Engineering Development Model

Low Pass Filter LPF-EDU1330+

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.

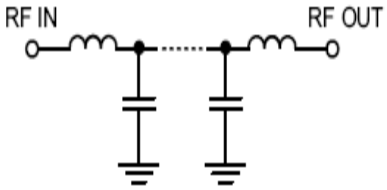
Please click "Back", and then click "Contact Us" for Applications support.

CASE STYLE : HQ1157

ELECTRICAL SPECIFICATIONS 75Ω @ +25°C

Parameter	Min.	Typ.	Max.	Units
Passband (Loss < 1.8 dB)	1		1000	MHz
Insertion loss 3dB		1035		MHz
Stopband (Loss > 20 dB)	1135		4000	MHz
(Loss > 40 dB)	1200		2600	MHz
Absolute Group Delay in the pass band		4.5	8	nS
Passband VSWR		1.4	1.7	(: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	0.5 W

PIN CONNECTIONS

Input	1
Output	8
Not Connected	-
Case Ground	3,4,5,6,7,9,10,11,12,13,14

Low Pass Filter LPF-EDU1330+

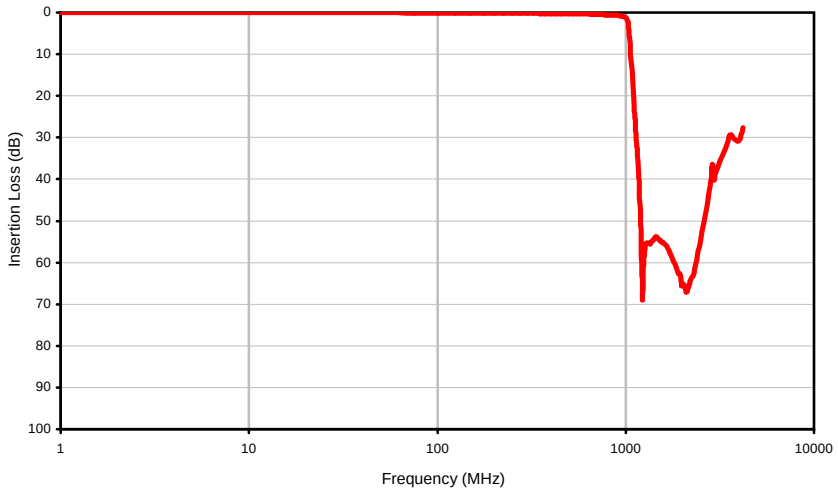
Typical Performance Data

FREQUENCY (MHz)	INSERTION LOSS (dB)	RETURN LOSS (dB)
1	0.02	54.54
10	0.03	50.48
100	0.10	42.19
300	0.20	41.41
675	0.41	17.37
750	0.51	16.25
925	0.72	20.83
980	1.00	20.15
1000	1.15	36.21
1025	2.14	9.21
1035	3.35	5.93
1045	5.18	3.80
1050	6.29	3.05
1070	11.34	1.41
1110	22.25	8.00
1135	28.99	0.52
1160	35.85	0.51
1200	49.73	0.53
1230	68.91	0.57
2300	62.83	0.63
2825	41.01	0.44
3000	38.52	0.38
5400	21.87	3.32
6000	27.90	4.53

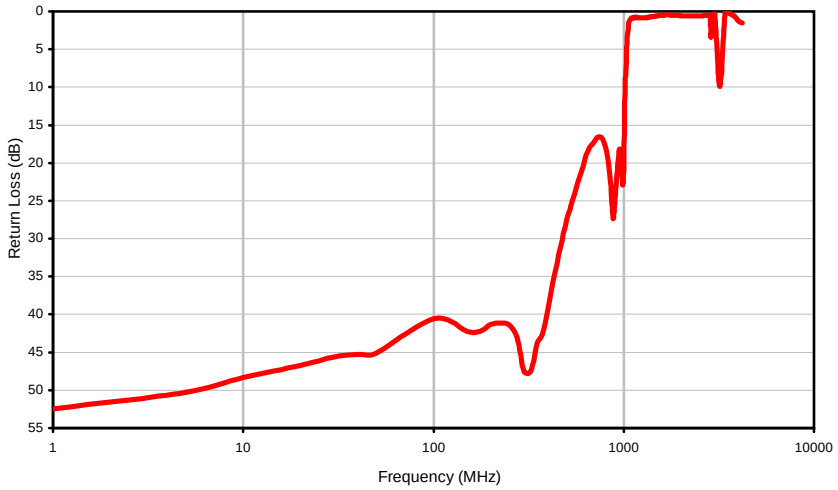
FREQUENCY (MHz)	GROUP DELAY (nsec)
1	1.06
10	1.06
20	1.05
50	1.04
75	1.04
100	1.04
150	1.05
200	1.06
250	1.07
300	1.09
350	1.11
400	1.13
450	1.16
500	1.21
550	1.25
550	1.25
600	1.32
650	1.39
700	1.50
750	1.59
800	1.75
850	1.97
900	2.34
1000	4.34

