

Low Pass Filter

LPF-EDU1665

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.

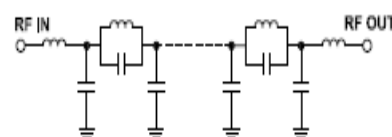
CASE STYLE : HZ1198

ELECTRICAL SPECIFICATIONS 50Ω @ +25°C

Parameter	Min.	Typ.	Max.	Units
Passband (Loss < 2 dB)	DC		190	MHz
Insertion loss 3 dB		202		MHz
Stopband (Loss > 20 dB) (Loss > 40 dB)		230	2500	MHz
		240	2500	MHz
Passband VSWR		1.5		(:1)
Stopband VSWR		20		(: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	2
Ground	3,4,5,6

Metal Shield Low Pass Filter

LPF-EDU1665

Typical Performance Data

FREQUENCY (MHz)	INSERTION LOSS (dB)	RETURN LOSS (dB)	FREQUENCY (MHz)	GROUP DELAY (nsec)
1	0.04	44.81	1	4.35
50	0.17	41.40	10	4.29
150	0.47	32.12	20	4.30
190	0.86	37.24	30	4.31
202	1.39	25.26	40	4.34
210	4.09	6.31	50	4.40
215	9.56	2.41	60	4.47
220	16.66	1.31	70	4.56
225	24.09	0.95	80	4.68
230	31.79	0.79	90	4.81
235	40.23	0.69	100	4.98
240	50.73	0.63	110	5.21
250	63.50	0.54	120	5.50
400	64.09	0.21	130	5.86
500	67.48	0.16	140	6.30
650	77.71	0.14	150	6.84
800	76.97	0.16	155	7.18
1000	72.23	0.18	160	7.52
1300	70.41	0.26	165	8.00
1500	69.47	0.27	170	8.43
1800	64.79	0.30	175	8.85
2000	71.75	0.30	180	9.25
2300	59.17	0.30	185	11.09
2500	53.47	0.30	190	12.44



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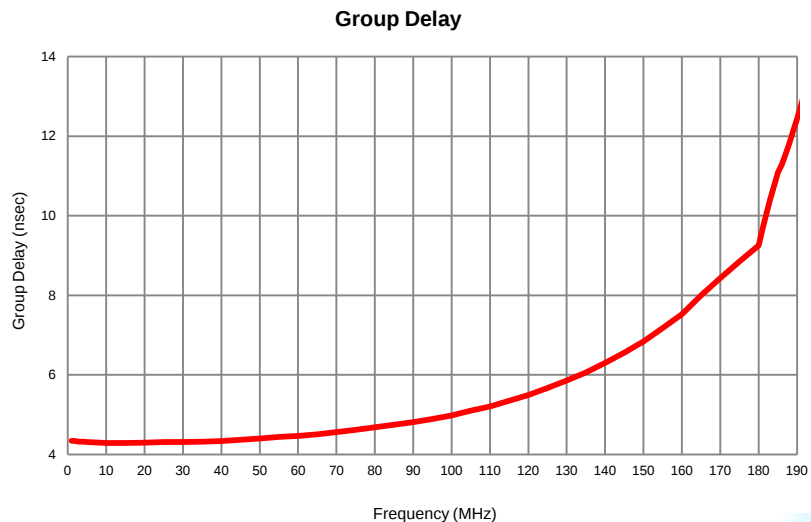
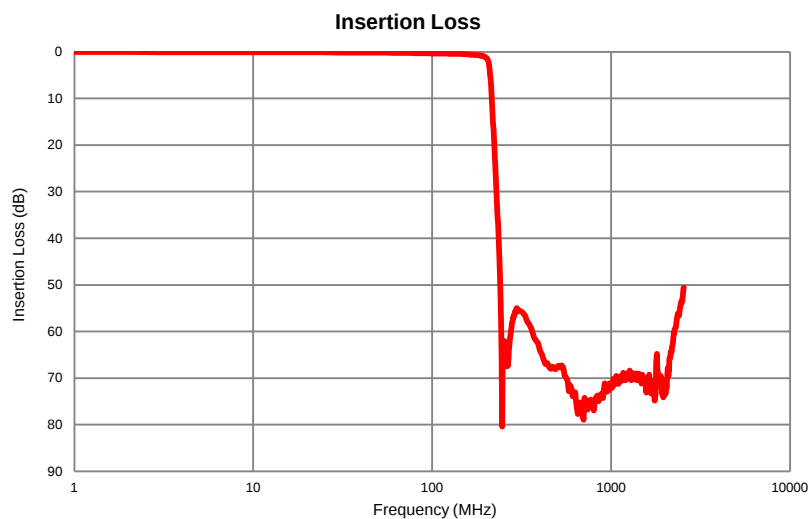
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RF/IF MICROWAVE COMPONENTS



