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 output)
- 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 (Hz): 100, 1K, 10K, 100K, 1M
- dBc/Hz: -10, -20, -30, -40, -50, -60

#### 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.