

Engineering Development Model

BandPass Filter

BPF-EDU1053

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.

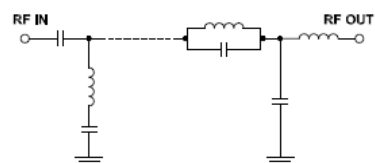
CASE STYLE : HU1186

ELECTRICAL SPECIFICATIONS 50Ω @ +25°C

Parameter	Min.	Typ.	Max.	Units
Passband (Loss < 2 dB)	465		520	MHz
Centre frequency		492.5		MHz
Low Band (Loss > 40 dB)	DC		30	MHz
Low Band (Loss > 20 dB)	30		400	MHz
High Band (Loss > 20 dB)	605		780	MHz
High Band (Loss > 40 dB)	780		1300	MHz
Passband VSWR		1.2		(: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	2
Output	9
Not Connected	-
Case Ground	1,3,4,5,6,7,8,10,11,12,13,14



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RF/IF MICROWAVE COMPONENTS

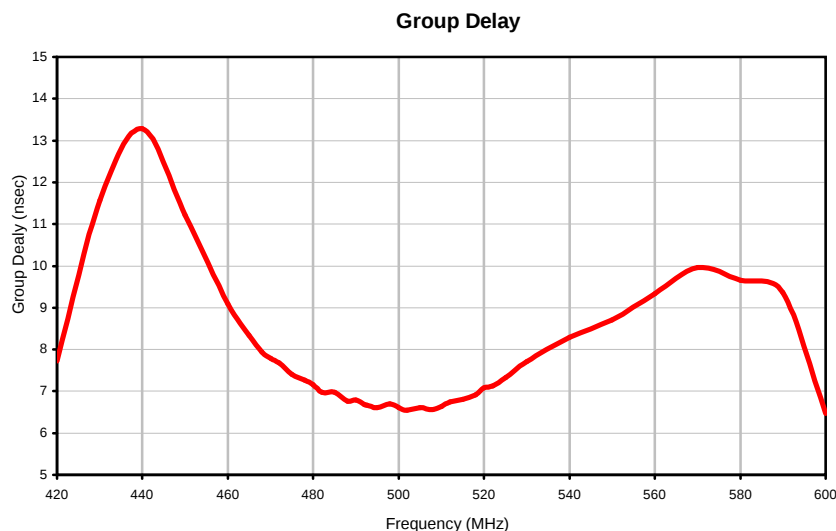
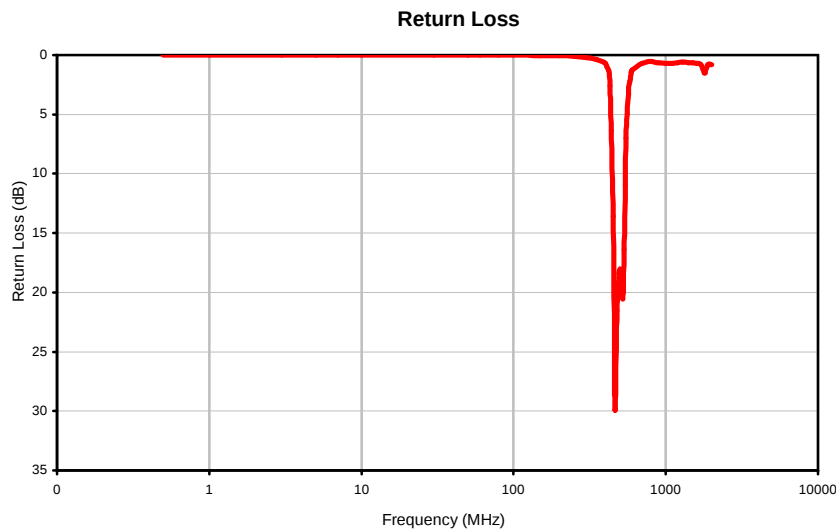