REV. X1
LPF-EDU1665
URJ
120808
Page 1 of 1

Typical Performance Curves

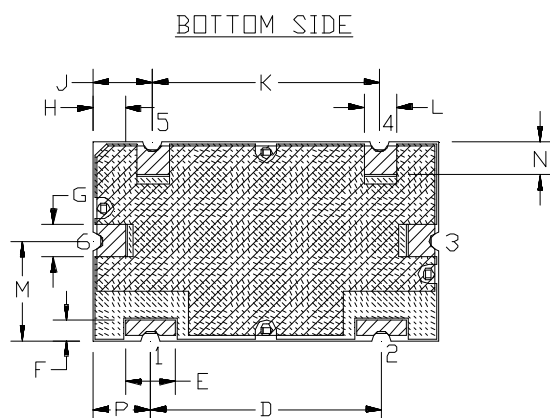
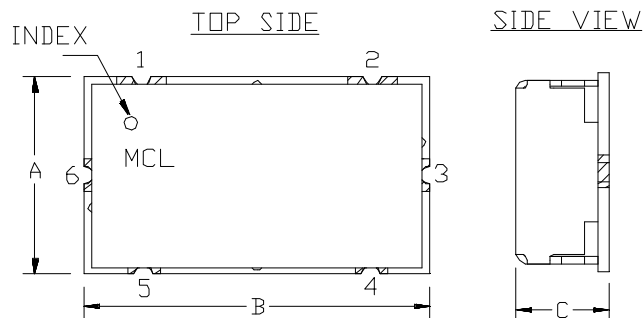


Case Style

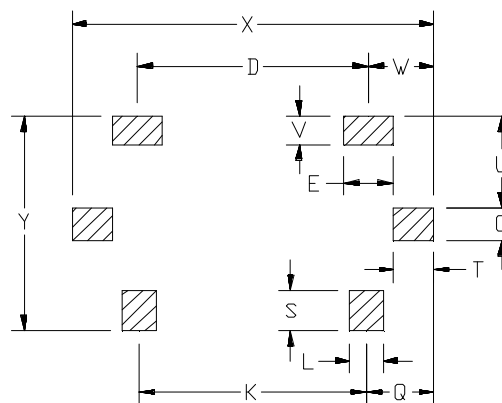
HZ

Outline Dimensions

HZ1198



PCB Land Pattern



 METALLIZATION  SOLDER RESIST

Suggested Layout,
Tolerance to be within $\pm .002$

CASE #	A	B	C	D	E	F	G	H	J	K	L	M
HZ1198	.472" (11.99)	.826" (20.98)	.220" (5.59)	.551" (14.00)	.118" (3.00)	.047" (1.19)	.078" (1.98)	.076" (1.92)	.142" (3.61)	.543" (13.79)	.078" (1.98)	.236" (5.99)

