2083-1272 Dual Translator, 1200 ± 150 MHz to 720 ± 150 MHz

2083-1272 Dual Translator - Consists of two converters (inverted spectrums) each of which convert a 1200 ± 150 MHz signal to a 720 ± 150 MHz (LO = 1.920 GHz). The two 1200 ± 150 MHz inputs are filtered and then mixed with a 1.920 GHz synthesized local oscillator (LO) signal to 720 ± 150 MHz. The mixer output is applied to the output filters and amplifier. The converters have a nominal gain of 0±2 dB. All connectors are 75 ohm BNC female. Front panel LEDs light when DC power is applied (green), a PLL alarm occurs (red), the unit detects presence of EXT Input (yellow). The 2083-1272 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: 1200 ± 150 MHz
- Input Level: -10 to -50 dB
- 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 -50 dBm
- Frequency: 720 ± 150 MHz

**Channel Characteristics**
- Gain at band center: 0 dB ±2 dB, fixed
- Frequency Response: ±1.5 dB, 720 ± 150 MHz out; ±0.7 dB, any 36 MHz increment
- Frequency Sense: Inverting (1.05 GHz Translates to .87 GHz, 1.35 GHz Translates to 0.57 GHz)
- Intermodulation: <-50 dBC for two carriers each at -13 dBm out
- Spurious Response: <-35 dBC, for 1200 ± 150 MHz input to 720 ± 150 MHz out
- 1.05-1.35 GHz Feedthru: <-10 dBm, min, <-20 dBm, goal
- LO rejection: <-40 dBm, LO at the output

**Synthesizer Characteristics**
- LO frequency: 1.920 GHz
- Frequency Accuracy: ± 1.0 ppm max

**Phase Noise @ F (Hz) > dBc/Hz**

<table>
<thead>
<tr>
<th>dBc/Hz</th>
<th>100</th>
<th>1K</th>
<th>10K</th>
<th>100K</th>
<th>1M</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>-70</td>
<td>-80</td>
<td>-85</td>
<td>-95</td>
<td>-110</td>
</tr>
</tbody>
</table>

**Indicators**
- Power; PLL Alarm; Ext. Ref. Green LED; Red LED; Yellow LED

**Available Options**
- E - External 10 MHz ref in & out
- H - High Stability (±0.01ppm) Internal Ref

**Connectors/Impedance (In & Out)**
- Standard. - 75Ω BNC
- D - 50Ω BNC
- SS- 50Ω SMA

**Contact Cross for other options**

**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.*