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Typical Performance Data

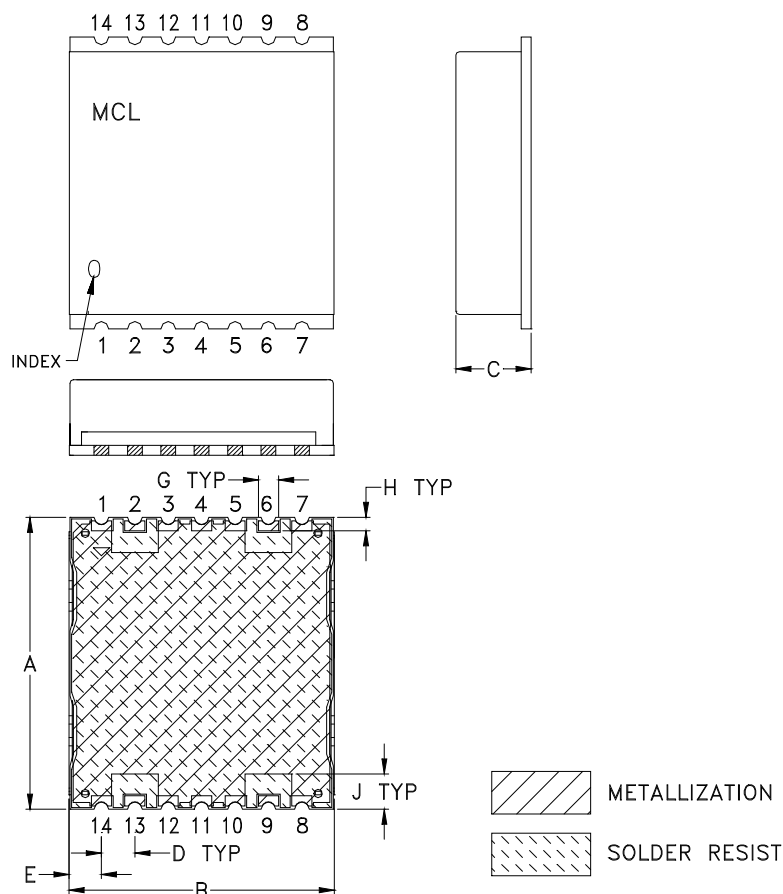
FREQUENCY (MHz)	INSERTION LOSS (dB)	RETURN LOSS (dB)	FREQUENCY (MHz)	GROUP DELAY (nsec)
0.5	84.31	0.01	420.0	7.73
1.0	79.64	0.01	430.0	11.58
3.0	67.85	0.02	440.0	13.29
5.0	63.71	0.00	450.0	11.21
7.0	60.56	0.00	460.0	9.09
10.0	57.51	0.00	465.0	8.33
30.0	48.11	0.00	468.0	7.95
50.0	44.09	0.01	470.0	7.79
60.0	42.80	0.01	472.0	7.69
80.0	41.05	0.01	475.0	7.40
100.0	40.10	0.01	478.0	7.26
150.0	40.57	0.03	480.0	7.16
200.0	45.70	0.07	482.0	6.97
250.0	67.70	0.13	485.0	6.97
300.0	64.95	0.22	488.0	6.75
350.0	35.69	0.36	490.0	6.79
390.0	33.64	0.59	492.0	6.68
400.0	42.11	0.68	492.5	6.67
410.0	29.88	0.98	495.0	6.60
420.0	17.66	1.27	498.0	6.69
430.0	9.91	2.58	500.0	6.61
440.0	4.57	6.36	502.0	6.54
450.0	2.18	13.56	505.0	6.60
460.0	1.46	24.17	508.0	6.56
465.0	1.31	29.88	510.0	6.64
480.0	1.15	21.51	512.0	6.75
490.0	1.13	18.74	515.0	6.81
492.5	1.13	18.41	518.0	6.92
500.0	1.15	18.04	520.0	7.08
520.0	1.25	20.53	522.0	7.13
530.0	1.48	16.38	525.0	7.33
540.0	2.08	10.91	530.0	7.71
550.0	3.18	7.01	540.0	8.30
560.0	5.23	4.96	550.0	8.71
570.0	7.29	2.91	560.0	9.34
580.0	11.99	2.19	570.0	9.97
590.0	16.70	1.48	580.0	9.66
600.0	25.72	1.28	590.0	9.36
605.0	32.52	1.23	600.0	6.47
700.0	48.34	0.71		
780.0	48.98	0.56		
800.0	52.46	0.56		
900.0	59.15	0.64		
1000.0	51.17	0.72		
1100.0	50.70	0.69		
1200.0	52.59	0.66		
1300.0	57.58	0.62		
1400.0	44.36	0.63		
1500.0	54.40	0.65		
1600.0	62.69	0.69		
1700.0	63.17	0.82		
1800.0	56.82	1.49		
1900.0	63.01	0.81		
2000.0	57.41	0.83		

