

Band Pass Filter

BPF-EDU0801

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.



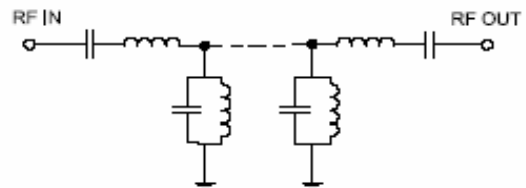
Please click "Back", and then click "Contact Us" for Applications support.

CASE STYLE : BG291

ELECTRICAL SPECIFICATIONS 50Ω @ +25°C				
Parameter	Min.	Typ.	Max.	Units
Passband (Loss < 3dB)	133		147	MHz
Center Frequency		140		MHz
Stopband Low Band (Loss > 20 dB)	110		120	MHz
Low Band (Loss > 40 dB)	DC		110	MHz
High Band (Loss > 20 dB)	162		180	MHz
High Band (Loss > 40 dB)	180		3000	MHz
Passband VSWR		1.4		(:1)
Stopband VSWR		18		(:1)

MAXIMUM RATINGS	
Operating Temperature	-55°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power Input	0.5W at 25°C

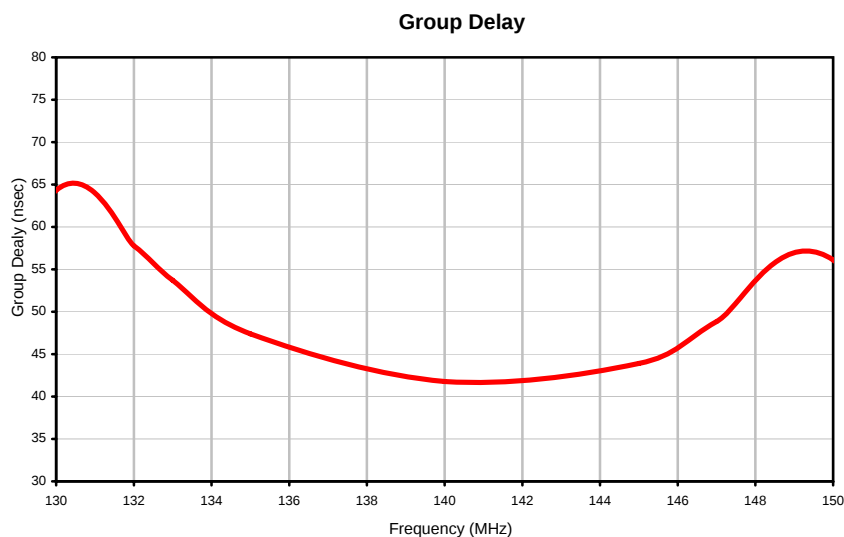
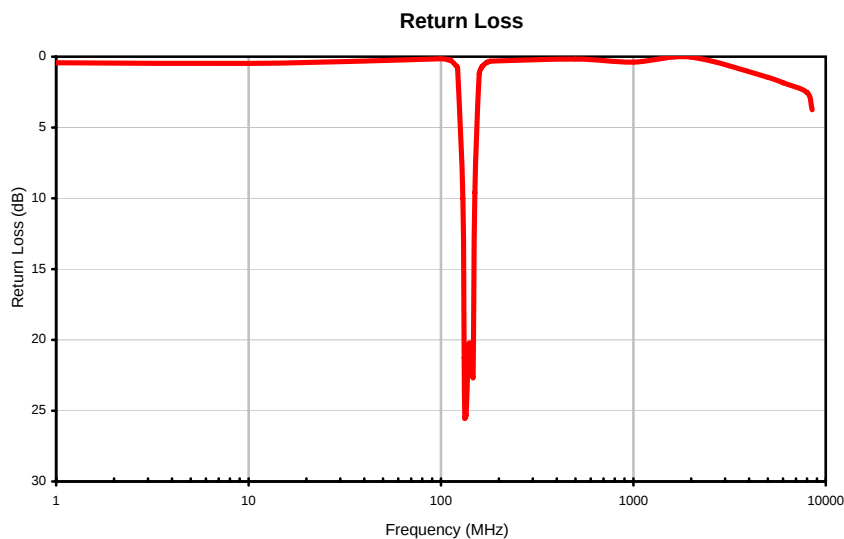
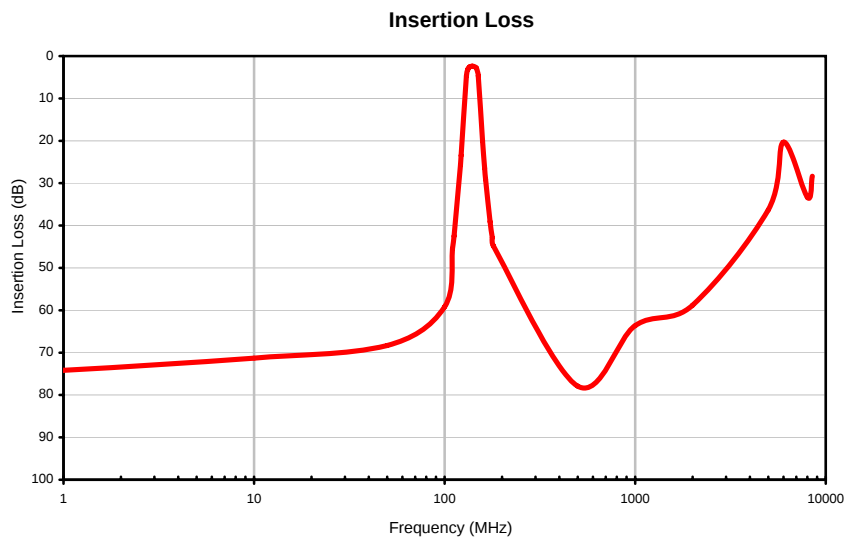
Functional Schematic



