The 2015-26 S-band Upconverter converts 140 ± 36 MHz to 2000 to 2500 MHz in 1 MHz steps (0.5 MHz steps, option -5) with low group delay and flat frequency response. Synthesized local oscillators (LO) provide frequency selection. Multi-function push button switches select the RF frequency, gain, and other parameters. Front panel LEDs provide indication of DC power (green), PLL alarm (red), remote operation (yellow) or the TX carrier is muted (yellow). Variable attenuators for the IF input and output provide a gain range of -10 to +30 dB as adjusted by the front panel multi-function push-button switches. Remote operation allows selection of frequency and gain. Parameter selection and frequency and gain settings appear on the LCD display. Connectors are BNC female for RF, IF and the optional external reference input and output. 10 MHz reference can be inserted on the RF line as an added option. The 10 MHz option includes a 10 MHz output connector which contains either the internal or external 10 MHz reference signal. A high stability (±0.01ppm) option 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.

EQUIPMENT SPECIFICATIONS*

Input Characteristics (IF)
- Impedance / Return Loss: 75Ω / 18dB
- Frequency: 140 ± 36 MHz
- Input Level Range: -40 to -10 dBm

Output Characteristics (RF)
- Impedance / Return Loss: 50Ω / 12dB
- Frequency: 2.0 to 2.5 GHz
- Output level: -20 to 0 dBm
- Output 1 dB compression: +5 dBm

Channel Characteristics
- Gain range (adjustable): -10 to +30 dB
- Image Rejection: > 50 dB, min.
- Frequency Response: ±1.5 dB, 2.0-2.5 GHz ; ± 0.5 dB, 36 MHz BW
- Spurious Response: < -50 dBc, in band
- Group Delay, max: 0.0035 ns/MHz² parabolic; 0.025 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: 1.0 MHz (0.5 MHz, option -5)
- 10 MHz In/Out Level: 3 dBm ± 3 dB (option E)

Phase Noise @ F (Hz) > 100 1K 10K 100K 1M
-70 -70 -80 -95 -105

Available Options
- E - External 10 MHz ref input & output
- H - High Stability (±0.01ppm) Internal Ref
- Q - RS485 Remote Interface
- Z - Attenuator 0.1 dB steps on Upconverter
- -5 - 0.5 MHz Frequency Steps

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

Other
- RF, IF Connectors: BNC (female)
- 10MHz Connectors: BNC (female), 50Ω/75Ω (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 W max.

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