



**MICRO LAMBDA  
WIRELESS, INC.**

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

**FEATURES**

- 20-36 and 28-40 GHz Full Band Coverage
- Excellent Linearity
- 1.7" Low Profile



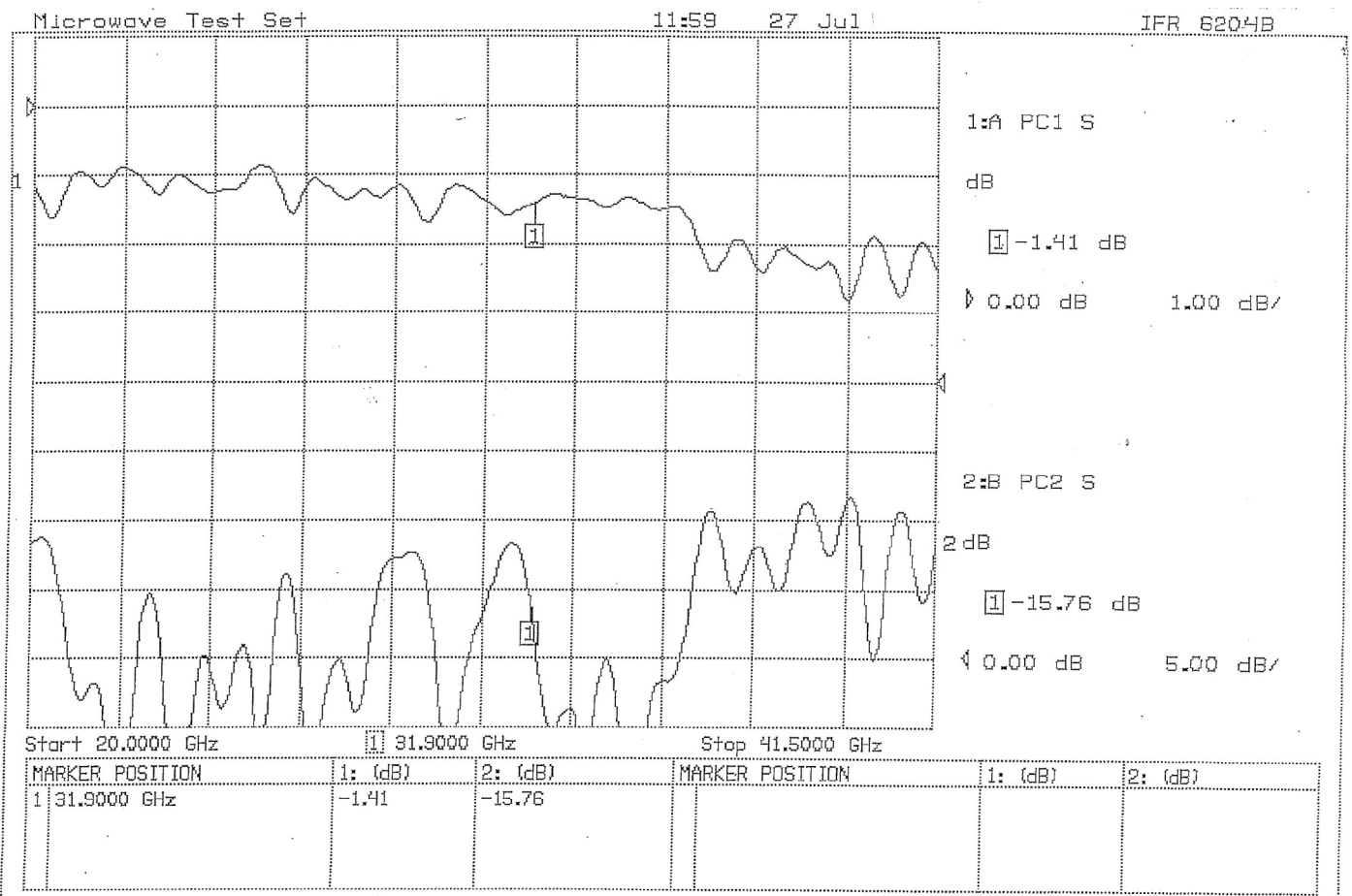
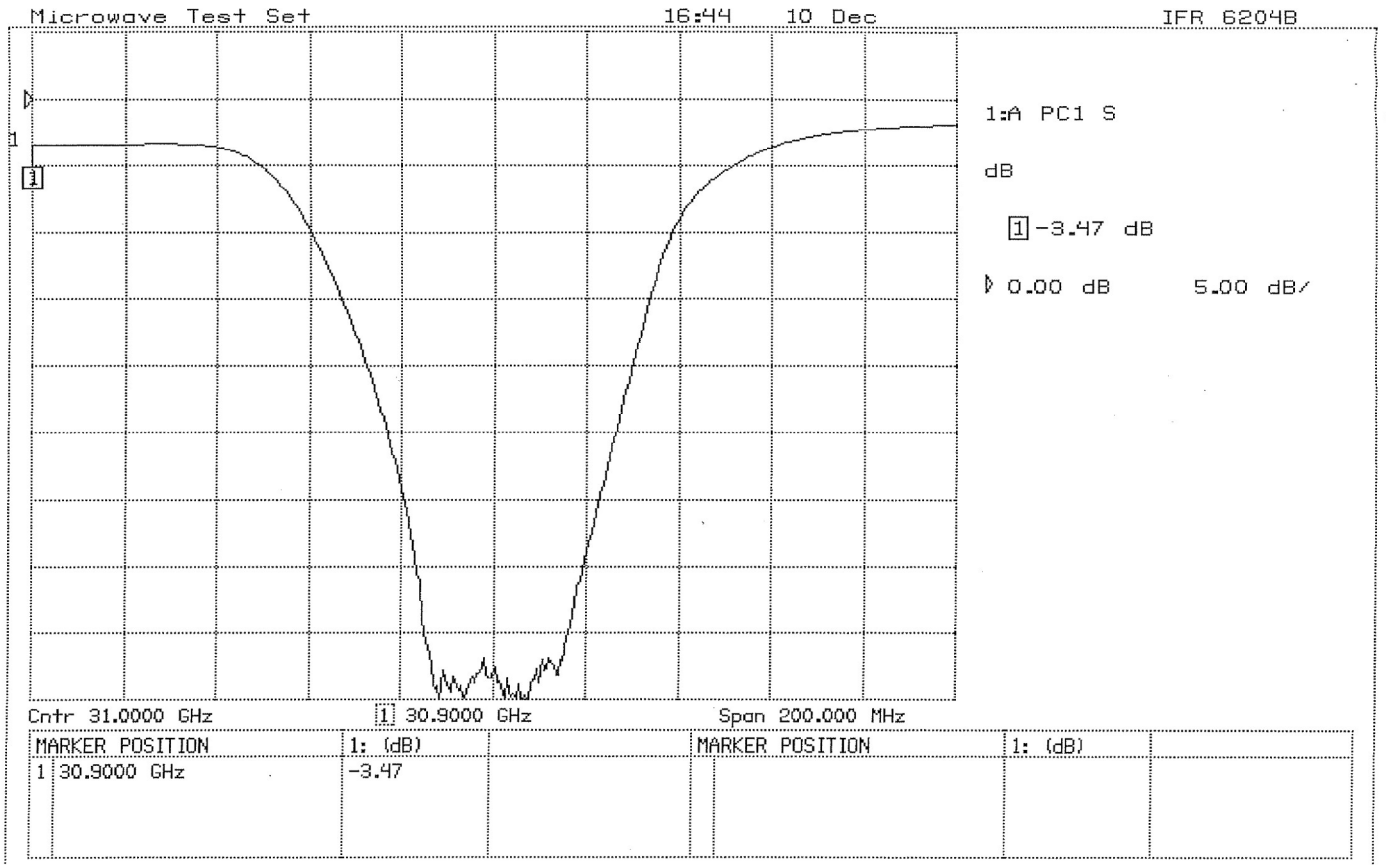
**DESCRIPTION**

