2016-02-720 L-Band Downconverter, 720 ±100 MHz IF

The 2016-02-720 Downconverter converts 950 to 2150 MHz to 720 MHz in 125 kHz 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 Type F female for the RF, and BNC female for the IF and external 10 MHz reference input and output. External 10 MHz is standard. A 10 MHz output connector contains either the internal or external 10 MHz reference signal whichever is selected by the user. The 2016-02-720 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.

Front Panel

EQUIPMENT SPECIFICATIONS*

**Input Characteristics**
- Impedance/Return Loss: 75Ω/10 dB
- Frequency: 950 to 2150 MHz
- Noise Figure, Max.: 20 dB max. gain
- Input Level range: -50 to -20 dBm

**Output Characteristics**
- Impedance/Return Loss: 50 Ω/14 dB
- Frequency: 720 ± 100 MHz
- Output Level Range: -20 to -10 dBm
- Output 1 dB compression: 0 dBm, max. gain

**Channel Characteristics**
- Gain range (adjustable): 0.0 to +30.0 dB, 1 ±1 dB steps
- Image Rejection: > 45 dB, min., 50 dB typical
- Frequency Response: ±2.0 dB, 950 to 2150 MHz; ±1.0 dB, 200 MHz BW
- Spurious Response: < -45 dBc, in band
- Group Delay, max: 10 ns total, Max. (parabolic + linear + ripple), 200 MHz BW
- Frequency Sense: Non-inverting

**Synthesizer Characteristics**
- Frequency Accuracy: ±1.0 ppm max. over temp (±0.01 ppm option -H)
- Frequency Step: 125 kHz

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

**10 MHz Level (In or Out)**
- 3 dBm, ± 3 dB, 75 ohms

**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, Ethernet Optional)

**Available Options**
- H - High Stability (±0.01ppm) Internal Ref
- Q - RS485 Remote Interface
- W8 - Ethernet; w/Web Browser (WB)
- W18 - Ethernet; w/WB & SNMP
- W28 - Ethernet; w/TCP/IP, Telnet® Connectors/Impedance
- STD - 75Ω Type F (RF), 50Ω BNC (IF)
- B - 75Ω BNC (RF), 75Ω BNC (IF)
- C - 50Ω BNC (RF), 75Ω BNC (IF)
- D - 50Ω BNC (RF), 50Ω BNC (IF)
- F - 75Ω Type F (RF), 75Ω BNC (IF)
- K - 75Ω 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)

**Other**
- RF Connector: Type F (female)
- IF, 10 MHz Connectors: BNC (female)
- 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, 30 watts max.

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

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