

Surface Mount Bandpass Filter

50Ω 875 to 1375 MHz

MBPA-1125+



CASE STYLE: QN2178

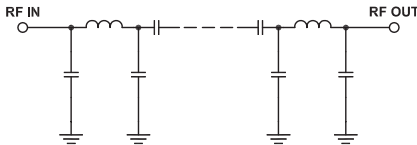
Features

- Wider stopband performance of 20 dB typical up to 20 GHz
- High selectivity
- Good passband VSWR

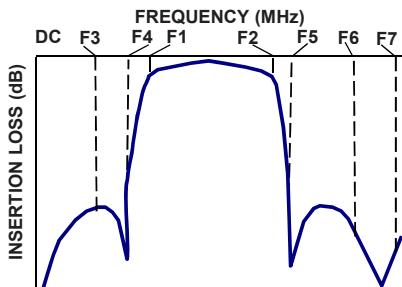
Applications

- Defence systems
- Aeronautical radio navigations
- Radar navigation systems

Functional Schematic



Typical Frequency Response



+RoHS Compliant

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

Electrical Specifications at 25°C

Parameter		F#	Frequency (MHz)	Min.	Typ.	Max.	Unit
Pass Band	Center Frequency	-	-	-	1125	-	MHz
	Insertion Loss	F1-F2	875-1375	-	3.0	3.8	dB
	VSWR	F1-F2	875-1375	-	1.7	2.0	:1
Stop Band, Lower	Insertion Loss	DC-F3	DC-600	50	60	-	dB
		F3-F4	600-770	40	50	-	dB
	VSWR	DC-F4	DC-770	-	20	-	:1
Stop Band, Upper	Insertion Loss	F5-F6	1590-6000	50	60	-	dB
		F6-F7	6000-20000	-	20	-	dB
	VSWR	F5-F7	1590-20000	-	8	-	:1

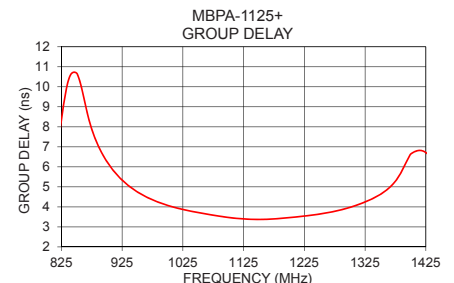
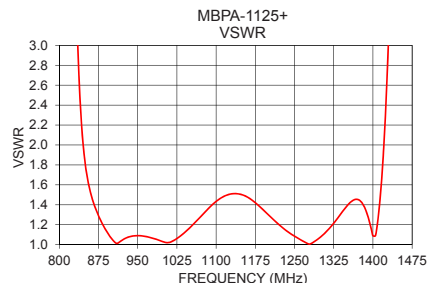
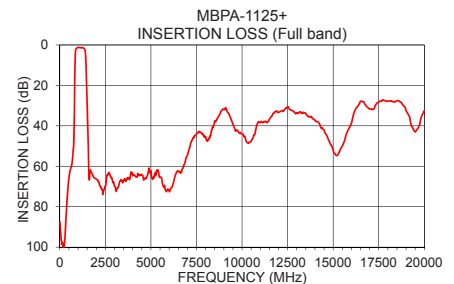
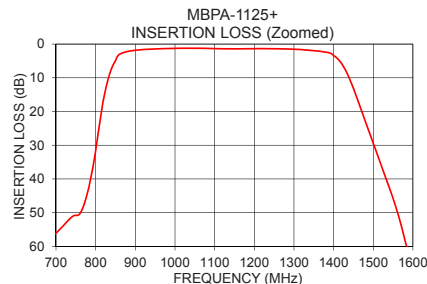
Maximum Ratings

Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power Input	24 dBm max.

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

Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)	Frequency (MHz)	Group Delay (nsec)
10	87.72	549.59	875	7.89
100	97.17	1408.20	900	6.26
600	61.14	71.02	925	5.34
770	47.86	27.03	950	4.75
800	31.63	15.75	975	4.35
810	23.38	11.46	1000	4.07
830	11.01	4.03	1025	3.87
850	4.94	1.80	1050	3.72
875	2.37	1.29	1075	3.59
1125	1.41	1.50	1100	3.47
1375	2.31	1.44	1125	3.40
1410	4.33	1.27	1150	3.37
1450	13.17	7.22	1175	3.40
1470	19.63	12.43	1200	3.46
1500	29.43	19.07	1225	3.54
1590	62.23	31.99	1250	3.64
6000	72.20	48.24	1275	3.78
10000	44.13	11.62	1300	3.98
18000	27.76	11.93	1325	4.25
20000	32.56	26.08	1375	5.29



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.
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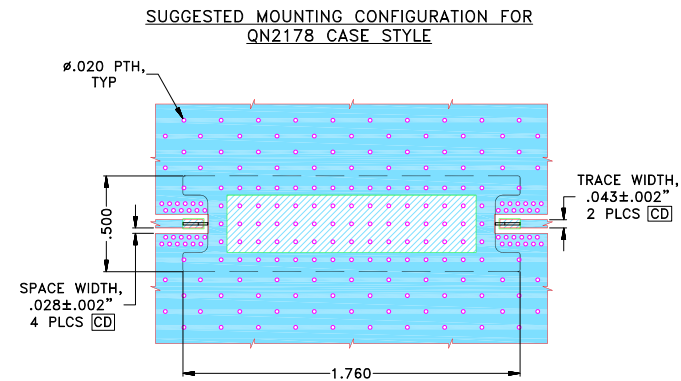
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Pad Connections

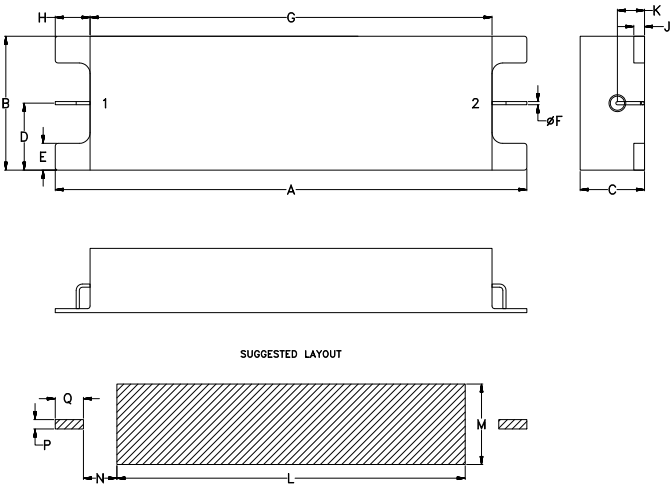
INPUT	1
OUTPUT	2

Demo Board MCL P/N: TB-893+
Suggested PCB Layout (PL-508)



- NOTES:
- TRACE WIDTH IS SHOWN FOR ROGERS(R04350B), WITH DIELECTRIC THICKNESS .020"±.0015". 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

Outline Drawing



Outline Dimensions (inch)

A	B	C	D	E	F	G	H
1.760	.500	.240	.260	.250	.100	.012	1.500
44.70	12.70	6.10	6.60	6.35	2.54	.30	38.10
J	K	L	M	N	P	Q	
.040	.101	1.300	.300	.125	.035	.105	
1.02	2.57	33.02	7.62	3.18	.89	5.94	

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