



# MICRO LAMBDA WIRELESS, INC.

## MILLIMETER WAVE YIG BANDPASS FILTERS 3-50 GHz



### FEATURES

- 3-50 GHz Frequency Coverage
- Excellent Linearity
- K-Type Connectors
- Low Insertion Loss

### DESCRIPTION

The MICRO LAMBDA Millimeter Wave line of 4-stage YIG bandpass filters provide high selectivity and offer excellent image rejection. Standard frequency bands include 3-50 GHz and 7-40 GHz and 18-40 GHz frequency coverage. These filters provide excellent linearity, low frequency drift and very flat 3 dB bandwidth response over the frequency range. These filters are suited for spectrum analyzers, down-converters and a variety of microwave test equipment applications.

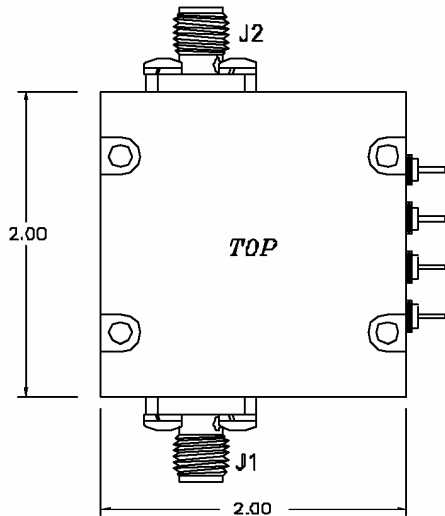
### ELECTRICAL AND PERFORMANCE SPECIFICATIONS

Guaranteed Specifications at 0° to +65° C Case Temperature

Model No.	MLFP-43040	MLFP-43044	MLFP-43050	MLFP-47040	MLFP-41840
Frequency Range, Min. (Note 2)	3-40 GHz	3-44 GHz	3-50 GHz	7-40 GHz	18-40 GHz
No. of Stages	4	4	4	4	4
3dB Bandwidth, Min. (Note 1)	30 MHz +(f/GHz)	30 MHz +(f/GHz)	30 MHz +(f/GHz)	35 MHz +(f/GHz)	50 MHz +(f/GHz)
Insertion Loss, Max.	6 dB	6 dB	6 dB	5 dB	5 dB
Passband Spurs & Ripple, Max.	2.5 dB	2.5 dB	2.5 dB	2.5 dB	2.5 dB
Passband VSWR, Max.	2:1	2:1	2:1	2:1	2:1
Selectivity, Typ.	24 dB/Octave	24 dB/Octave	24 dB/Octave	24 dB/Octave	24 dB/Octave
Off Resonance Isolation, Min.	80 dB	80 dB	60 db	80 db	80 db
Off Resonance Spurious, Min.	60 dB	60 dB	40 db	60 db	60 db
Limiting Level, Min.	+10 dBm	+10 dBm	+10 dBm	+10 dBm	+10 dBm
Tuning Coil Characteristics					
Tuning Sensitivity, Typ.	30 MHz/mA	30 MHz/mA	25 MHz/mA	30 MHz/mA	30 MHz/mA
Linearity, Max.	+/- 35 MHz	+/- 35 MHz	+/- 35 MHz	+/- 30 MHz	+/- 25 MHz
Hysteresis, Typ.	50 MHz	50 MHz	60 MHz	45 MHz	30 MHz
Temperature Drift, Max.	(3 dB BW)/2	(3 dB BW)/2	(3 dB BW)/2	(3 dB BW)/2	(3 dB BW)/2
Coil Resistance, Typ.	6 Ohms	6 Ohms	4 Ohms	6 Ohms	6 Ohms
Coil Inductance, Typ.	200 mH	200 mH	100 mH	200 mH	200 mH
Heater Voltage	20-30 Vdc	20-30 Vdc	20-30 Vdc	20-30 Vdc	20-30 Vdc
Heater Current-Surge, Max. @ 25 deg. C.	750 mA	750 mA	750 mA	750 mA	750 mA
Steady State @ 25 deg. C.	150 mA	150 mA	150 mA	150 mA	150 mA
Case Style	21-056	21-056	21-056	21-056	21-056

Note: 1) Modified 3 dB Bandwidths Available.

