2016-1327 Downconverter, 1.3 - 2.7 GHz

The 2016-1327 Downconverter converts 1300 to 2700 MHz to 70 MHz in 1 MHz steps with low group delay and flat frequency response. Synthesized local oscillators (LO) provide frequency selection. Multi-function switches select the input frequency, gain, and other parameters. Front panel LEDs provide indication of DC power, PLL alarm or Remote operation. Gain is adjustable manually (MGC) over a 0 to 30 dB range. The frequency and gain are remotely selectable. Parameter selection and frequency and gain settings appear on the LCD display. Connectors are BNC female for the RF, IF and optional external 10 MHz reference input and output (option -E). Tables below show connector and other options. The 2016-1327 is powered by a 100-240 ±10% VAC, 47-63 Hz power supply, and is contained in a 1 3/4" X 19" X 16" rack mount chassis.

**EQUIPMENT SPECIFICATIONS**

**Input Characteristics**
- Impedance/Return Loss: 50Ω/10 dB
- Frequency: 1300 to 2700 MHz
- Noise Figure, Max.: 15 dB max. gain
- Input Level range: -50 to -20 dBm
- Input 1 dB compression: -15 dBm

**Output Characteristics**
- Impedance/Return Loss: 75 Ω /18 dB
- Frequency: 70 ± 18 MHz
- Output Level/max linear: -20 / -10 dBm
- Output 1 dB compression: -5 dBm

**Channel Characteristics**
- Gain range (adjustable): 0.0 to +30.0 dB (1dB steps)
- Image Rejection: > 50 dB, min.
- Frequency Response: ±2.0 dB, 1300 to 2700 MHz ; ± 0.75 dB, 36 MHz BW
- Spurious Response: < -50 dBc, in band
- Group Delay, max: 0.015 ns/MHz2 parabolic; 0.05 ns/MHz linear; 1 ns ripple
- Frequency Sense: Non-inverting

**Synthesizer Characteristics**
- Frequency Accuracy: ± 1.0 ppm max over temp (± 0.02 ppm optional)
- Frequency Step: 1.0 MHz (125 kHz steps is OPTION X)
- 10 MHz Level (In or Out): +3 dBm, ± 3 dB, 75 ohms (option E)

**Phase Noise @ Freq**

<table>
<thead>
<tr>
<th>dBc/Hz</th>
<th>100Hz</th>
<th>1kHz</th>
<th>10kHz</th>
<th>100kHz</th>
<th>1MHz</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>-70</td>
<td>-70</td>
<td>-80</td>
<td>-90</td>
<td>-100</td>
</tr>
</tbody>
</table>

**Controls, Indicators**
- Frequency Selection: direct readout LCD; manual or remote selection
- Gain Selection: direct readout LCD; manual or remote selection
- Power, Alarm, Remote: Green LED; Red LED; Yellow LED
- Remote: RS232C, 9600 baud (RS485, option Q)

**Other**
- RF Connector: BNC, 50 ohm (female)
- IF, 10 MHz Connectors: BNC (female) Option E
- Alarm/Remote Connector: DB9 (female) - NO or NC contact closure on Alarm
- Size: 19 inch, 1RU standard chassis 1.75” high X 16.0” deep
- Power: 100-240 ±10% VAC, 47-63 Hz, 45 watts max.

**Available Options**
- E - External 10 MHz ref input & output
- H - High Stability (±0.01ppm) Internal Ref
- Q - RS485 Remote Interface
- T - Temperature Sensor
- W8 - Ethernet M&C Remote Interface
- W18 - Ethernet Interface w/SNMP
- X - 125 kHz Frequency Step Size

**Connectors/Impedance**
- STD - 50Ω BNC (RF), 75Ω BNC (IF)
- D - 50Ω BNC (RF), 50Ω BNC (IF)
- M - 50Ω Type N (RF), 50Ω BNC (IF)
- N - 50Ω Type N (RF), 75Ω BNC (IF)
- S - 50Ω SMA (RF), 50Ω BNC (IF)

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