

High Performance LB61 Series X-Band Low Noise Block Down Converter (LNB)

General Information

Intended for either indoor or outdoor environments, CPI Locus Microwave, Inc., designed the LB61 X-Band LNB for use in professional outdoor systems and includes an input WG isolator and interstage Tx reject filter. The LB61's exceptional design and performance provides a cost-competitive solution and a history of field-proven reliability.

Specifications included are for a standard product. Please contact the factory for your custom or specific performance needs.

Features:

- Input WG Isolator
- Outdoor packaging
- Integral Tx reject filter
- Input waveguide window
- Integral fault Alarm



11561 DS Rev A

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LB61 Series Low Noise Block Down Converter



	Range	Units	Notes	
Electrical Specifications				
Input Frequency	7.25-7.75	GHz	Phase Locked to ext. ref.	
Output Frequency	950-1450	MHz		
Local Oscillator Frequency	6.30	GHz		
External Reference (Standard) Frequency	10	MHz		
Level	0 dBm +/-5 dB			
Phase Noise (SSB) @ 1 kHz offset	-72 min., -76 typ.	dBc/Hz		
@ 10 kHz offset	-82 min., -85 typ.	dBc/Hz		
@ 100 kHz offset	-92 min., -100 typ.	dBc/Hz		
Noise Temperature	45 or 50 max.	K		@+23°C
Gain	50 or 60 min.	dB		
Gain Flatness	+/-1.5 max.	dB	per full band	
Gain Slope	+/-0.5 max.	dB	per 40 MHz	
P _{1dB}	+10 min.	dBm		
Input VSWR	1.20 typ., 1.25 max.	:1	Input Isolator Included	
Output VSWR	1.5 typ., 2.00 max.	:1		
Overdrive	0 max.	dBm	non-damaging	
LO Leakage @ RF Input	-80 max.	dBm		
Signal Independent Spurious	-60 max.	dBm	in band	
Signal Related Spurious	-65 min.	dBc	0 dBm output max.	
Desense level (7.9-8.4 GHz) ¹	-25 min.	dBm	Interstage filter included	
Image Rejection	60 min.	dB		
Power Requirement				
Input Voltage	+12 to +18	VDC		
Current	600 nom.	mA		
Fault Alarm	contact closure	Form 'C'	current sensing	
Mechanical Specifications				
Outline	LMI Dwg #10683			
Weight	2.0 nom.	lbs.		
Finish	paint	white		
Connectors				
RF Input	UG-138/U or CPR112G	Flange	WR112 waveguide	
RF Output	N or SMA	Female		
Power	6 pin	MS Type	mate included	
Pressure Test	5	psi		
Environmental				
Operating Temperature	-40 to +60	°C		
Humidity	100	%	with condensation	

Notes:

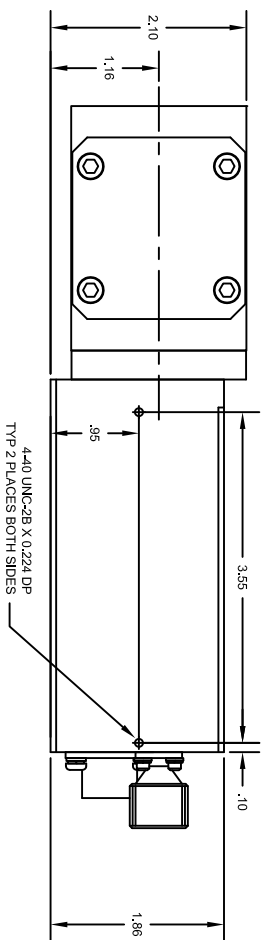
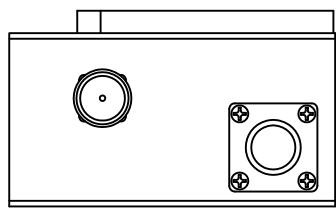
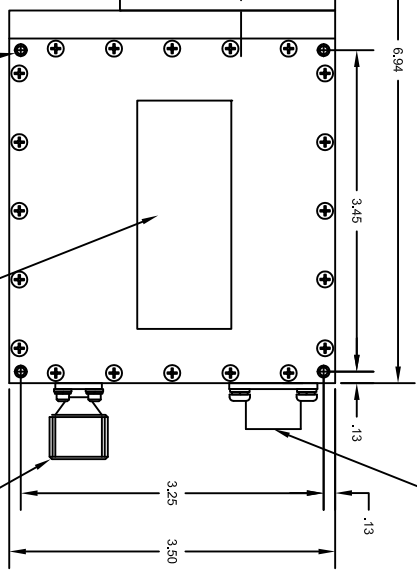
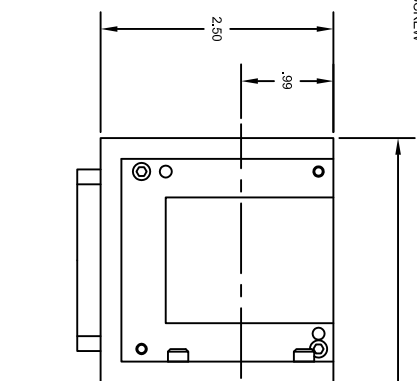
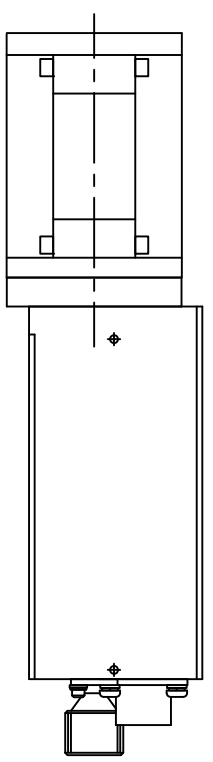
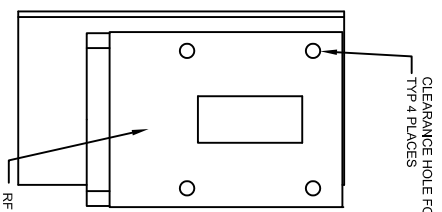
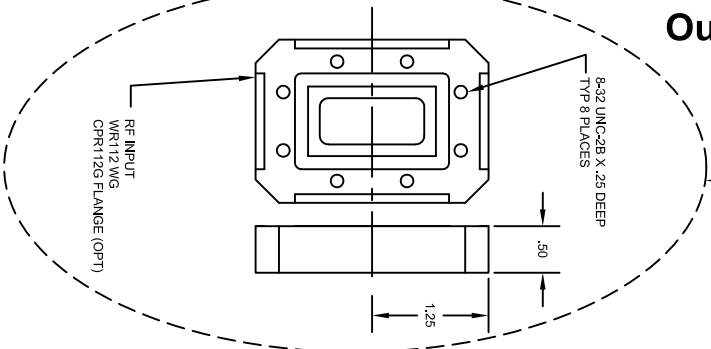
1. -30 max. with optional 60 dB Gain