Typical Performance Data

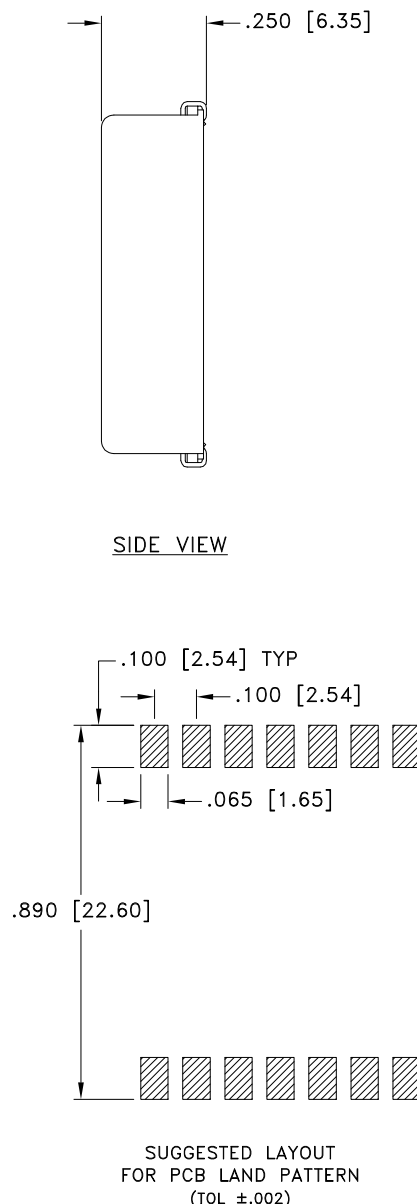
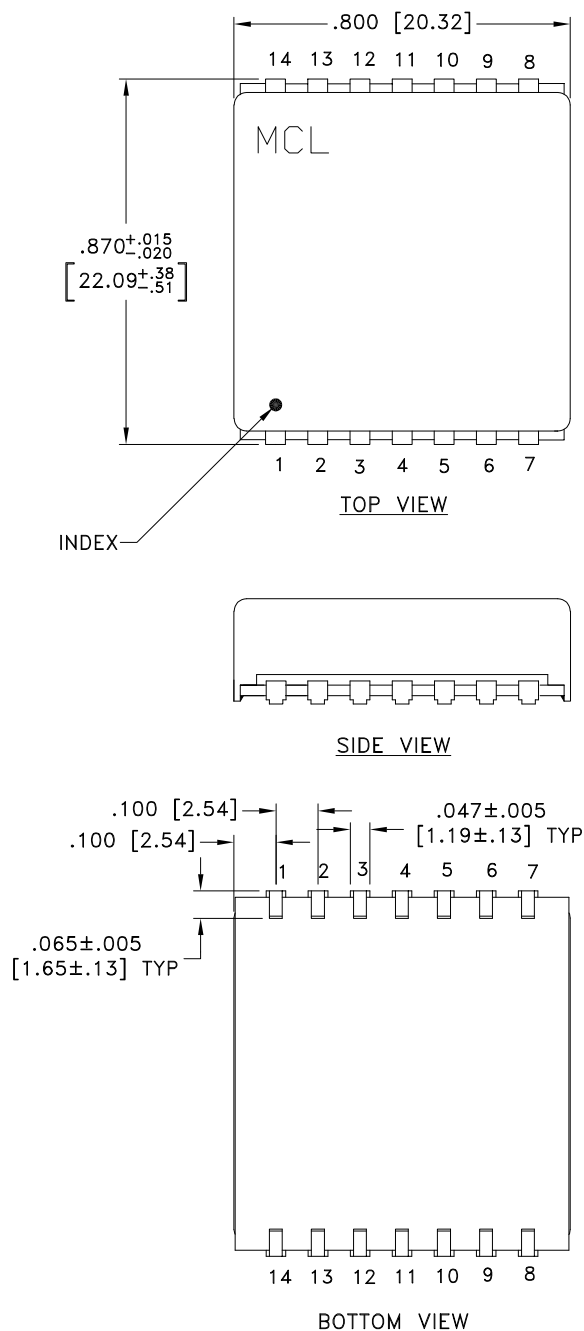
FREQUENCY (MHz)	INSERTION LOSS (dB)	RETURN LOSS (dB)	FREQUENCY (MHz)	GROUP DELAY (nsec)
0.50	74.39	0.43	0.50	13.76
1.00	74.17	0.43	1.00	13.37
10.00	71.31	0.47	10.00	9.10
50.00	68.30	0.27	50.00	1.15
100.00	59.17	0.15	100.00	7.92
110.00	45.47	0.24	110.00	3.29
112.00	42.48	0.23	112.00	6.73
121.00	25.71	0.71	121.00	16.53
122.00	23.47	0.83	122.00	19.19
130.00	4.71	10.02	130.00	64.32
132.00	3.18	21.27	132.00	57.78
133.00	2.93	25.52	133.00	53.72
135.00	2.57	25.31	135.00	47.39
140.00	2.36	20.28	140.00	41.78
145.00	2.61	22.19	145.00	43.91
147.00	2.86	22.65	147.00	48.85
150.00	4.65	9.60	150.00	56.12
158.00	20.06	1.22	158.00	15.84
162.00	26.49	0.82	162.00	10.25
164.00	29.10	0.68	164.00	7.69
173.00	39.10	0.41	173.00	3.19
178.00	42.85	0.35	178.00	2.73
180.00	44.75	0.32	180.00	8.15
500.00	77.89	0.17	500.00	0.13
1000.00	63.63	0.38	1000.00	0.37
2000.00	58.80	0.04	2000.00	0.70
5000.00	36.31	1.46	5000.00	0.78
6000.00	20.31	1.84	6000.00	0.76
8000.00	33.34	2.53	8000.00	0.39
8500.00	28.36	3.75	8500.00	2.64

