2116-117 Block Downconverter, 11.7 - 12.75 GHz to 0.95 - 2.00 GHz

The 2116-117 Downconverter converts 11.7 - 12.75 GHz to 0.95 - 2.00 GHz with a local oscillator at 10.75 GHz. Front panel LEDs provide indication of DC Power, External 10 MHz, and PLL Alarm. The gain is +35 dB (+25 dB for Option W25). Connectors are SMA 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 100-240 ± 10% VAC power supply, and mounted in a 13/4” X 19” X 14” rack mount chassis.

### EQUIPMENT SPECIFICATIONS

#### Input Characteristics (RF)
- Impedance/Return Loss: 50Ω/14 dB
- Frequency: 11.7 to 12.75 GHz
- Noise Figure, Max.: 12 dB max gain
- Level: -55 to -35 dBm (-45 to -25 dBm; OPTION W25)
- 1dB Compression: -25 dBm (-15dBm; OPTION W25)

#### Output Characteristics (L-Band)
- Impedance/Return Loss: 50Ω/14 dB
- Frequency: 0.95 to 2.00 GHz
- Level: -20 to 0 dBm
- 1dB Compression: +10 dBm

#### Channel Characteristics
- 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 dBc
- Intermodulation: < -55 dBc for two carriers each at -10 dBm out
- Frequency Response: ±1.5 dB, 0.95-2.00 MHz out; ± 0.5 dB, 40 MHz BW
- Frequency Sense: Non-inverting

#### LO Characteristics
- LO Frequency: 10.75 GHz
- Frequency Accuracy: ± 0.01 ppm max over temp internal reference; ext. ref. input
- 10 MHz level In/Out: +3 dBm ± 3 dB

#### Controls, Indicators
- INT/AUTO/EXT Switch: Selects internal or external 10 MHz (rear panel DP3T switch)
- Ext 10 MHz: Yellow LED, indicates external 10 MHz reference selected
- PLL Alarm: Red LED, External contact closure
- Power: Green LED

#### Other
- RF Connector: SMA (female), standard
- IF Connector: BNC (female), 50Ω, standard
- 10 MHz connectors: BNC (female), 75Ω connector; works with 50Ω or 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 maximum

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