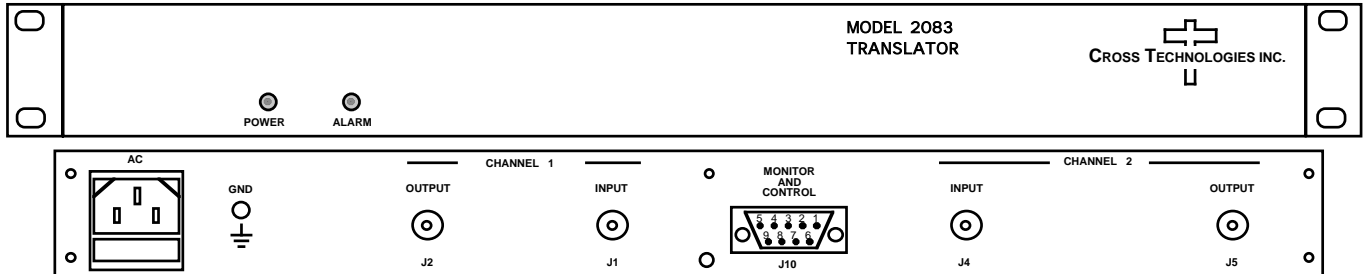


2083-2215 Dual Translator

2083-2215 Dual Translator - Consists of two converters (inverted spectrums) each of which convert a **1.725 - 2.175 GHz** signal to a **0.95-1.4 GHz (LO =3.125 GHz)**. The two 1.725 - 2.175 GHz inputs are bandpass filtered and then mixed with a 3.125 GHz synthesized local oscillator (LO) signal to 0.95-1.4 GHz. The mixer output is applied to the output filters and amplifier. The converters have a nominal gain of 0 dB. All connectors are 75 ohm BNC female. Front panel LEDs light when DC power is applied (green) and when a PLL alarm occurs (red). The 2083-2215 is powered by a 100-240 ± 10% VAC power supply and housed in a 1.75" X 19" X 16" 1RU chassis.



EQUIPMENT SPECIFICATIONS*

Input Characteristics

Input Impedance/RL 75 Ω /12 dB
 Frequency, 1.725-2.175 GHz
 Input Level -10 to -30 dBm
 Input 1 dB compression 0 dBm

Output Characteristics

Impedance/RL 75 Ω/12 dB
 Output 1 dB compression 0 dBm
 Output Level, Range -10 to -30 dBm
 Frequency 0.95-1.4 GHz

Channel Characteristics

Gain at band center 0 dB ±2 dB, fixed
 Frequency Response ±1.5 dB, 0.95-1.4 GHz out; ± 0.7 dB, any 36 MHz increment
 Frequency Sense Inverting (1.725 GHz Translates to 1.4 GHz, 2.175 GHz Translates to 0.95 GHz)
 Intermodulation <-50 dBC for two carriers each at -13 dBm out
 Spurious Response <-40 dBC, for 1.725-2.175 GHz input to 0.95 to 1.4 GHz out
 0.95-1.4 GHz Feedthru <-30 dBC, min, <-40 dBC, goal
 1.725-2.2 GHz Feedthru <-10 dBC, min, <-20 dBC, goal
 LO rejection <-40 dBm, LO at the output

Synthesizer Characteristics

LO frequency 3.125 GHz
 Frequency Accuracy ± 1.0 ppm max

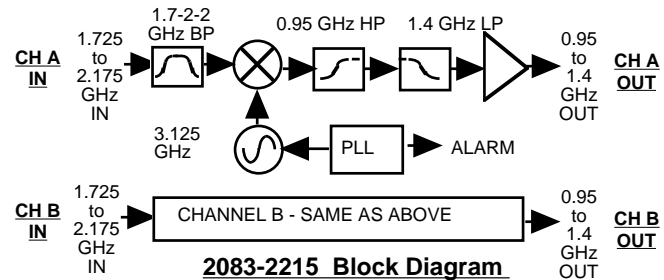
Phase Noise @ F (Hz) >	100	1K	10K	100K	1M
dBC/Hz	-70	-80	-80	-95	-110

Indicators

DC Power; PLL Alarm Green LED; Red LED

Other

Connectors RF in and RF Out, BNC, female, 75 ohm
 Connector, Alarm DB9 - NO or NC contact closure on Alarm
 Size 19 inch, 1RU standard chassis 1.75"H X 16.0"D
 Power 100-240 ± 10% VAC, 47-63 Hz, 15 watts max



2083-2215 Block Diagram

*+10 to +40 degrees C; 2000 meters max elevation; 80% max humidity; Specifications subject to change without notice