Typical Performance Curves



Outline Dimensions

BG291



DENOTES METALLIZATION

Weight: 4 gram

Dimensions are in inches[mm]. Tolerances: 2PL $\pm$ 0.03[0.76]; 3 PL $\pm$ 0.015 [0.381] inches[mm], unless otherwise specified

Notes:

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

For RoHS Case Styles: Tin plate over Nickel plate. All models, (+) suffix.

For RoHS-5 Case Styles: Tin-Lead plate. All models, no (+) suffix.

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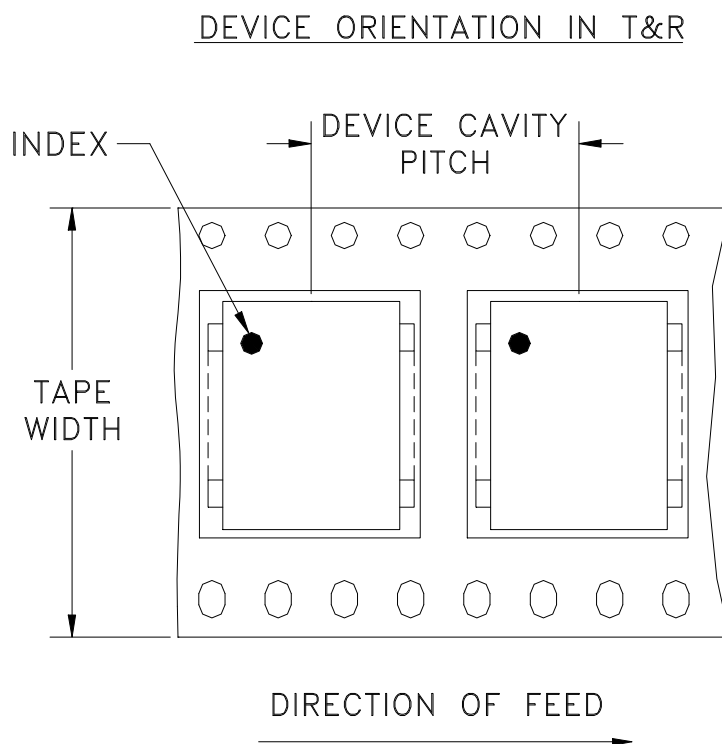
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32	32	13	200

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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