Specifications are subject to change at the discretion of CPI Locus Microwave, Inc.

REVISION HISTORY			DWN BY	APPR BY	DATE
ZONE	REV	CHANGE NO	DESCRIPTION		
---	-	---	ENGINEERING RELEASE	JPD	08/04/18
---	A	558	CHG'D WG ISOLATOR, REDRAWN	JPD	09/05/27
---	B	927	ADD VIEWS, CHG WG CALLOUT	SES	11/03/23
---	C	1537	REMOVE TAR STATEMENT	MES	13/05/08

Outline Drawing

WHEN USED, THE OPTIONAL CPR112G FLANGE IS MOUNTED TO THE UG138U FLANGE AND ADDS .50" TO THE OVERALL LENGTH.



- MSS112E10-6P
- PNOUT
- A = GND
- C = GND
- D = OPEN ON FAULT
- E = FAULT COMMON
- F = CLOSED ON FAULT

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TO TOLERANCES

FRACTIONS	DECIMALS
3/16"	.XX
ANGLES	.XXX ± .005
THIRD ANGLE PROJECTION	

LOCUS MICROWAVE INC.

OUTLINE, X-BAND LNB

SIZE	CODE	DWG NO.	REV
C	34TH3	10683	C

SCALE 1:1 PROJ: PAGE 1 OF 1

Model Number Configuration

1 2 3 4 5 6 7

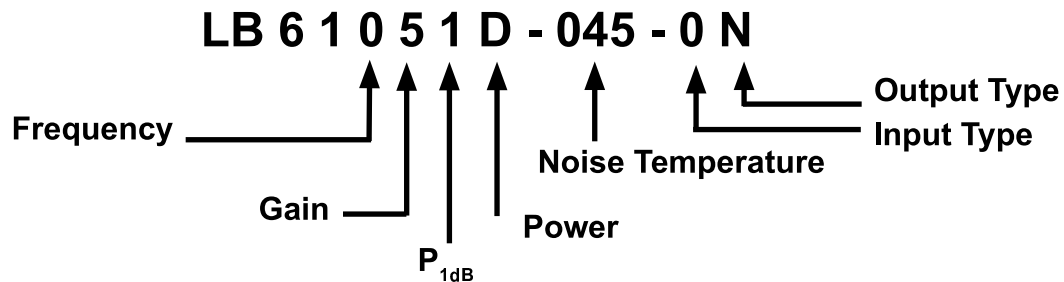
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1 Frequency	2 Gain	3 P _{1dB}	4 Power	5 Noise Temp
0 = 7.25-7.75 GHz	5 = 50 dB 6 = 60 dB	1 = 10 dBm	D = 12-18 VDC	045 K 050 K

6 Input Type	7 Output Type	A Accessories	B Finish	Federal Standard
0 = UG-138/U Flange 1 = CPR112G Flange *1	S = SMA (F) N = N (F)	0 = None 1 = 6 Pin Pigtail 2 = 6 Pin Pigtail	0 = White 1 = Dark Green 2 = Desert Tan 3 = Beige 4 = Sand 5 = Forest Green 6 = Metalast	37925 34094 33446 37722 33303 34083

*1 NOTE: CPR112G Flange includes gasket.

Example: 7.25-7.75 GHz, 50 dB Gain, +10 dBm P_{1dB}, DC Power, 45K Noise



Please confirm configurations against product specifications, and with factory, prior to order.