



MICRO LAMBDA WIRELESS, INC.

MLUN-120 SERIES ULTRA NOTCH YIG BAND REJECT FILTERS 6 GHz - 20 GHz

FEATURES

- 6 GHz to 20 GHz Frequency Coverage
- Excellent Linearity
- Superior Notch Depth



DESCRIPTION

The MICRO LAMBDA **MLUN**-Series of Band Reject filters cover the frequency range of 6 GHz to 20 GHz in different bands. These filters offer excellent notch depth and precise bandwidths for rejection of unwanted signals 3 dB bandwidths are 150 to 270 MHz with 40 dB and 80 bandwidths of 40 to 80 MHz in standard designs. These filters are well suited for broadband receivers and a variety of EW system applications. Standard configuration are provided and can also be ordered with an Analog, TTL Digital or Serial Driver.

ELECTRICAL AND PERFORMANCE SPECIFICATIONS

Guaranteed Specifications at -0° to $+65^{\circ}$ C Case Temperature

Model No.	MLUN-0618-120	MLUN-0618-121	MLUN-0618-122	MLUN-0618-123	MLUN-0618-124
Frequency Range, Min.	6.0 –18.0 GHz	6.0 –18.0 GHz	6.0 –18.0 GHz	6.0 –18.0 GHz	6.0 –18.0 GHz
Reject Bandwidth					
@ 40 dB, Min.	80 MHz				
@ 50 dB, Min.		70 MHz			
@ 60 dB, Min.			60 MHz		
@ 70 dB, Min.				50 MHz	
@ 80 dB, Min.					40 MHz
@ 3 dB, Max.	250 MHz	220 MHz	200 MHz	175 MHz	150 MHz
Passband VSWR, Max.	2:1	2:1	2:1	2:1	2:1
Passband Insertion Loss, Max.	2.0 dB	2.0 dB	2.0 dB	2.0 dB	2.0 dB
Passband Range	DC-18.2 GHz	DC-18.2GHz	DC-18.2 GHz	DC-18.2 GHz	DC-18.2 GHz
Spurious, Max	4 dB	4 dB	4 dB	4 dB	4 dB
Limiting Level, Min.	+10 dBm	+10 dBm	+10 dBm	+10 dBm	+10 dBm
Max. Input Power, No Damage.	+28 dBm	+28 dBm	+28 dBm	+28 dBm	+28 dBm
Tuning Coil Characteristics					
Tuning Sensitivity, Typ.	13 MHz/mA	13 MHz/mA	18 MHz/mA	19 MHz/mA	19 MHz/mA
Linearity, Max.	+/- 2 MHz	+/- 2 MHz	+/- 3 MHz	+/- 4 MHz	+/- 6 MHz
Hysteresis, Typ.	2 MHz	2 MHz	4 MHz	12 MHz	15 MHz
Temperature Drift (0 to 65 deg. C), Max	8 MHz	6 MHz	8 MHz	10 MHz	12 MHz
Coil Resistance, Typ.	16 Ohms	16 Ohms	13 Ohms	6 Ohms	6 Ohms
Coil Inductance, Typ.	120 mH	120 mH	120 mH	140 mH	140 mH
Heater Voltage	+28 Vdc	+28 Vdc	+28 Vdc	+28 Vdc	+28 Vdc
Heater Current-Surge, Max.@ 25 deg. C.	300 mA	300 mA	300 mA	300 mA	300 mA
Steady State@ 25 deg. C.	150 mA	150 mA	150 mA	150 mA	150 mA
Case Style	21-018	21-018	21-018	21-018	21-018



