

Bandpass Filter

Features

- Excellent rejection
- Flat group delay @ passband
- Good VSWR, 1.2:1 typ. @ passband

Applications

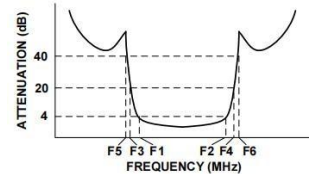
- Receivers/transmitters
- Point-to-point communication
- Base station

HT-BPF-B140W+

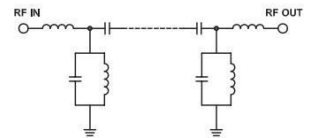


50Ω 135 to 145 MHz

Typical Frequency Response



Functional Schematic



Pin Connections

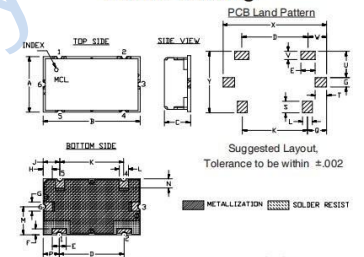
INPUT	1
OUTPUT	2
GROUND	3, 4, 5, 6

Maximum Ratings

Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power Input*	0.5W max.

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

Outline Drawing



Outline Dimensions: Unit (mm)

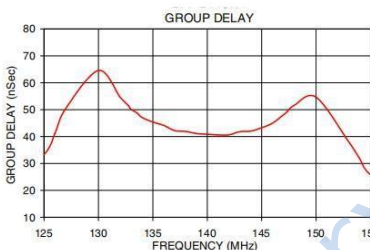
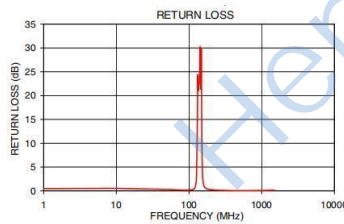
A	11.99	B	20.98	C	5.59
D	14	E	3	F	1.19
G	1.98	H	1.92	J	3.61
K	13.79	L	1.98	M	5.99
N	2.01	P	3.51	Q	4.11
S	2.49	T	2.44	U	5.51
V	1.70	W	3.99	X	22
WT		6.0	Y	13	

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

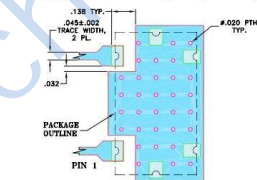
CENTER FREQ. (MHz)	PASSBAND (MHz) (Loss < 4dB)	STOPBAND (MHz)				VSWR(:1)	
		(Loss > 20dB)		(Loss > 40dB)		Passband Max.	Stopband Typ.
F _c	F ₁ - F ₂	F ₃	F ₄	F ₅	F ₆		
140	135-145	117	165	105	190-1500	1.4	30

Typical Performance Data

Frequency (MHz)	Insertion Loss (dB)		Return Loss (dB)	Frequency (MHz)	Group Delay (nsec)
	α	σ			
1	83.42	4.30	0.47	125	34.69
105	51.15	0.27	0.21	127	53.10
117	32.69	0.19	0.42	130	64.24
120	26.89	0.21	0.58	132	53.65
125	14.72	0.27	1.67	133	49.73
127	9.37	0.26	3.46	135	45.27
130	3.99	0.12	13.85	136	43.58
135	2.57	0.02	21.59	138	41.67
140	2.41	0.01	24.85	139	40.68
145	2.65	0.03	21.37	140	40.37
150	4.81	0.12	10.72	142	40.77
153	10.08	0.22	3.68	144	41.90
160	23.18	0.19	1.11	145	43.19
165	30.16	0.16	0.73	147	47.86
190	51.09	0.28	0.30	148	51.21
500	85.08	5.75	0.05	150	54.51
1000	81.36	5.03	0.07	153	37.79
1500	70.58	2.37	0.15	155	26.29



Demo Board MCL P/N: TB-400+ Suggested PCB Layout (PL-247)



- NOTES:
1. TRACE WIDTH IS SHOWN FOR FR4 WITH DIELECTRIC THICKNESS .005" (127μm). COPPER 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.
 2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.
- DENOTES PCB COPPER LAYOUT WITH SNGBC (SOLDER MASK OVER BARE COPPER)
 DENOTES COPPER LAND PATTERN FREE OF SOLDERMASK