2083-1919-02 Translator, 0.95 to 1.95 GHz, ±250 MHz, Spectrum Inverter

**2083-1919-02 Block Translator** - The 2083-1919-02 Block Translator works from 0.95 to 1.95 GHz and has three operating modes:

1. **Tracking** - Provides a ±250 MHz block inverted spectrum with Fin = Fout.
2. **Independent** - Provides a ±250 MHz block inverted spectrum with Fin and Fout tuned independently.
3. **Bypass** - Provides a non-inverted pass through of the entire 0.95 to 1.95 GHz band with gain control.

The 0.95-1.95 GHz input is mixed, first to a ±250 MHz block at F1 center frequency with a low side LO (F1 - Fin), and then to a ±250 MHz block with a high side LO (F1 + Fin) which provides spectrum inversion. The Tracking and Independent modes function as shown above. In **Bypass** mode the entire 0.95 to 1.95 GHz band is just amplified. The gain range is 0 to +30 dB in 0.5 ±0.5 dB steps. Tuning of Fin and Fout is in 1 MHz steps from 1.2 - 1.7 GHz. Multifunction switches select the Gain, Fin and Fout frequencies and internal or External 10 MHz reference which appear on the LCD display and can be adjusted remotely. Front panel LEDs provide indication of DC power (green), PLL alarm (red), and remote operation (yellow). Connectors are Type F female for RF input and output. The unit is powered by a 100-240 ±10% VAC, 47-63 Hz input power supply and housed in a 1 3/4" X 19" X 16" rack mount chassis.

### Equipment Specifications

**Input Characteristics**
- Impedance/RL: 75Ω/12 dB
- Frequency: 950 - 1950 MHz
- Composite Level: -50 to -30 dBm
- Max No. Damage: +10 dBm

**Output Characteristics**
- Impedance/RL: 75Ω/12 dB
- Frequency: FC = 1.2 - 1.7 GHz, ±250 MHz
- Composite Level: -40 to -20 dBm
- Output 1 dB Compression: -10 dBm, at max gain

**Channel Characteristics**
- Gain: 0 to +30 dB, ± 2 dB, selectable in 0.5 ±0.5 dB steps, at Fc
- Frequency Response: ± 2.0 dB, ± 0.25 GHz bandwidth; ± 0.5 dB, any 40 MHz increment
- Spurious, In-band: < -50 dBc in band, signal dependent and signal independent; See NOTE 1
- Spurious, Out-of-band: < -30 dBc, 0.5- 0.94 GHz and 1.96-2.5 GHz; See NOTE 1
- Frequency Sense: Inverting

**Synthesizer Characteristics**
- Resolution: Accuracy ±0.01 ppm
- Reference: 10 MHz Internal; Internal/External selection
- Frequency Step: 1 MHz; Fout = Fcenter frequency adjustment, 1.2-1.7 GHz

**Controls, Indicators**
- Frequency Translation: Direct readout LCD; manual or remote selection
- Frequency Gain: Direct readout LCD; manual or remote selection
- Power: Green LED; Red LED; Yellow LED
- Remote: RS232C, 9600 baud; RS485, Ethernet Optional
- Other: RF In/RF Out Connector: Type F (female)
- Alarm/Remote Connector: DB9 (female) - NO or NC contact closure on Alarm
- Size: 19 inch standard chassis 1.75" High x 16.0" Deep
- Power: 100-240 (±10%) VAC, 47-63 Hz, 30 watts max.

**Available Options**
- Comm. Interface/Standard RS232
  - Q: RS485 Remote Interface
  - W8: Ethernet; w/Web Browser (WB)
  - W18: Ethernet; w/WB & SNMP
  - W28: Ethernet; w/TCP/IP, Telnet
- Connectors/Impedance
  - B: 75Ω BNC (RF IN), 75Ω BNC (RF OUT)
  - D: 50Ω BNC (RF IN), 50Ω BNC (RF OUT)
  - NN: 50Ω N (RF IN), 50Ω N (RF OUT)

Contact Cross for other options.

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