ELECTRICAL AND PERFORMANCE SPECIFICATIONS

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

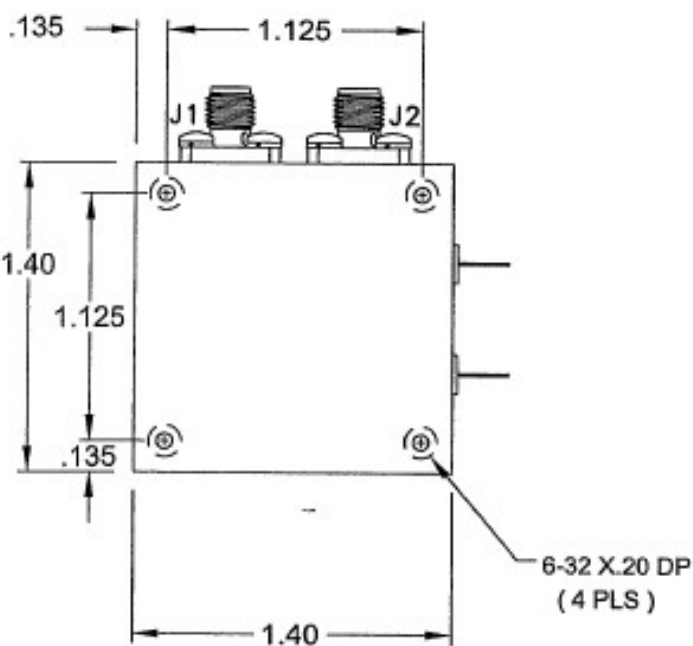
Model No.	MLUN-0620-120	MLUN-0620-121	MLUN-0620-122	MLUN-0620-123	MLUN-0620-124
Frequency Range, Min.	6.0 –20.0 GHz	6.0 –20.0 GHz	6.0 –20.0 GHz	6.0 –20.0 GHz	6.0 –20.0 GHz
Reject Bandwidth					
@ 40 dB, Min.	80 MHz				
@ 50 dB, Min.		70 MHz			
@ 60 dB, Min.			60 MHz		
@ 70 dB, Min.				50 MHz	
@ 80 dB, Min.					40 MHz
@ 3 dB, Max.	270 MHz	240 MHz	220 MHz	200 MHz	175 MHz
Passband VSWR, Max.	2:1	2:1	2:1	2:1	2:1
Passband Insertion Loss, Max.	2.2 dB	2.2 dB	2.2 dB	2.2 dB	2.2 dB
Passband Range	DC-20.2 GHz	DC-20.2GHz	DC-20.2 GHz	DC-20.2 GHz	DC-20.2 GHz
Spurious, Max	4 dB	4 dB	4 dB	4 dB	4 dB
Limiting Level, Min.	+10 dBm	+10 dBm	+10 dBm	+10 dBm	+10 dBm
Max. Input Power, No Damage.	+28 dBm	+28 dBm	+28 dBm	+28 dBm	+28 dBm
Tuning Coil Characteristics					
Tuning Sensitivity, Typ.	13 MHz/mA	13 MHz/mA	18 MHz/mA	19 MHz/mA	19 MHz/mA
Linearity, Max.	+/- 2 MHz	+/- 2 MHz	+/- 3 MHz	+/- 4 MHz	+/- 6 MHz
Hysteresis, Typ.	2 MHz	2 MHz	4 MHz	12 MHz	15 MHz
Temperature Drift (0 to 65 deg. C), Max	8 MHz	6 MHz	8 MHz	10 MHz	12 MHz
Coil Resistance, Typ.	16 Ohms	16 Ohms	13 Ohms	6 Ohms	6 Ohms
Coil Inductance, Typ.	120 mH	120 mH	120 mH	140 mH	140 mH
Heater Voltage	+28 Vdc	+28 Vdc	+28 Vdc	+28 Vdc	+28 Vdc
Heater Current-Surge, Max.@ 25 deg. C.	300 mA	300 mA	300 mA	300 mA	300 mA
Steady State@ 25 deg. C.	150 mA	150 mA	150 mA	150 mA	150 mA
Case Style	21-018	21-018	21-018	21-018	21-018



ELECTRICAL AND PERFORMANCE SPECIFICATIONS

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

Model No.	MLUN-0820-120	MLUN-0820-121	MLUN-0820-122	MLUN-0820-123	MLUN-0820-124
Frequency Range, Min.	8.0 –20.0 GHz	8.0 –20.0 GHz	8.0 –20.0 GHz	8.0 –20.0 GHz	8.0 –20.0 GHz
Reject Bandwidth					
@ 40 dB, Min.	80 MHz				
@ 50 dB, Min.		70 MHz			
@ 60 dB, Min.			60 MHz		
@ 70 dB, Min.				50 MHz	
@ 80 dB, Min.					40 MHz
@ 3 dB, Max.	270 MHz	240 MHz	220 MHz	200 MHz	175 MHz
Passband VSWR, Max.	2:1	2:1	2:1	2:1	2:1
Passband Insertion Loss, Max.	2.2 dB	2.2 dB	2.2 dB	2.2 dB	2.2 dB
Passband Range	DC-20.2 GHz	DC-20.2GHz	DC-20.2 GHz	DC-20.2 GHz	DC-20.2 GHz
Spurious, Max	4 dB	4 dB	4 dB	4 dB	4 dB
Limiting Level, Min.	+10 dBm	+10 dBm	+10 dBm	+10 dBm	+10 dBm
Max. Input Power, No Damage.	+28 dBm	+28 dBm	+28 dBm	+28 dBm	+28 dBm
Tuning Coil Characteristics					
Tuning Sensitivity, Typ.	13 MHz/mA	13 MHz/mA	18 MHz/mA	19 MHz/mA	19 MHz/mA
Linearity, Max.	+/- 2 MHz	+/- 2 MHz	+/- 3 MHz	+/- 4 MHz	+/- 6 MHz
Hysteresis, Typ.	2 MHz	2 MHz	4 MHz	12 MHz	15 MHz
Temperature Drift (0 to 65 deg. C), Max	8 MHz	6 MHz	8 MHz	10 MHz	12 MHz
Coil Resistance, Typ.	16 Ohms	16 Ohms	13 Ohms	6 Ohms	6 Ohms
Coil Inductance, Typ.	120 mH	120 mH	120 mH	140 mH	140 mH
Heater Voltage	+28 Vdc	+28 Vdc	+28 Vdc	+28 Vdc	+28 Vdc
Heater Current-Surge, Max.@ 25 deg. C.	300 mA	300 mA	300 mA	300 mA	300 mA
Steady State@ 25 deg. C.	150 mA	150 mA	150 mA	150 mA	150 mA
Case Style	21-018	21-018	21-018	21-018	21-018



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

* POSITION OF E1 & E4
SELECTED AT FACTORY
FOR COIL POLARITY

WEIGHT : 13 Oz. MAX

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE:			CONTRACT NO.		 MICRO LAMBDA WIRELESS, INC.	
FRACTIONS	DECIMALS	ANGLES	APPROVALS			
	1/16" = .0625"				10/21/05	BAND REJECT FILTER (1.4")
MATERIAL						
FINISH			DESIGNED		10/21/05	
			REVIEW		10/21/05	
DO NOT SCALE DRAWING			SIZE	CAGE NO.	DWG. NO.	REV.
				0RN63	21 - 018	C