



# MICRO LAMBDA WIRELESS, INC.

## MLFR SERIES MILLIMETER-WAVE YIG BAND REJECT FILTERS 20-40 GHz

### FEATURES

- 20-36 and 36-40 GHz Full Band Coverage
- Excellent Linearity
- 1.7" Low Profile



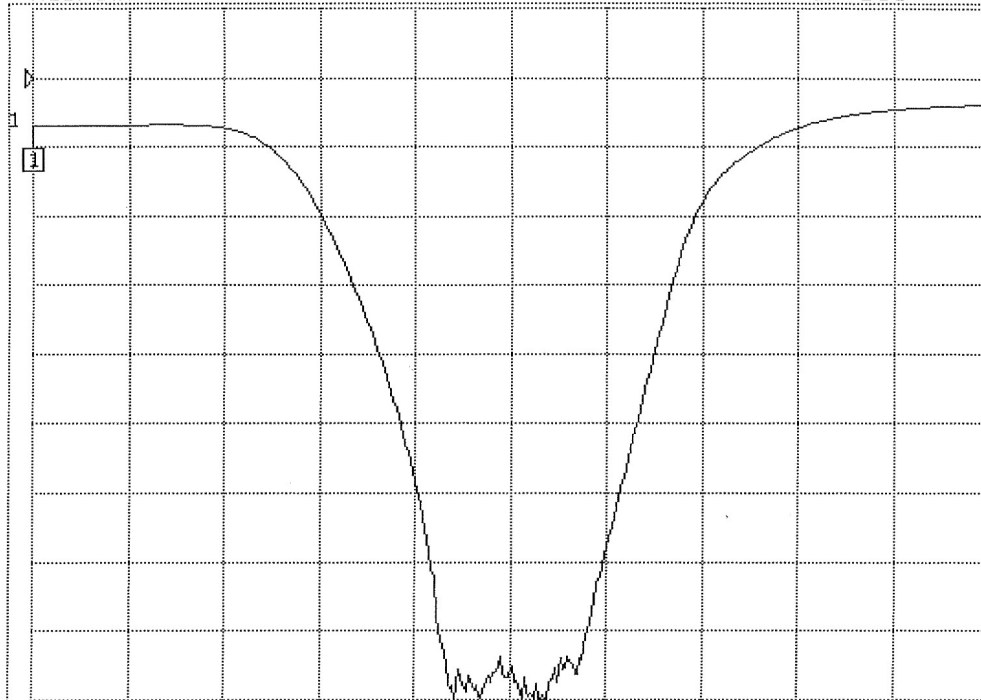
### DESCRIPTION

The MICRO LAMBDA MLFR-Series of Millimeter-Wave Band Reject filters cover the frequency range of 20 GHz to 40 GHz in bands. These filters offer excellent notch depth and precise bandwidths for rejection of unwanted signals. 3 dB bandwidths are 100 MHz with 40 dB bandwidths of 15 MHz available in standard designs. These filters are well suited for broadband receivers and a variety of EW system applications. Standard configuration of 2.0" x 1.7" are provided and can also be ordered with an Analog, TTL Digital or Serial Driver.

### ELECTRICAL AND PERFORMANCE SPECIFICATIONS

Guaranteed Specifications at -0° to +60° C Case Temperature

Model No.	MLFR-2036	MLFR-3640
Frequency Range, Min.	20-36 GHz	36-40 GHz
Reject Bandwidth @ 40 dB, Min.	15 MHz	15 MHz
@ 3 dB, Max.	100 MHz	100 MHz
Passband VSWR, Max.	2.5:1	2.5:1
Passband Insertion Loss, Max.	3 dB	3 dB
Passband Range	20-42 GHz	20-42 GHz
Spurious, Max	4 dB	4 dB
Limiting Level, Min.	+10 dBm	+10 dBm
Max. Input Power, No Damage.	+28 dBm	+28 dBm
Tuning Coil Characteristics		
Tuning Sensitivity, Typ.	25 MHz/mA	25 MHz/mA
Linearity, Max.	+/- 5 MHz	+/- 5 MHz
Hysteresis, Typ.	15 MHz	17 MHz
Temperature Drift (0 to 60 deg. C), Max.	+/-20 MHz	+/-20 MHz
Coil Resistance, Typ.	4 Ohms	4 Ohms
Coil Inductance, Typ.	50 mH	50 mH
Heater Voltage	+28 Vdc	+28 Vdc
Heater Current-Surge, Max. @ 25 deg. C.	300 mA	300 mA
Steady State @ 25 deg. C.	100 mA	100 mA
Case Style	99-0021-162	99-0021-162



