

Surface Mount Bandpass Filter

50Ω 110 to 180 MHz

Maximum Ratings

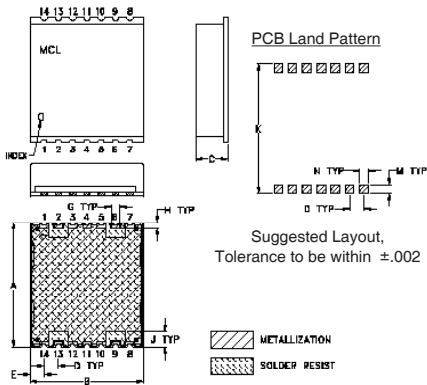
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power Input	0.2W Max.

Permanent damage may occur if any of these limits are exceeded.

Pin Connections

INPUT	2
OUTPUT	9
NOT CONNECTED	6,13
GROUND	1, 3, 4, 5, 7,8,10,11,12,14

Outline Drawing

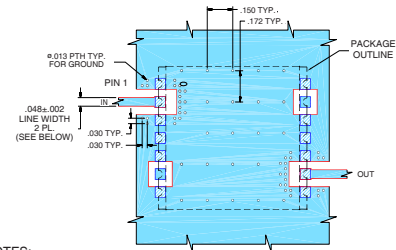


Outline Dimensions (inch/mm)

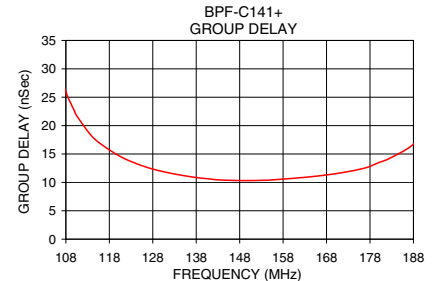
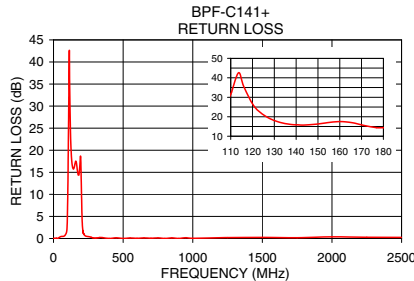
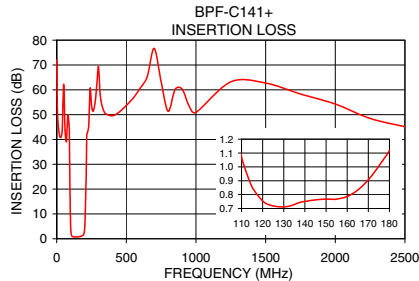
A	B	C	D	E	G	H	J	K	M	N	wt
.870	.800	.25	.100	.097	.060	.040	.105	.910	.060	.060	grams
22.10	20.32	6.35	2.54	2.46	1.52	1.02	2.67	23.11	1.52	1.52	2.85

Note: Please refer to case style drawing for details

Demo Board MCL P/N: TB-500+ Suggested PCB Layout (PL-294)



- TRACE WIDTH IS SHOWN FOR ROGERS R04350B, DIELECTRIC THICKNESS: .030"±.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 SOLDER MASK



Features

- Good VSWR, 1.3:1 Typ @ Passband
- Flat Group Delay
- Shielded case
- Aqueous washable

Applications

- Military communications
- Receivers / Transmitters
- Harmonic rejection

BPF-C141+



Generic photo used for illustration purposes only

CASE STYLE: HU1186

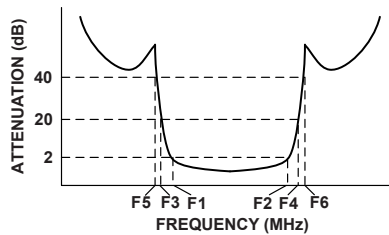
+RoHS Compliant

The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications

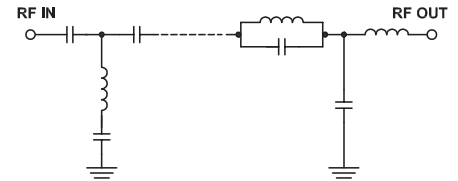
Bandpass Filter Electrical Specifications (T_{AMB} = 25°C)

CENTER FREQ. (MHz)	PASSBAND (MHz) (Loss < 2dB)	STOPBANDS (MHz)				VSWR (:1)		
		Loss > 20dB	Loss 40dB Typ.	Passband	Stopband	Typ.	Max.	Typ.
F _c	F ₁ - F ₂	F ₃	F ₄	F ₅	F ₆			
141	110 - 180	92	213	90	217 - 2500	1.3	1.7	18

Typical Frequency Response



Functional Schematic



Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB)		Return Loss (dB)	Frequency (MHz)	Group Delay (nSec)
	\bar{x}	σ			
0.5	72.15	0.59	0.01	108.0	25.97
90.0	44.81	2.20	1.10	110.0	22.54
92.0	37.23	1.95	1.28	113.6	18.47
96.0	17.01	1.27	1.96	116.0	16.79
98.4	9.41	0.97	3.33	120.8	14.45
100.8	4.46	0.58	6.68	126.4	12.72
103.2	2.27	0.22	12.23	132.0	11.63
110.0	1.07	0.03	31.61	137.6	10.90
120.8	0.74	0.01	25.27	141.0	10.62
141.0	0.75	0.03	15.86	148.8	10.31
160.0	0.79	0.03	17.53	153.6	10.37
180.0	1.12	0.03	14.39	154.4	10.38
199.2	3.19	0.28	13.24	160.0	10.70
204.0	8.23	0.82	5.73	165.6	11.09
208.8	18.43	1.13	2.45	171.2	11.67
213.0	30.56	1.54	1.30	176.8	12.52
217.0	42.20	1.22	1.00	180.0	13.48
2500.0	45.14	1.32	0.24	188.0	16.72

Notes

- Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
- Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
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