The 3116-21-137 Dual Band Block Downconverter, 5.85-6.65, 13.75-14.5 GHz

The 3116-21-137 Block Downconverter converts one of two RF bands to 0.95 - 1.75 GHz. The gain is +20 ± 2 dB maximum and is adjustable in 0.5 ± 0.5 dB steps from +20 to -10 dB. Front panel LEDs provide indication of Remote operation, PLL Alarm and DC Power. Frequency, gain and internal/external/Auto reference frequency selection are controlled by front panel switches or remote selection (via RS 232C, standard; Ethernet Optional) and are viewable on the LCD Display. Connectors are SMA female for the RF and BNC female for the L-Band and external reference input and reference output. In AUTO, the 10 MHz reference stays in external if the external level is +1 to +8 dBm. The 3116 is powered by a 100-240 ± 10% VAC power supply, and housed in a 1 3/4" X 19 " X 14" rack mount chassis.

**EQUIPMENT SPECIFICATIONS**

**Input Characteristics**
- Impedance/RL: 50Ω/14 dB
- Frequency (GHz): Band 1 - 5.85 to 6.65; Band 2 - 13.75 to 14.5
- Noise Figure, Max.: 15 dB max gain
- Input Level Range: -20 to 0 dBm

**Output Characteristics**
- Impedance/RL: 50 Ω /14 dB; RF MON 12dB
- Frequency (GHz): Band 1 - 0.95 to 1.75; Band 2 - 0.95 to 1.70
- Output Level Range: -20 to 0 dBm
- Output 1 dB compr. +10 dBm, at max gain

**Channel Characteristics**
- Gain at F<sub>c</sub>: +20 ±2 dB, (+20 to -10 dB variable in 0.5± 0.5 dB steps); RF MON, 0 ±2 dB
- Image Rejection: > 60 dB, min
- Spurious, Inband: Band 1 SIGNAL RELATED < 40 dBc in band, -20 to 0 dBm out; SIGNAL INDEPENDENT, < 60 dBm
- Band 2 SIGNAL RELATED < 55 dBc in band, -20 to 0 dBm out; SIGNAL INDEPENDENT, < 60 dBm
- Spurious, Out of band: < 50 dBm spurious, signal independent; 0.5 to 2.5 GHz out
- Intermodulation: < 50 dBc for two carriers at 4 MHz spacing, each at -5 dBm out
- Frequency Response: ±2 dB, over RF band; ± 0.5 dB, 40 MHz BW
- Frequency Sense: Non-inverting

**LO Characteristics**
- LO Frequency: Band 1, 4.9 GHz; Band 2, 12.8 GHz
- Frequency Accuracy: ± 0.05 ppm max over temp internal reference; ext. ref. input
- 10 MHz In/Out Level: 3 dBm, ± 3 dB, w/ Auto-detect

**Controls, Indicators**
- Freq., Gain, Ext Ref Sel. direct readout LCD; pushbutton switches or remote
- Pwr; Alarm; Rem; Mute
- Remote: RS232C/RS485/422, 9600 baud (Ethernet Optional)

**Other**
- RF/L-Band Connector: SMA (female), 50Ω / BNC (female), 50Ω
- 10 MHz Connectors: BNC (female), 75Ω, works with 50 or 75 ohms
- Alarm/Remote Conn.: 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, 30 watts max.

**Available Options**
- Remote M&C Ethernet Options
  - W8 - Ethernet w/web browser Interface
  - W18 - Ethernet w/SNMP (and MIB) Interface
  - W28 - Ethernet w/direct TCP/IP Interface
  - W828 - W8 + W18 + W128

**Extended Temperature Option**
- W31 - 0˚C to 50˚C

**Connector Options**
- M - 50Ω N-type (RF), 50Ω BNC (L-BAND)
- N - 50Ω N-type (RF), 75Ω BNC (L-BAND)
- S7 - 50Ω SMA (RF), 75Ω BNC (L-BAND)
- SN - 50Ω SMA (RF), 50Ω N-type (L-BAND)
- SS - 50Ω SMA (RF), 50Ω SMA (L-BAND)

Contact Cross for other options

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