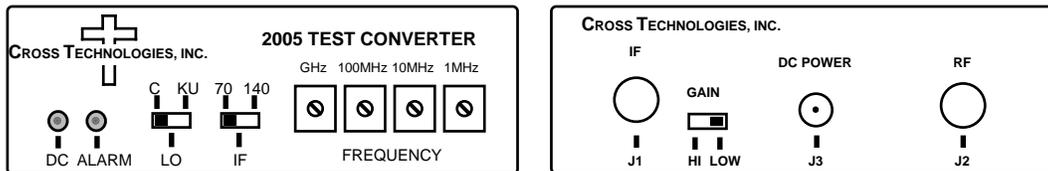


2005-10P Upconverter

The 2005-10P Upconverter converts a 70 MHz or 140 MHz IF signal to 2000 to 2500 MHz in 1 MHz steps with selection of high side LO (C = inverted) or low side LO (Ku = non-inverted) and 70 or 140 MHz input over the 2.0 - 2.5 GHz range for loop-back applications.

Featuring low phase noise, these units are used to loop 70 or 140 MHz modulators to 2.0 - 2.5 GHz receivers for test purposes. The 70 or 140 MHz carrier input is mixed with a synthesized local oscillator (LO) signal. The output frequency is selected with four BCD switches which control the synthesized LO. Front panel LEDs light when DC power is applied (green) and when a PLL alarm occurs (red). The mixer output is applied to the output attenuator providing a nominal gain of -10 dB (high gain) or -30 dB (low gain). Connectors are 50Ω BNC (female) for the IF input and for the RF output (other connector options are available). Standard Power (P), 120 ±10% VAC, 60 Hz, 10W max. wall mount power supply. The 2005 can be mounted on a 1 3/4" X 19" rack mount panel (**option -R**).



Front and Rear Panel

EQUIPMENT SPECIFICATIONS*

Input Characteristics

Impedance	50Ω
Return Loss	15 dB
Frequency	70 or 140 MHz center, ± 20 MHz
Level	-10 to -25 dBm (LOW GAIN) -25 to -40 dBm (HI GAIN)
1dB compression	0 dBm (LOW GAIN) -15 dBm (HI GAIN)

Output Characteristics

Impedance	50Ω
Return Loss	12 dB
Frequency Range	2.0 to 2.5 GHz

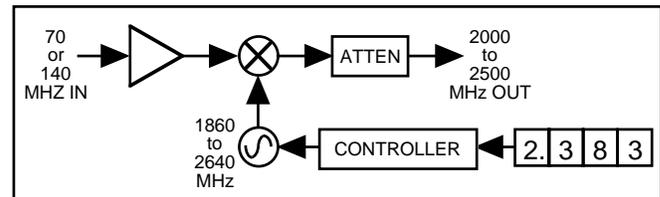
Channel Characteristics

Gain	-30 dB ± 3 dB (LOW GAIN) -10 dB ± 3 dB (HI GAIN)
Spurious Response	< -40dBC max, < -45dBC typ; OUTPUT NOT FILTERED
Frequency Response	± 2 dB, 2.0 - 2.5 GHz; ± 0.5 dB, any 10MHz increment

Synthesizer Characteristics

Frequency Accuracy	± 25 kHz max
Frequency Step	1.0 MHz minimum

Phase Noise @ F (Hz) >	100	1K	10K	100K	1M
dBC/Hz	-70	-70	-80	-90	-100



Block Diagram

Indicators

DC Power	Green LED
PLL Alarm	Red LED

Other

RF, IF Connectors	BNC (female)
Size, Bench Top	4.7" wide X 1.75" high X 6.5" deep
Size, Rack Mount	19 inch standard chassis 1.75"high X 7.0" deep (option -R)
Power, Standard (P)	120 ± 10% VAC, 60 Hz, 10W max. wall mount power supply, +15VDC unregulated, 600 ma.
Power Supply Options:	
(Option P4):	100-240 ±10% VAC, 47-63 Hz wall mount power supply, +15VDC unregulated, 600 ma.
(Option C):	No power supply - Requires external 2000-01 power supply.

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