

LOW-NOISE BLOCK DOWNCONVERTERS

MODEL SERIES: LNB-1826-30

FEATURES

- RF frequency range..... 18 to 26 GHz
- Conversion gain 42 dB typical
- Noise figure..... 3 dB maximum

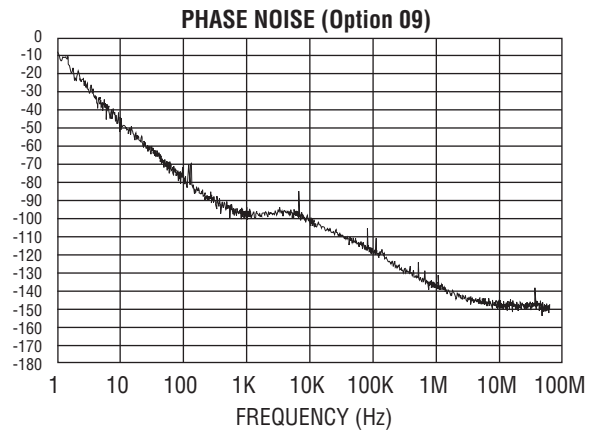
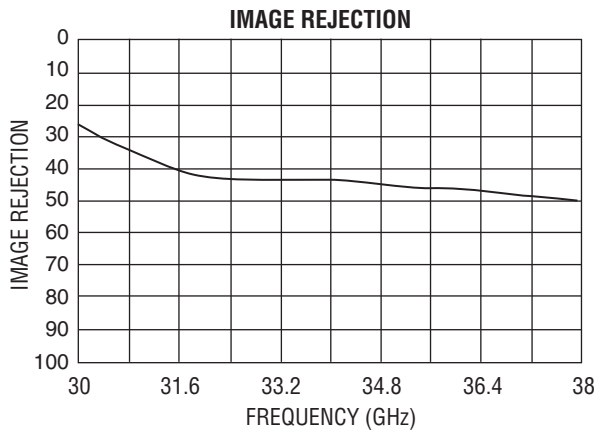
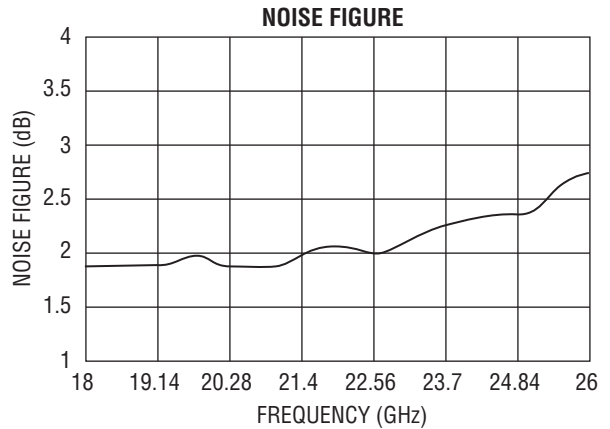
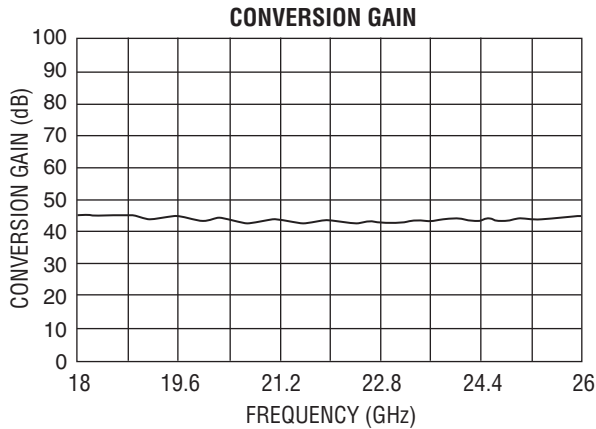


These wide RF/IF bandwidth frequency converters, with fixed LO frequencies (block converters), are commonly used to process millimeter signals with less expensive receivers below 18 GHz. In some applications, the resulting signals are upconverted back into the millimeter band. The LNB series, with its 4 dB noise figure, permits operation at low input signal powers. In addition, the PM noise of the converter is minimized by a phase-locked and multiplied internal LO source. The block diagram shown above is a baseline configuration. **ALTERNATIVE CONFIGURATIONS ARE AVAILABLE.**

ELECTRICAL SPECIFICATIONS

INPUT PARAMETERS	CONDITION	UNITS	MIN.	TYP.	MAX.
RF frequency range		GHz	18		26
RF VSWR	50 ohm reference	Ratio			2.5:1
LO frequency (fixed, internal)		GHz		28	
Reference input frequency		MHz	10		
Reference input power		dBm	0		
DC power	+15 VDC	Amp	1		
TRANSFER CHARACTERISTICS	CONDITION	UNITS	MIN.	TYP.	MAX.
Conversion gain		dB		42	
Single-sideband noise figure at 25°C		dB		2.5	3
LO-to-RF isolation		dB	45		
LO-to-IF isolation		dB		30	
RF-to-IF isolation		dB		20	
Output power at 1 dB compression		dBm	+7		
Output two-tone third-order intercept point		dBm	+17		
Image rejection		dB	20	25	
OUTPUT PARAMETERS	CONDITION	UNITS	MIN.	TYP.	MAX.
IF frequency range		GHz	2		10
IF VSWR	50 ohm reference	Ratio			2.5:1

LNB-1826-30 TYPICAL TEST DATA



ENVIRONMENTAL CONDITIONS

Specification temperature +25°C
 Storage temperature -55 to +85°C minimum
 Humidity 95% noncondensing

NOTE: Test data supplied at 25°C;
 conversion gain, noise figure and
 1 dB compression point.

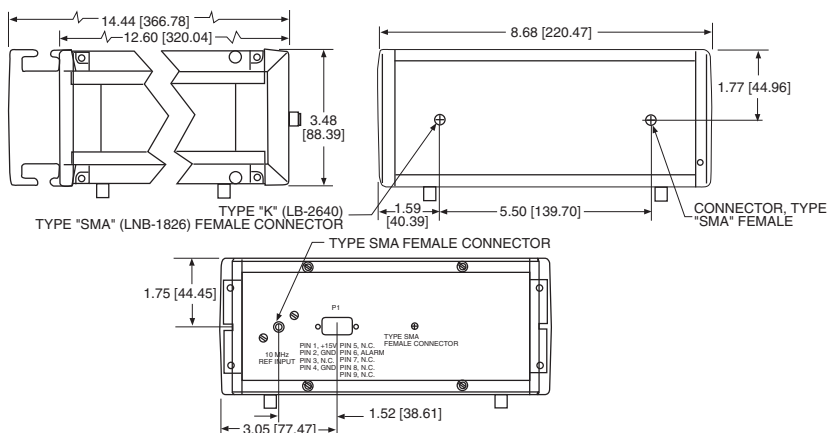
AVAILABLE OPTIONS

Option Number

- 01 LO frequency set at 16 GHz, LO < RF operation.
- 02 Bias (contact MITEQ).
- 03 Conversion gain (contact MITEQ).
- 04 Noise figure (contact MITEQ).
- 05 +10 dB minimum output 1 dB compression point.
- 06 Additional environmental conditions (contact MITEQ).
- 07 Mechanical, RF input, WR42 waveguide.
- 08 External LNA for remote feed applications.
- 09 Low phase noise LO utilizing an internal reference with frequency stability to ±1 PPM.

NOTE: When ordering, please specify model number and option number(s) required.

OUTLINE DRAWING



NOTE: All dimensions shown in brackets [] are in millimeters.

BLOCK DIAGRAM

