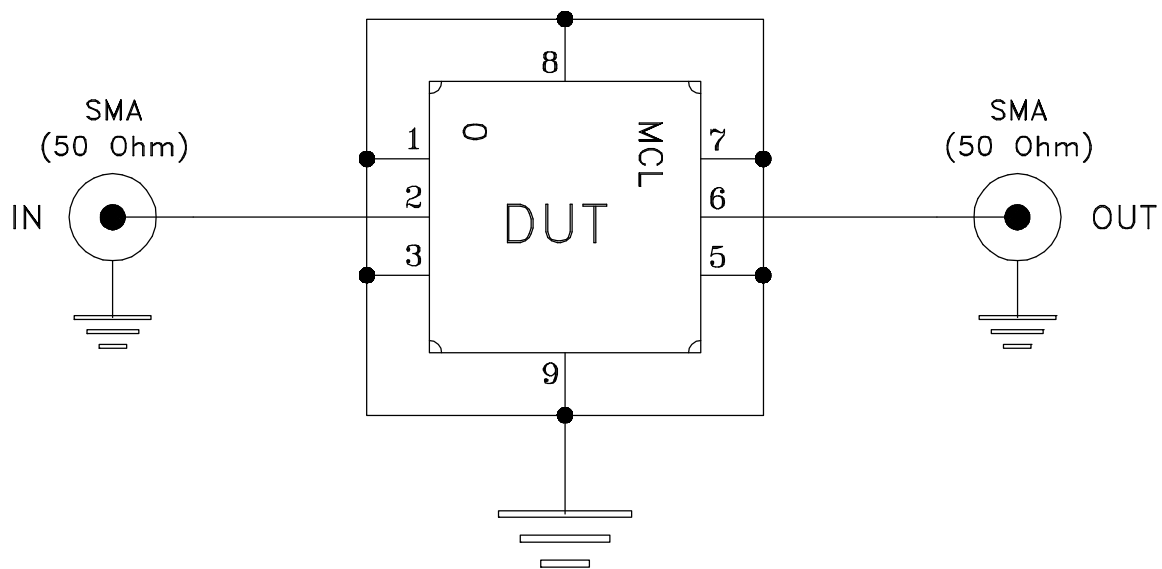
DATE:01/12/95

SIZE	CODE IDENT	DRAWING NO:	REV:
A	15542	98-PL-176	B
FILE:	98PL176	SCALE: 5:1	SHEET: 1 OF 1

Evaluation Board and Circuit



TB-332



Schematic Diagram

Notes:

1. 50 Ohm SMA Female connectors.
2. PCB Material: R04350 or equivalent,
Dielectric Constant=3.5, Thickness=.020 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	-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