CASE #	N	P	Q	S	T	U	V	W	X	Y	WT GRAMS	NOTES
HZ1198	.079" (2.01)	.138" (3.51)	.162" (4.11)	.098" (2.49)	.096" (2.44)	.217" (5.51)	.067" (1.70)	.157" (3.99)	.866" (22.00)	.512" (13.00)	6.0	A35

Dimensions are in inches (mm). Tolerances: 2PL. +/- .03; 3PL. +/- .015

Notes:

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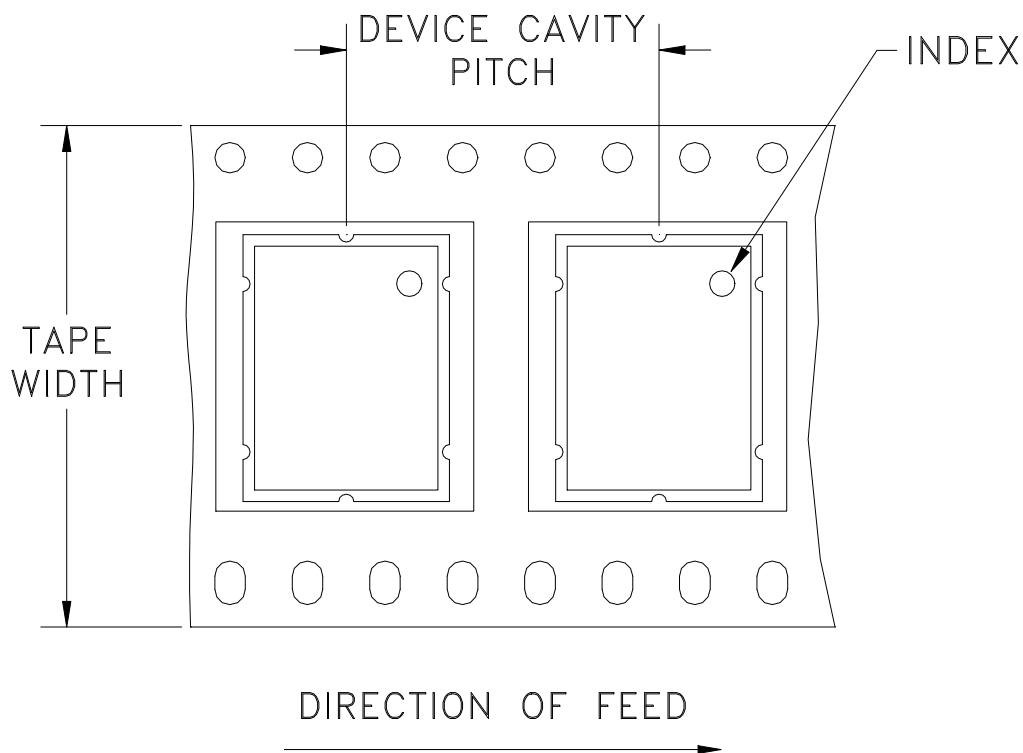


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RF/IF MICROWAVE COMPONENTS

Tape & Reel Packaging TR-F6

DEVICE ORIENTATION IN T&R



Tape Width, mm	Device Cavity Pitch, mm	Reel Size, inches	Devices per Reel
32	16	13	500