Typical Performance Curves

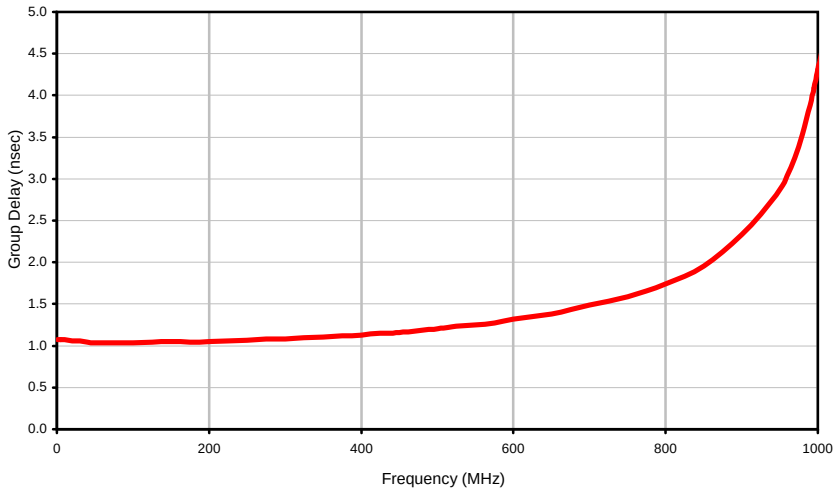
Insertion Loss



Return Loss



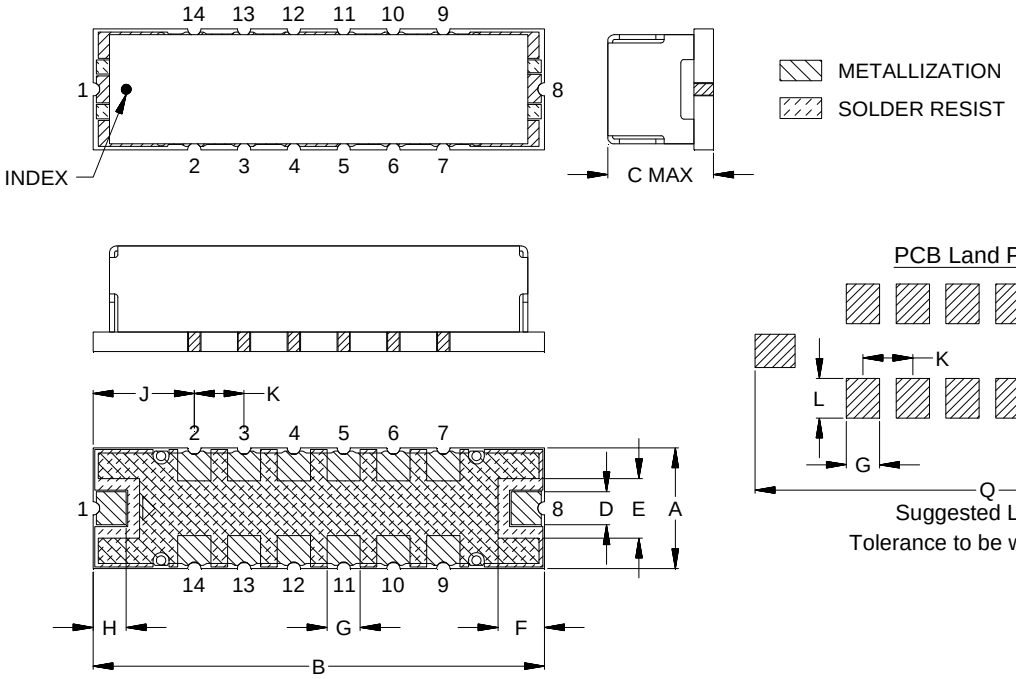
Group Delay



Case Style HQ

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

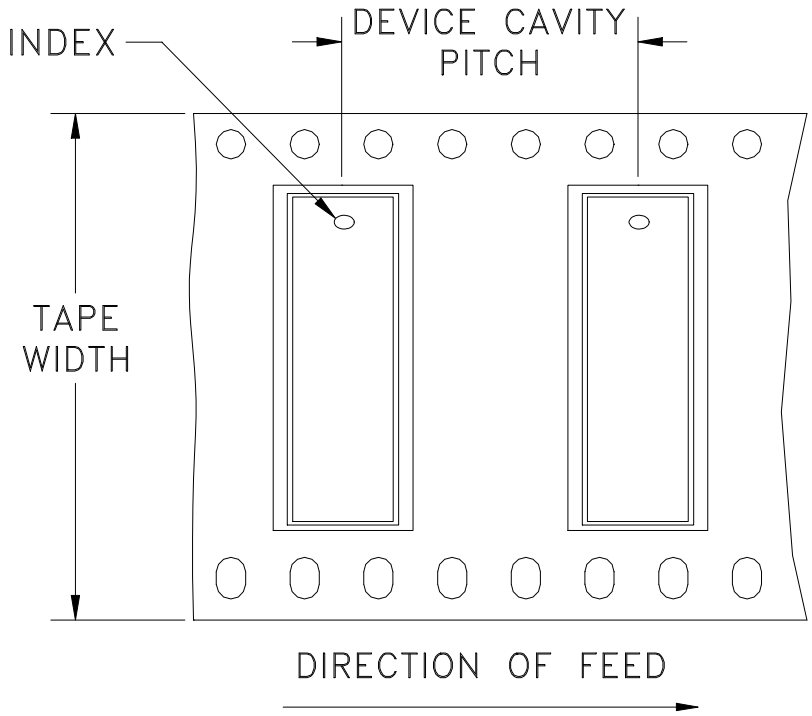
Notes:

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.

This document and its contents are the property of Mini-Circuits.

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

Mini-Circuits®
INTERNET http://www.minicircuits.com
P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661
Distribution Centers NORTH AMERICA 800-654-7949 • 417-335-5935 • Fax 417-335-5945 • EUROPE 44-1252-832600 • Fax 44-1252-837010
Mini-Circuits ISO 9001 & ISO 14001 Certified

This document and its contents are the property of Mini-Circuits.

Mini-Circuits

Environmental Specifications ENV12

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

This document and its contents are the property of Mini-Circuits.