2016-75-40 Downconverter, 713 MHz to 40 MHz

The 2016-75-40 Downconverter converts 713 MHz to 40 ± 6 MHz with low group delay and flat frequency response. Synthesized local oscillators (LO) provide fixed frequency downconversion. Multi-function push button switches select the gain, and other parameters. Front panel LEDs provide indication of DC power (green), remote operation (yellow), and PLL alarm (red). Variable attenuators for the RF input provide a gain range of 0 to +40 dB as adjusted by the front panel multi-function pushbutton switches. Remote operation allows selection of gain. Parameter selection and frequency translation and gain settings appear on the LCD display. Connectors are Type F female for the RF and BNC female for IF (see chart below for other connector options) and optional 10 MHz input and output signals (option -E). A high stability (±0.01ppm) option (-H) is also available. The unit is powered by a 100-240 ± 10% VAC power supply, and housed in a 1 3/4” X 19” X 16” rack mount chassis.

Front Panel

EQUIPMENT SPECIFICATIONS*

Input Characteristics (RF)
- Impedance/Return Loss: 75Ω / 12dB
- Frequency: 713 MHz ± 6 MHz
- Noise Figure, max.: 15 dB (max gain)
- Level Range: -60 to -20 dBm
- Input 1dB compression: -15 dBm, min gain

Output Characteristics (IF)
- Impedance/Return Loss: 75Ω / 12dB
- Frequency: 40 ± 6 MHz
- Level Range: -30 to -20 dBm
- Output 1 dB compression: -10 dBm

Channel Characteristics
- Gain range (adjustable): 0.0 to +40.0 dB
- Image Rejection: > 50 dB, min.
- Frequency Response: 40 ± 6 MHz out ; ±0.5 dB
- Spurious Response: < -45 dBC, in band
- Group Delay, max: 0.01 ns/MHz² parabolic; 0.03 ns/MHz linear; 1 ns ripple
- Frequency Sense: Non-inverting

Synthesizer Characteristics
- Frequency Accuracy: ±1.0 ppm internal reference (±0.01 ppm, option H)
- Frequency Step: None, 40 MHz out
- 10 MHz In/Out Level: +3 dBm ± 3 dB (option E)

Controls, Indicators
- Freq/Gain Selection: direct readout LCD; manual or remote selection
- Pwr; Alarm; Rem; Mute: Green LED; Red LED; Yellow LED; Red LED
- Remote: RS232C, 9600 baud (RS485, option Q)

Available Options
- E - External 10 MHz ref input & output
- H - High Stability Internal Ref (±0.01 ppm)
- Q - RS485 Remote Interface

Connectors/Impedance
- B - 75Ω BNC (RF), 75Ω BNC (IF)
- C - 50Ω BNC (RF), 75Ω BNC (IF)
- D - 50Ω BNC (RF), 50Ω BNC (IF)
- N - 50Ω N-type (RF), 75Ω BNC (IF)
- M - 50Ω N-type (RF), 50Ω BNC (IF)
- S - 50Ω SMA (RF), 50Ω BNC (IF)

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