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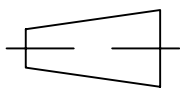
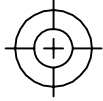
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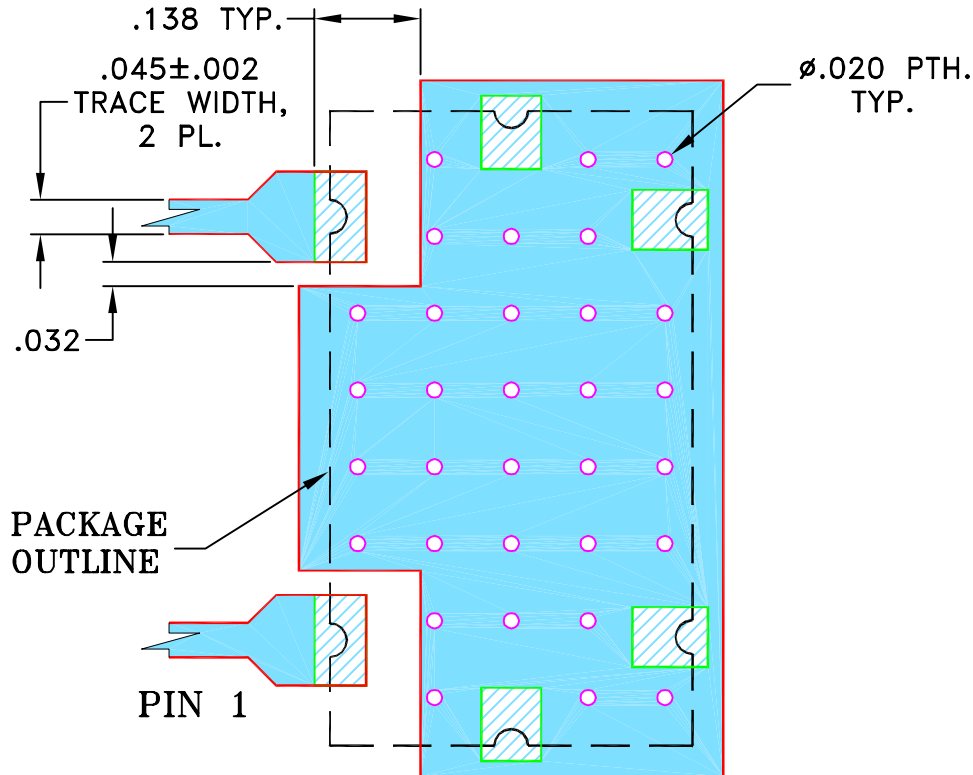
THIRD ANGLE PROJECTION



REVISIONS

REV	ECN No.	DESCRIPTION	DATE	DR	AUTH
OR	M107879	NEW RELEASE (FROM RAVON)	11/06	DK	HH
OR	R66100	NEW RELEASE (FROM RAVON)	11/06	DK	HH

**SUGGESTED MOUNTING CONFIGURATION FOR
HZ1198 CASE STYLE, "rg" PIN CONNECTION, 50 Ω**



NOTES:

- TRACE WIDTH IS SHOWN FOR FR4 WITH DIELECTRIC THICKNESS $.025 \pm .002$ ". 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

DIMENSIONS ARE IN INCHES

TOLERANCES ON:

2 PL DECIMALS ±

3 PL DECIMALS ± .005

ANGLES ±

FRACTIONS ±

DRAWN

DK (RAVON)

14 NOV 06

CHECKED

RZ (RAVON)

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APPROVED

HH (RAVON)

14 NOV 06



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PL, rg, HZ1198, DPLX, TB-400+
50 Ω

SIZE

A

CODE IDENT

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98-PL-247

REV:

OR

FILE:

98PL247

SCALE:

4:1

SHEET:

