

## FEATURES

- 0.5-18.0 GHz Frequency Coverage
- 3 or 4 Stage Version
- Excellent Linearity
- Small Size



## DESCRIPTION

The MICRO LAMBDA MLFM-Series 1" cube YIG filters cover the frequency range of 0.5 GHz to 18 GHz and are available with 15-40 MHz 3 dB bandwidths. They provide excellent linearity, low insertion loss and flat response over the frequency range. These filters offer the user the ability to reduce the size of current system designs as well as next generation system designs. This 1" cube line of filters are ideal for use in miniature receivers, and small micro-wave test equipment applications.

## ELECTRICAL AND PERFORMANCE SPECIFICATIONS

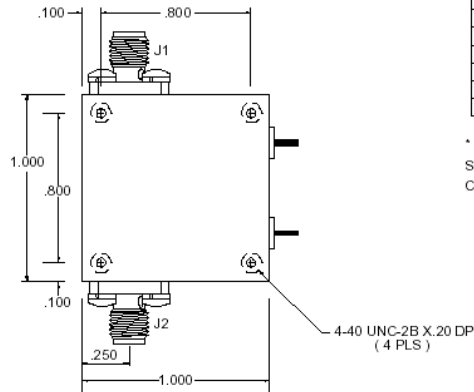
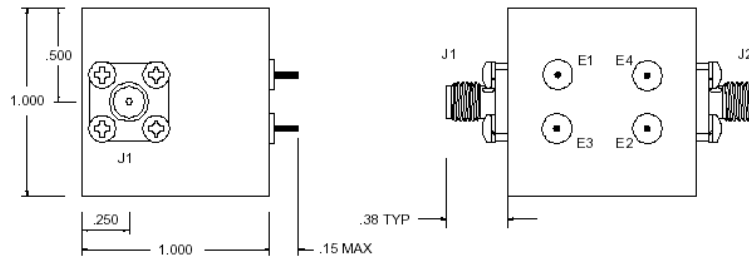
Guaranteed Specifications at  $-0^{\circ}$  to  $+70^{\circ}$  C Case Temperature (Note 2)

<b>Model No.</b>	MLFM-30520	MLFM-40540	MLFM-42008	MLFM-42018	MLFM-46018
Frequency Range, Min.	0.5-2 GHz	0.5-4 GHz	2-8 GHz	2-18 GHz	6-18 GHz
No. of Stages	3	4	4	4	4
3dB Bandwidth, Min. (Note 1)	15 MHz	15 MHz	30 MHz	30 MHz	40 MHz
Insertion Loss, Max.	8 dB	8 dB	5 dB	5 dB	5 dB
Passband Spurs & Ripple, Max.	2.0 dB	2.0 dB	2.0 dB	2.0 dB	2.0 dB
Passband VSWR, Max.	2:1	2:1	2:1	2:1	2:1
Selectivity, Typ.	18 dB/ Octave	24 dB/ Octave	24 dB/ Octave	24 dB/ Octave	24 dB/ Octave
Off Resonance Isolation, Min.	80 dB	80 dB	80 dB	70 dB	70 dB
Off Resonance Spurious, Min.	50 dB	50 dB	50 dB	40 dB	40 dB
Limiting Level, Min.	0 dBm	-5 dBm (.5-1 GHz) 0 dBm (1-4 GHz)	+10 dBm	+10 dBm	+10 dBm
<b>Tuning Coil Characteristics</b>					
Tuning Sensitivity, Typ.	18 MHz/mA	18 MHz/mA	20 MHz/mA	20 MHz/mA	20 MHz/mA
Linearity, Max.	+/- 3 MHz	+/- 3 MHz	+/- 5 MHz	+/- 5 MHz	+/- 5 MHz
Hysteresis, Typ.	5 MHz	6 MHz	6 MHz	15 MHz	10 MHz
Temperature Drift, Max.	6 MHz	10 MHz	15 MHz	15 MHz	15 MHz
Coil Resistance, Typ.	22 Ohms	22 Ohms	8 Ohms	8 Ohms	8 Ohms
Coil Inductance, Typ.	35 mH	35 mH	35 mH	40 mH	40 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.	500 mA	500 mA	500 mA	500 mA	500 mA
Steady State @ 25 deg. C.	150 mA	150 mA	150 mA	150 mA	150 mA
Case Style	21-010	21-011	21-011	21-011	21-011

Note: 1) Modified 3 dB Bandwidths available.

2)  $-54^{\circ}$ C to  $+85^{\circ}$ temperature available.

Outline Drawing: 21-010

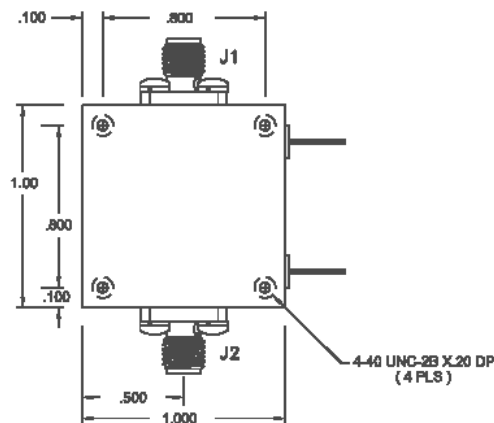
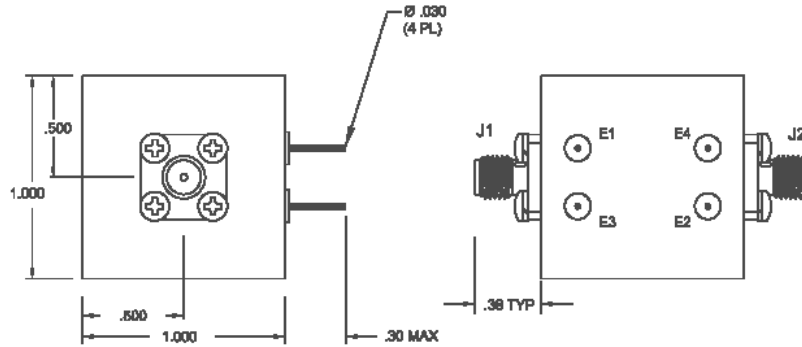


CONN	FUNCTIONS
J1	RF IN
J2	RF OUT
E1	+ COIL
E2	- COIL
E3	HEATER
E4	HEATER

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

**WEIGHT : 5 Oz. MAX**

Outline Drawing: 21-011



CONN	FUNCTIONS
J1	RF IN
J2	RF OUT
E1	+ COIL
E2	- COIL
E3	HEATER
E4	HEATER

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

**WEIGHT : 4 Oz. MAX**