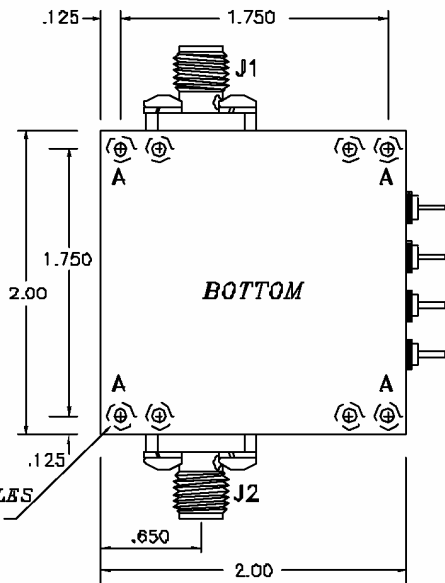
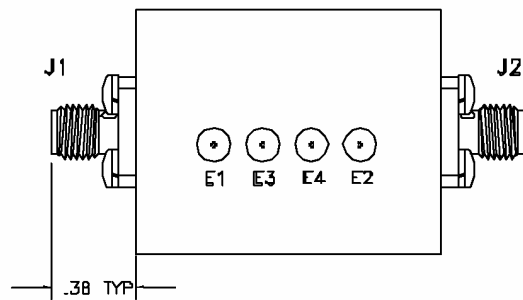
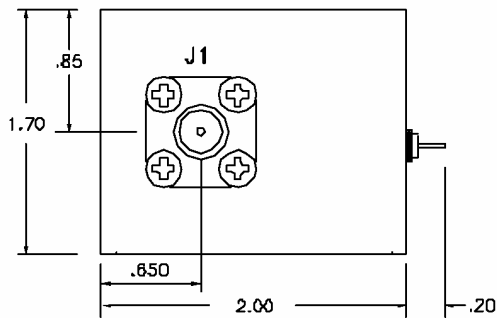
2) Other Frequency Ranges Available.



CONN	FUNCTIONS
J1	RF IN (K-CONN; FEM.)
J2	RF OUT (K-CONN; FEM.)
E1	+ COIL
E2	- COIL
E3	HEATER
E4	HEATER

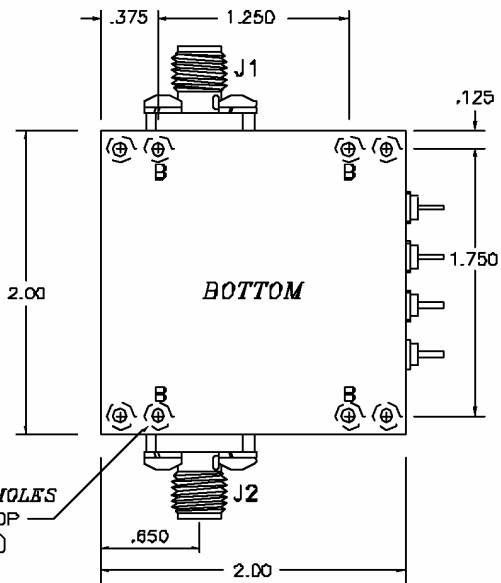
\* POSITION OF E1 & E2  
SELECTED AT FACTORY FOR  
COIL POLARITY

**WEIGHT : 16 Oz. MAX**



MOUNTING HOLES  
6-32 X.22 DP  
( 4 PLS )

MOUNTING HOLES LOCATION: OPTION A



MOUNTING HOLES  
6-32 X.22 DP  
( 4 PLS )

MOUNTING HOLES LOCATION: OPTION B

UNLESS OTHERWISE SPECIFIED DIMENSIONS  
ARE IN INCHES  
TOLERANCE ARE :  
FRACTIONS DECIMALS ANGLES  
/ .001 .010 .015  
/ .001 .005

MATERIAL CARPENTER 49

FINISH

DO NOT SCALE DRAWING

CONTRACT NO.

APPROVALS DATE

DRAWN N.NGIUYEN 2/15/00

CHECKED

ISSUED



MICRO LAMBDA, INC.

**MMW FILTER ( 2.0" X 2.0" X 1.7" )**

SIZE	CAGE No	DWG. NO.	REV.
	DRN63	21 - 056	