1:A PC1 S

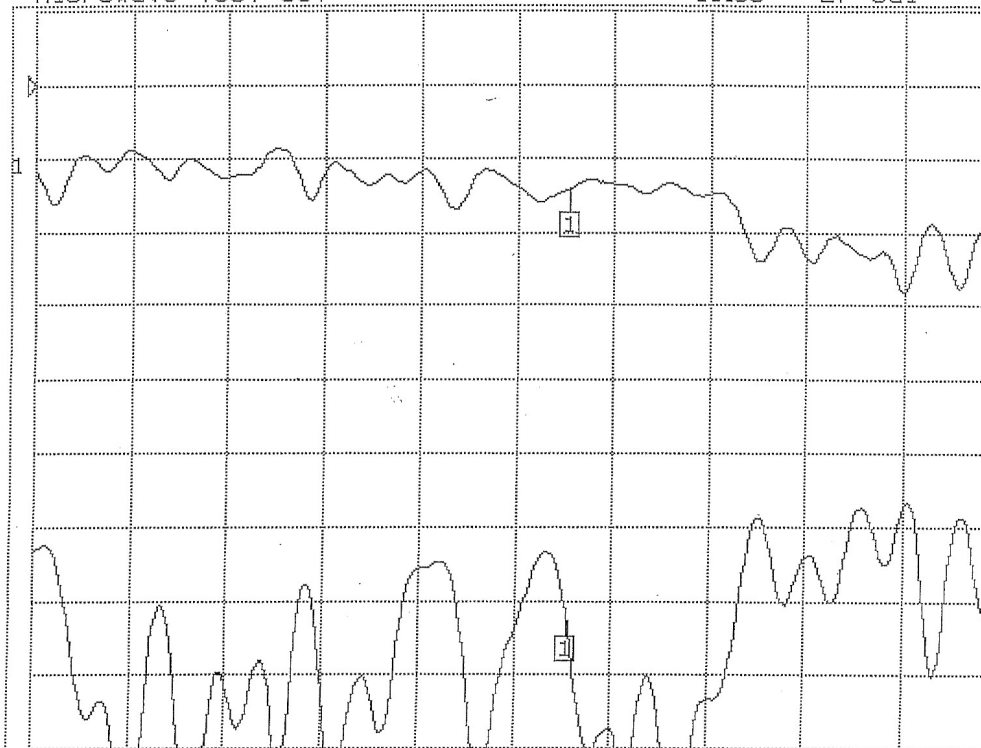
dB

1 -3.47 dB

0.00 dB 5.00 dB/

Cntr 31.0000 GHz 30.9000 GHz Span 200.000 MHz

MARKER POSITION	1: (dB)	MARKER POSITION	1: (dB)
1 30.9000 GHz	-3.47		



1:A PC1 S

dB

1 -1.41 dB

0.00 dB 1.00 dB/

2:B PC2 S

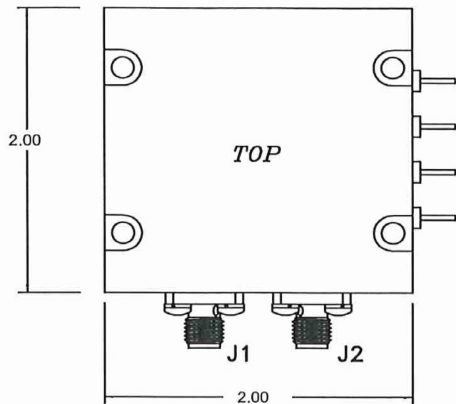
2 dB

1 -15.76 dB

0.00 dB 5.00 dB/

Start 20.0000 GHz 31.9000 GHz Stop 41.5000 GHz

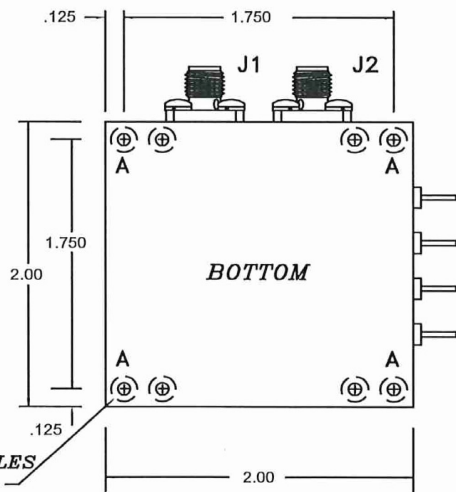
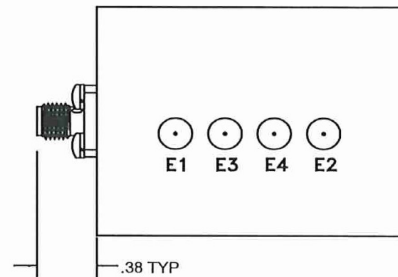
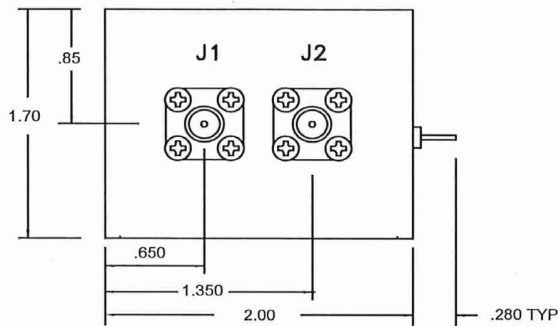
MARKER POSITION	1: (dB)	2: (dB)	MARKER POSITION	1: (dB)	2: (dB)
1 31.9000 GHz	-1.41	-15.76			



CONN	FUNCTIONS
