2115-58 Block Upconverter, 5.85 - 6.425 GHz

The 2115-58 Block Upconverter converts 0.95 - 1.525 GHz to 5.850 - 6.425 GHz with low phase noise and flat frequency response. Frequency translation is via a 7.375 GHz local oscillator. Front panel LEDs provide indication of DC Power, External 10 MHz, and PLL Alarm. The gain is +20 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 2115 is powered by a 100-240 ± 10% VAC power supply, and mounted in a 1 3/4" X 19" X 14" rack mount chassis.

**Front Panel**

**Equipment Specifications**

**Input Characteristics (L-Band)**
- Impedance/Return Loss: 50Ω/14 dB
- Frequency: 0.95 to 1.525 GHz
- Noise Figure, Max.: 20 dB max gain
- Input Level range: -40 to -20 dBm
- Input 1 dB compression: -10 dBm

**Output Characteristics (RF)**
- Impedance/Return Loss: 50 Ω/14 dB
- Frequency: 5.85 to 6.425 GHz
- Output Level Range: -20 to 0 dBm
- Output 1 dB compression: +10 dBm

**Channel Characteristics**
- Gain: +20 dB ±1 dB
- Image Rejection: > 60 dB, min
- Spurious, Inband: 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 dB, 5.850 - 6.425 GHz out; ± 0.5 dB, 40 MHz BW
- Frequency Sense: Inverting

**LO Characteristics**
- LO Frequency: 7.375 GHz
- Frequency Accuracy: ± 0.01 ppm max over temp internal reference; external reference input
- 10 MHz level: 3 dBm, ± 3 dB, 75 ohms, External In or Internal out

<table>
<thead>
<tr>
<th>Phase Noise @ F (Hz) &gt; 2 GHz</th>
<th>1000</th>
<th>100</th>
<th>10</th>
<th>1</th>
<th>0.1</th>
</tr>
</thead>
<tbody>
<tr>
<td>dBC/Hz</td>
<td>-70</td>
<td>-80</td>
<td>-85</td>
<td>-100</td>
<td>-110</td>
</tr>
</tbody>
</table>

**Controls, Indicators**
- Ext 10 MHz: Yellow LED, indicates external 10 MHz reference selected (rear panel DPDT switch)
- Power: Green LED
- PLL Alarm: Red LED, External contact closure

**Available Options**
- Connectors/Impedance:
  - FN - 50Ω N-type (RF), 75Ω F-type (L-Band)
  - N - 50Ω N-type (RF), 75Ω BNC (L-Band)
  - NN - 50Ω N-type (RF), 50Ω N-type (L-Band)
  - NS - 50Ω SMA (RF), 50Ω N-type (L-Band)
  - S - 50Ω SMA (RF), 50Ω BNC (L-Band)
  - S7 - 50Ω SMA (RF), 75Ω BNC (L-Band)

**Other**
- RF Connector: Type-N (female), 50Ω
- L-Band Connector: BNC (female), 50Ω
- 10 MHz Connectors: BNC (female), 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, 45 watts max.

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