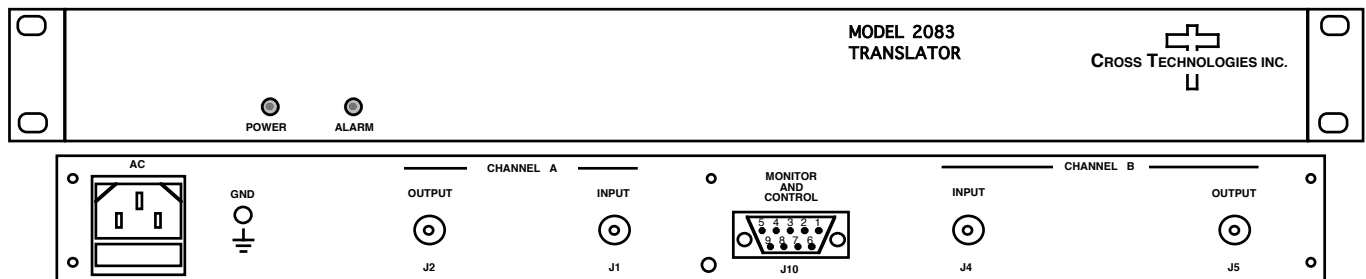


**2083-2114-01 Dual Translator, Non-inverting**

**2083-2114-01 Dual Translator** - Consists of two converters (non-inverted spectrums) each of which convert a **1.65 - 2.10 GHz** signal to a **0.95-1.4 GHz (LO =0.70 GHz)**. The two 1.65 - 2.10 GHz inputs are bandpass filtered and then mixed with a 0.70 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 2083-2114-01 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, 1.65-2.10 GHz  
 Input Level -20 to -40 dBm  
 Input 1 dB compression 0 dBm

**Output Characteristics**

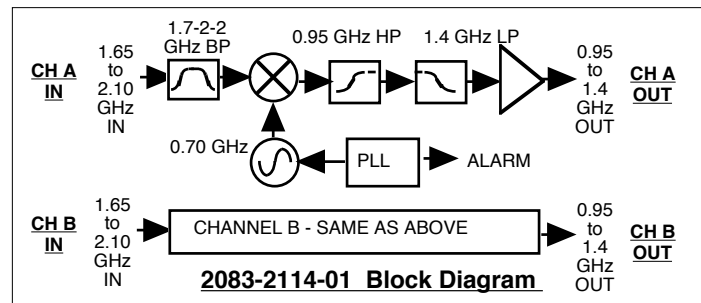
Impedance/RL 75 Ω /12 dB  
 Output 1 dB compression 0 dBm  
 Output Level, Range -20 to -40 dBm  
 Frequency 0.95-1.4 GHz

**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 **Non-inverting (1.65 GHz Translates to 0.95 GHz, 2.10 GHz Translates to 1.40 GHz)**  
 Intermodulation <-50 dBC for two carriers each at **-23 dBm out**  
 Spurious Response <-25 dBC for 4XLO - Fin; <-12 dBC for 5XLO - Fin; <- 40 dBC typ. for other spurs, in band, (for 1.65-2.10 GHz input to 0.95 to 1.4 GHz out)  
 0.95-1.4 GHz Feedthru <-30 dBC, min, <-40 dBC, goal  
 1.65-2.2 GHz Feedthru <-10 dBC, min, <-20 dBC, goal  
 LO rejection <-40 dBm, LO, 2XLO (1.40 GHz) at the output

**Synthesizer Characteristics**

LO frequency 0.70 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

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