3115-117 Block Upconverter, 0.95 - 2.00 GHz to 11.7 - 12.75 GHz

The 3115-117 Upconverter converts 0.95 - 2.00 GHz to 11.7 - 12.75 GHz (non-inverted) with a 10.75 GHz local oscillator. The gain is +30 dB maximum and is adjustable in 0.5 ± 0.5 dB steps. Front panel LEDs provide indication of Remote operation, PLL Alarm and DC Power. Gain and internal/external/Auto reference frequency selection are controlled by front panel switches or remote selection (via RS-232C/485, 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 +3 dBm, ±3 dB. The 3115 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/Return Loss: 50Ω/14 dB
- Frequency: 0.95 to 2.00 GHz
- Noise Figure, Max.: 20 dB max gain
- Input Level range: -40 to -25 dBm

Output Characteristics
- Impedance/Return Loss: 50Ω/14 dB
- Frequency: 11.7 to 12.75 GHz
- Output Level Range: -20 to -5 dBm
- Output 1 dB compression: +5 dBm at max. gain

Channel Characteristics
- Gain, max; adjustment: +30 dB ±2 dB, max. gain at Fc; 30 dB adjustment in 0.5 ±0.5 dB Steps
- Image Rejection: > 60 dB, min
- Spurious, In Band: SIGNAL RELATED<-50 dB in band, -5 dBm out; SIGNAL INDEPENDENT,<-60 dBm
- Spurious, Out of Band: <-50 dB, 10.5 to 11.69 and 12.751 to 13.7 GHz
- Intermodulation: <-50 dBm, 10.5 to 11.69 and 12.751 to 13.7 GHz
- Frequency Response: ±1.5 dB, 11.7 -12.75 GHz 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 In/Out Level: 3 dBm, ± 3 dB, w/ Auto-detect
- Phase Noise @ F (Hz) > dB/Hz:

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<tr>
<th>10</th>
<th>100</th>
<th>1K</th>
<th>10K</th>
<th>100K</th>
<th>1M</th>
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<tr>
<td>-55</td>
<td>-70</td>
<td>-80</td>
<td>-85</td>
<td>-100</td>
<td>-110</td>
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Controls, Indicators
- Gain: Ext Ref Selection: direct readout LCD; pushbutton switches or remote
- Pwr; Alarm; Rem; Mute: Green LED; Red LED; Yellow LED; Yellow LED
- Remote: RS232C/RS485/422, 9600 baud (Ethernet Optional)

Other
- RF Connector: SMA (female), 50Ω
- L-Band Connector: 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 11.7" deep
- Power: 100-240 ± 10% VAC, 47 - 63 Hz, 45 watts max.

Available Options
- W31 0 to +50 degrees C operation
- 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 - Ethernet w/web browser Interface
  - W8 - Ethernet w/SNMP (and MIB) Interface

Available Connector Options
- N - 50Ω N-type (RF), 75Ω BNC (L-BAND)
- NF - 50Ω N-type (RF), 75Ω F-type (L-BAND)
- NN - 50Ω N-type (RF), 50Ω N-type (L-BAND)
- S7 - 50Ω SMA (RF), 75Ω BNC (L-BAND)
- SF - 50Ω SMA (RF), 75Ω F-type (L-BAND)
- SN - 50Ω SMA (RF), 50Ω N-type (L-BAND)
- SS - 50Ω SMA (RF), 50Ω SMA (L-BAND)

*10°C to 40°C; Specifications subject to change without notice.