2015-57-140 Upconverter, 140 ± 36 MHz to 5.845 - 6.725 GHz

The 2015-57-140 Upconverter converts 140 ± 36 MHz to 5.845 to 6.725 GHz in 125 kHz steps (1 kHz steps, option X1005) with low group delay and flat frequency response. Synthesized local oscillators (LO) provide frequency selection with ±0.01 ppm stability. Push button switches select the RF frequency, gain, and other parameters. Front panel LEDs provide indication of DC power (green), remote operation (yellow), PLL alarm (red), or the TX carrier is muted (yellow). Variable attenuators for the IF input and RF output provide a gain range of 0 to +30 dB as adjusted by the front panel pushbutton switches. Remote M&C allows selection of the 10 MHz reference, frequency and gain. Parameter selection and frequency and gain settings appear on the LCD display. Connectors are BNC female for IF input and 10MHz reference input and output, and Type N female for the RF output (other connector configurations available). The unit is powered by a 100-240 ±10% VAC power supply; and housed in a 1.75” X 19” X 16” rack mount chassis.

Front and Rear Panels (shown with optional Ethernet)

EQUIPMENT SPECIFICATIONS*

Input Characteristics (IF)
- Impedance/Return Loss: 75Ω / 18 dB min.
- Frequency: 140 ± 36 MHz
- Input Level: -30 to -10 dBm

Output Characteristics (RF)
- Impedance/Return Loss: 50Ω/14 dB min.
- Frequency: 5.845 to 6.725 GHz
- Output level: -20 to 0 dBm
- Output 1 dB compression: +10 dBm, Gain = +30

Channel Characteristics
- Max. Gain; range: +30 ± 2 dB; 0 to +30 dB, 0.5 ± 0.5 dB steps
- Spurious Response: < -50 dBc
- Intermodulation: < -50 dBc for two carriers each at -5 dBm out
- Frequency Response: ±1.5 dB, 5.845-6.725 GHz; ±0.7 dB, 72 MHz BW
- Group Delay, max: 0.0035 ns/MHz² parabolic; 0.025 ns/MHz linear; 1 ns ripple
- Frequency Sense: Non-inverting

Synthesizer Characteristics
- Frequency Accuracy: ±0.01 ppm; Ext. ref. input
- Frequency Step: 125 kHz minimum; (1 kHz steps, option X1005)
- 10 MHz In/Out Level: 3 dBm ± 3 dB

Phase Noise @ Freq
- 100 Hz: -70 dBc/Hz
- 1kHz: -75 dBc/Hz
- 10kHz: -80 dBc/Hz
- 100kHz: -95 dBc/Hz
- 1 MHz: -110 dBc/Hz

Available Options
- W7 - RF/IF Monitor Ports (Front)
- W31 - Ext. Temp 0C to +50C
- X1005 - 1 kHz frequency step

Remote M&C Interfaces:
- Q - RS485/422
- W8 - Ethernet; w/Web Browser (WB)
- W18 - Ethernet; w/WB & SNMP
- W28 - Ethernet; w/TCP/IP, Telnet

Connectors/Impedance
- STD. - 50Ω Type N (RF), 75Ω BNC (IF)
- M - 50Ω Type N (RF), 50Ω BNC (IF)
- S - 50Ω SMA (RF), 50Ω BNC (IF)
- S7 - 50Ω SMA (RF), 75Ω BNC (IF)

Contact Cross for other options

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