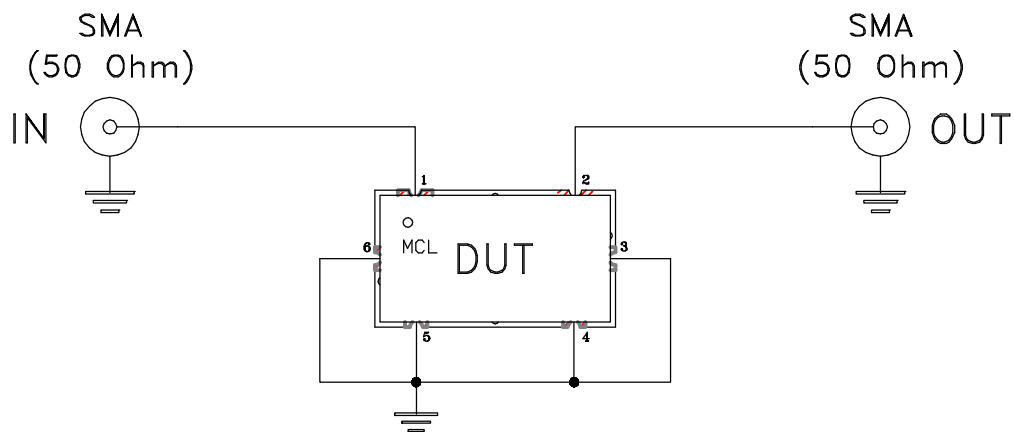
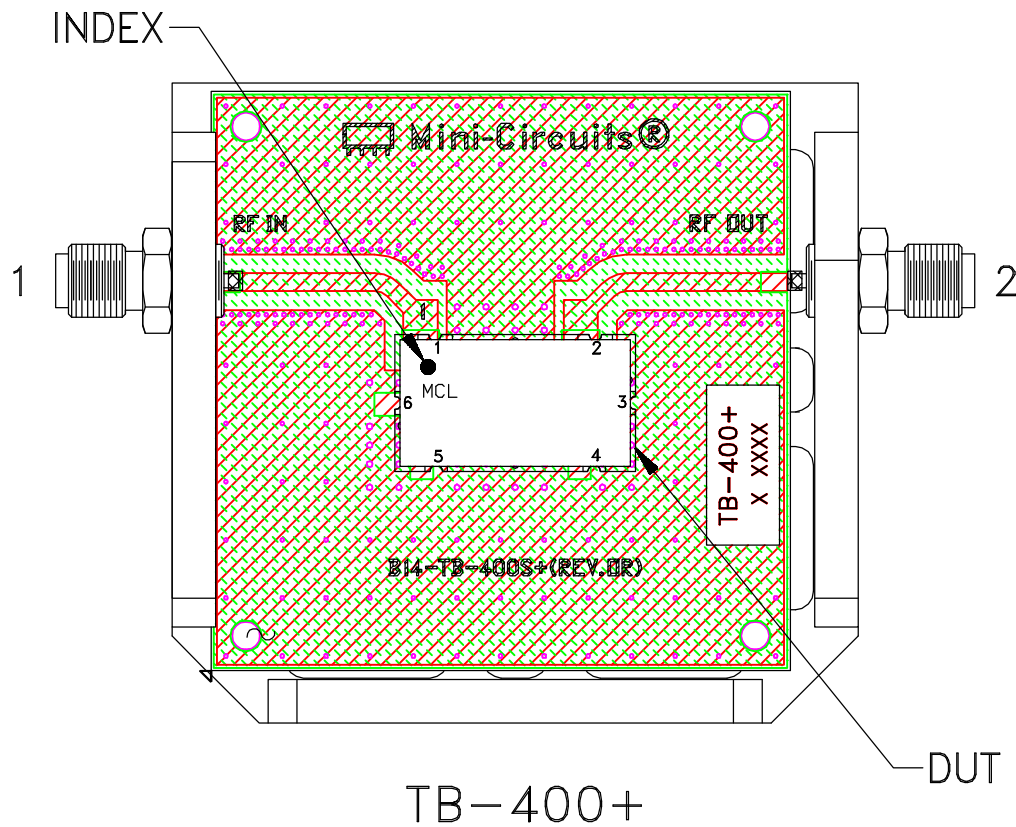
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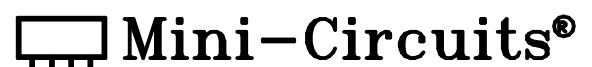
Evaluation Board and Circuit



Schematic Diagram

Notes:

1. 50 Ohm SMA Female connectors.
2. PCB Material: R04350 or equivalent.
Dielectric Constant=3.5, Thickness=.030 inch.





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