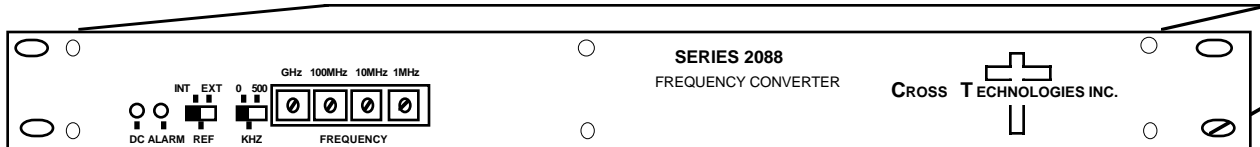


2088-22 Upconverter, 2.2 to 2.4 GHz

The 2088-22 Upconverter converts a 70 MHz IF signal to 2.2 to 2.4 GHz with no spectrum inversion, low group delay, and flat frequency response. The 70 MHz IF input is mixed with synthesized local oscillator (LO) signals, first to 600 MHz and finally to 2.2 to 2.4 GHz. The frequency is selected using front panel BCD switches and a toggle switch, and is selectable in 0.5 MHz increments. The reference oscillator can be switched between the 25 MHz internal or a 10 MHz external oscillator. Front panel LEDs light when DC power is applied (green) or when a PLL alarm occurs (red). Gain is adjustable over a 40 dB range when in MGC mode and is automatically adjusted when in AGC mode. Connectors are SMA female for IF input and for the RF output and BNC female for the external 10MHz input. The 2088-22 Upconverter is housed in an 1 3/4" X 19" X 14" deep rack mount chassis.



2088-22 UPCONVERTER

EQUIPMENT SPECIFICATIONS*

Input Characteristics

Input Impedance/RL 50 Ω /18 dB
 Frequency 2088-22 70 ± 10 MHz
 Input Level (AGC) -30 to -70 dBm
 Input Level (MGC) -30 to -50 dBm

Output Characteristics

Impedance/RL 50Ω/12 dB
 Frequency 2088-22 2.2 to 2.4 GHz
 Output 1 dB/3RD ORDER 0 / +10 dBm

Channel Characteristics

Gain 20 to 55 dB (automatically adjusts in AGC mode, manually adjustable in MGC mode)
 Spurious Response <-45 dBC in band ; <-45 dBC out of band (at -10 ± 5 dBm output)
 Frequency Response ± 0.5 dB, ± 10 MHz
 Group Delay, max ± 5 ns, ± 6 MHz; ± 15 ns, ± 10 MHz

Synthesizer Characteristics

Frequency Accuracy ± 25 kHz max over temp (with internal reference)
 Tuning steps 0.5 MHz
 Phase Noise(dBC/Hz) ≤ -80, 10kHz; ≤ -90, 100kHz; < -100, 1MHz

Controls

Frequency BCD Switches, adjustable with a small blade screwdriver
 Toggle switch selects 0 or 500 kHz
 Gain Control Toggle switch selects MGC or AGC mode
 Gain Potentiometer adjusts gain over a 40 dB range when in MGC mode
 Reference Toggle switch selects 25MHz internal or 10MHz external reference

Indicators

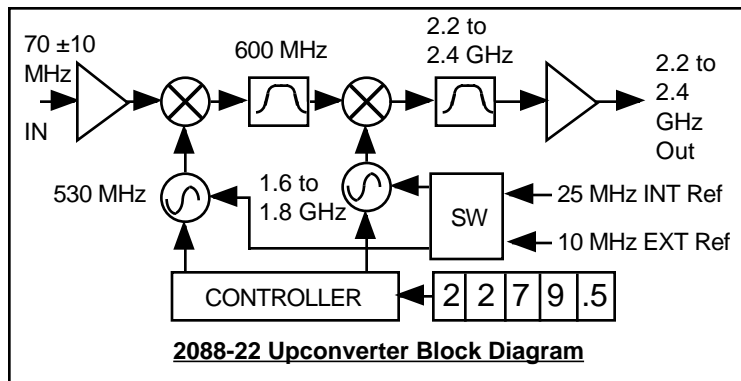
DC Power; PLL Alarm Green LED; Red LED

Other

IF, RF Connectors SMA, female
 Connector, Ext 10MHz BNC, female
 Connector, Alarm Terminal Strip
 Size 19 inch standard chassis 1.75"high X 14.0" deep
 Power 90 - 260 VAC, 47 - 63 Hz, 30 watts max.

Model Numbers

2088-22 70 MHz in, 2.2 to 2.4 GHz out
 Call for other frequencies



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