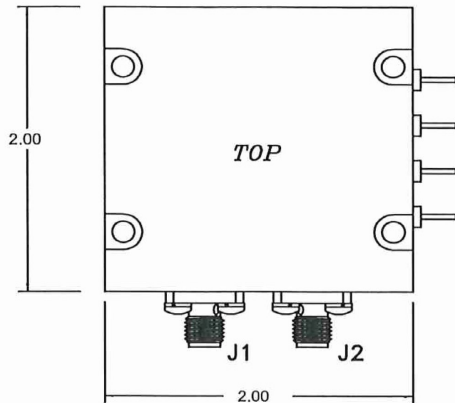
The MICRO LAMBDA MLFR-Series of Millimeter-Wave Band Reject filters cover the frequency range of 20 GHz to 40 GHz in bands. These filters offer excellent notch depth and precise bandwidths for rejection of unwanted signals. 3 dB bandwidths are 100 MHz with 40 dB bandwidths of 15 MHz available in standard 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  $-0^{\circ}$  to  $+60^{\circ}$  C Case Temperature

Model No.	MLFR-2036	MLFR-2840
Frequency Range, Min.	20-36 GHz	28-40 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

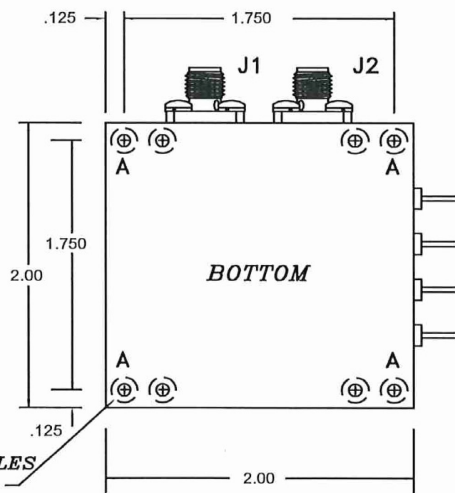
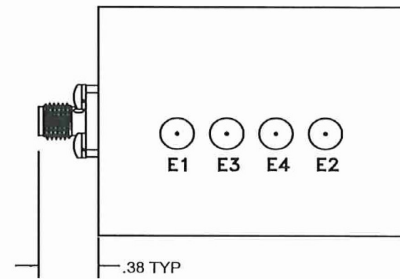
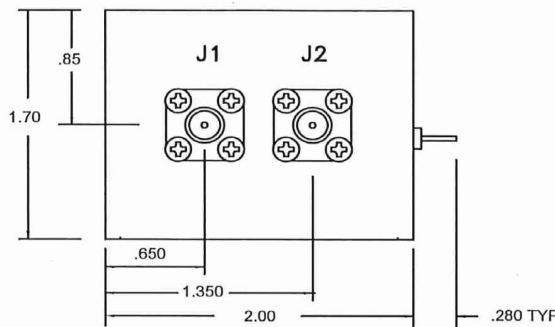




CONN	FUNCTIONS
J1	RF IN (K-CONN; 2.9mm; FEM.)
J2	RF OUT (K-CONN; 2.9mm; FEM.)
E1	+ COIL
E2	- COIL
E3	HEATER
E4	HEATER

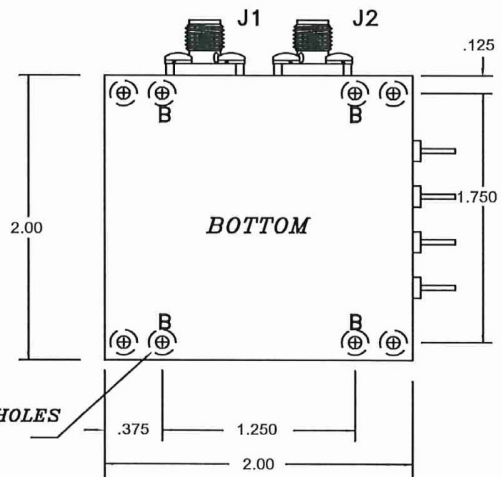
\* POSITION OF E1 & E2  
SELECTED AT FACTORY FOR  
COIL POLARITY

**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**

<small>UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCE ARE:</small> <small>FRACTIONS    DECIMALS    ANGLES</small> <small>▲                    xx ▲ 010</small> <small>▲                    xxx ▲ 005</small>	CONTRACT NO.			<b>MICRO LAMBDA WIRELESS, INC.</b>		
	APPROVALS	DATE				
MATERIAL	DRAWN	N. NGUYEN	9/23/2020	<b>MMW BRF ( 2.0" X 2.0" X 1.7" )</b>		
CARPENTER 49	CHECKED	<i>phd gyp 9-23-20</i>				
FINISH	ISSUED	SIZE	CAGE No	DWG. NO.	REV.	
DO NOT SCALE DRAWING			ORN63	99 - 0021 - 162	A	