Typical Performance Curves

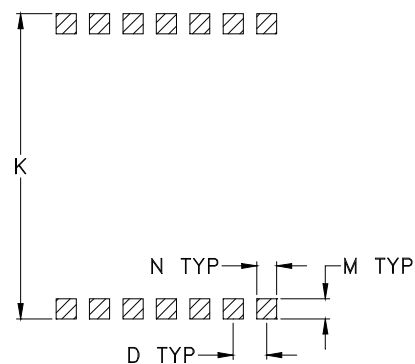


Outline Dimensions

HU1186



PCB Land Pattern



Suggested Layout,
Tolerance to be within ± 0.002

CASE#	A	B	C	D	E	F	G	H	J	K	L	M	N	P	WT, GRAM
HU1186	.870 (22.10)	.800 (20.32)	.25 (6.35)	.100 (2.54)	.097 (2.46)	- -	.060 (1.52)	.040 (1.02)	.105 (2.67)	.910 (23.11)	- -	.060 (1.52)	.060 (1.52)	- -	2.85

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: 2-5 μ inch (.05-.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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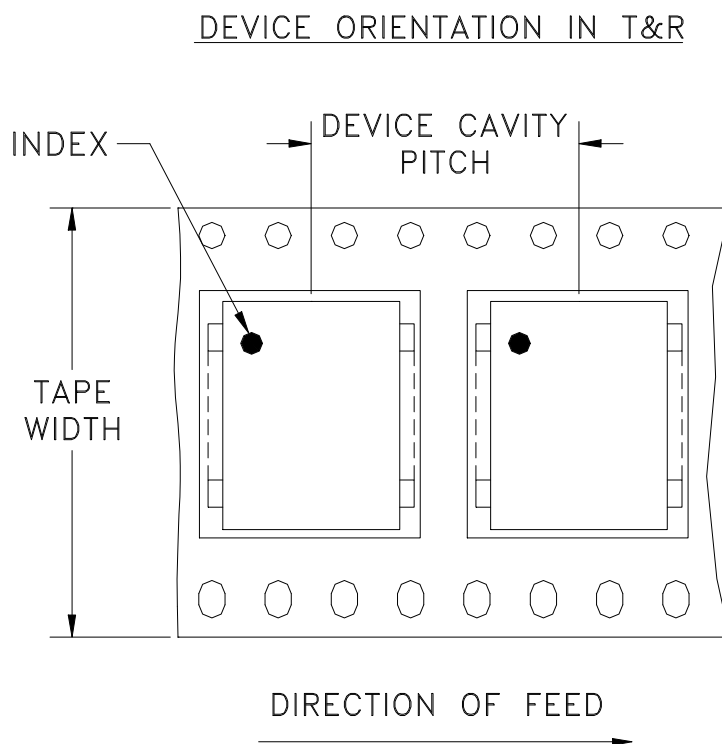
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RF/IF MICROWAVE COMPONENTS

Tape & Reel Packaging TR-F21



Tape Width, mm	Device Cavity Pitch, mm	Reel Size, inches	Devices per Reel
32	32	13	200

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.

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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