J1	RF IN (K-CONN; 2.9mm; FEM.)
J2	RF OUT (K-CONN; 2.9mm; FEM.)
E1	+ COIL
E2	- COIL
E3	HEATER
E4	HEATER

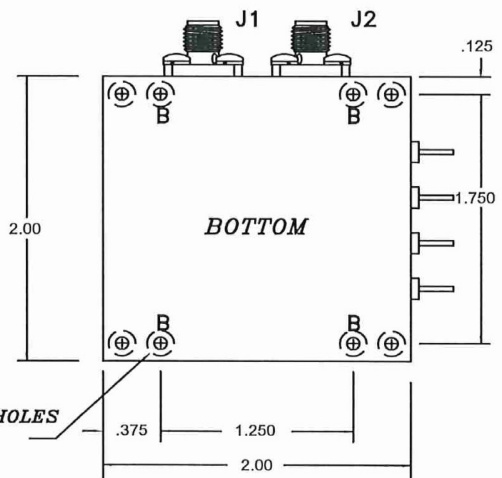
\* POSITION OF E1 & E2  
SELECTED AT FACTORY FOR  
COIL POLARITY

**WEIGHT : 24 Oz.(680 GRAMS) 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
▲	.XX ▲ .010	▲
▲	.XXX ▲ .005	

MATERIAL CARPENTER 49

FINISH

DO NOT SCALE DRAWING

CONTRACT NO.

APPROVALS

DATE

DRAWN N.NGUYEN 9/23/2020

CHECKED *[Signature]* 9-23-20

ISSUED



MICRO LAMBDA WIRELESS, INC.

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

SIZE

CAGE No  
0RN63

DWG. NO.

99 - 0021 - 162

REV.

A