2116-126 Block Downconverter, 12.25 - 12.75 GHz

The 2116-126 Downconverter converts 12.25 - 12.75 GHz to 0.95 - 1.45 GHz with a local oscillator at 11.3 GHz. Front panel LEDs provide indication of DC Power, External 10 MHz, and PLL Alarm. The gain is +35 dB. Connectors are Type N female for the RF and BNC female for the L-Band and external reference input and reference output. A three-way switch controls which 10 MHz reference is being used. In the INT position, the internal reference is used, in the EXT position, the external reference is used, and in the AUTO position, the internal reference is used unless a 3 dBm ± 3 dB, 10MHz reference signal is connected to the external reference input. The 2116 is powered by a 90-260 VAC power supply, and mounted in a 1 3/4" X 19" X 14" rack mount chassis.

EQUIPMENT SPECIFICATIONS*

Input Characteristics
- Impedance/Return Loss: 50Ω/14 dB
- Frequency: 12.25 to 12.75 GHz
- Noise Figure, Max.: 20 dB max gain
- Input Level range: -55 to -35 dBm
- Input 1 dB compression: -25 dBm

Output Characteristics
- Impedance/Return Loss: 50Ω /14 dB
- Frequency: 0.95 to 1.45 GHz
- Output Level Range: -20 to 0 dBm
- Output 1 dB compression: +10 dBm

Channel Characteristics
- Gain: +35 dB ±2 dB
- Image Rejection: > 60 dB, min
- Spurious, In Band: SIGNAL RELATED<60 dBC in band, 0 dBm out; SIGNAL INDEPENDENT,<60 dBm
- Spurious, Out of Band: <50 dBm
- Intermodulation: <55 dBc for two carriers each at -10 dBm out
- Frequency Response: ±1.5 dB, 950 - 1500 MHz out; ± 0.5 dB, 40 MHz BW
- Frequency Sense: Non-inverting

LO Characteristics
- LO Frequency: 11.3 GHz
- Frequency Accuracy: ± 0.01 ppm max over temp internal reference; ext. ref. input
- 10 MHz level: 3 dBm, ± 3 dB, 75 ohms, External In or Monitor out

Phase Noise @ F (Hz) > | 100 | 1K | 10K | 100K | 1M |
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<td>dBC/Hz</td>
<td>-70</td>
<td>-80</td>
<td>-85</td>
<td>-100</td>
<td>-110</td>
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Controls, Indicators
- Ext 10 MHz: Yellow LED, indicates external 10 MHz reference selected (rear panel DPDT switch)
- PLL Alarm: Red LED, External contact closure
- Power: Green LED

Other
- RF Connector: SMA (female), 50Ω
- L-Band Connector: BNC (female), 50Ω
- 10 MHz Connectors: BNC (female), 75Ω connector; Works for 50Ω/75Ω
- Alarm Connector: DB9 - NO or NC contact closure on Alarm
- Size: 19 inch standard chassis 1.75" high X 14.0" deep
- Power: 100-240 ±10% VAC, 47 - 63 Hz, 25 watts max.

*+10 to +40 degrees C; Specifications subject to change without notice

Available Connector Options
- M - 50Ω N-type (RF), 50Ω BNC (L-BAND)
- N - 50Ω N-type (RF), 75Ω BNC (L-BAND)
- NF - 50Ω N-type (RF), 75Ω F-type (L-BAND)
- SN - 50Ω N-type (RF), 50Ω N-type (L-BAND)
- SF - 50Ω SMA (RF), 75Ω BNC (L-BAND)
- SS - 50Ω SMA (RF), 50Ω SMA (L-BAND)

CROSS TECHNOLOGIES, INC.
6170 Shiloh Road Alpharetta, Ga. 30005
770-886-8005, FAX 770-886-7964
www.crosstechnologies.com