2083-21-1422 Block Translator, 1375-1395 or 1540-1560 to 2220-2240 MHz

**2083-21-1422 Block Translator** - The 2083-21-1422 Block Translator converts either a 1375-1395 MHz or a 1540-1560 MHz block to 2220-2240 MHz block with no spectrum inversion. The 1375-1395 or 1540-1560 MHz input is mixed with local oscillator (LO) signals, first to a 1750 MHz center frequency and finally to the 2220-2240 MHz block output. The gain can be set for 0 to +20 dB in 1 dB increments. The input 1385 and 1550 MHz translation center frequencies can be adjusted by ± 10 MHz in 1 MHz (10 Hz, Option -X10) increments. The output center frequency is fixed at 2230 MHz. Multifunction switches select the Gain, the translation frequency and internal or External 10 MHz reference (Option E) 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 BNC female for RF input and output. It is powered by a 100-240 ±10% VAC, 47-63 Hz input power supply and in a 1 3/4” X 19” X 16” 1RU chassis.

**EQUIPMENT SPECIFICATIONS**

**Input Characteristics**
- Input Impedance/RL: 50Ω /12 dB
- Frequency (20MHz BW):
  - Band 1: Fc=1375 - 1395 MHz
  - Band 2: Fc=1540 - 1560 MHz
- Input Composite Level: -70 to -50 dBm
- Input, max. no damage: +15 dBm

**Output Characteristics**
- Impedance/RL: 50Ω/12 dB
- Frequency: 2220 - 2240 MHz, Bands 1 and 2
- Output Composite Level: -50 to -30 dBm
- Output 1 dB compression: -20 dBm, at max gain

**Channel Characteristics**
- Gain: 0 to +20 dB, ± 1 dB, selectable in ±1 dB steps
- Frequency Response: ± 1.0 dB, 20 MHz bandwidth; ± 0.5 dB, any 5 MHz increment
- Spurious, Inband: < -50 dBc in band, signal dependent and signal independent; See NOTE 1
- Spurious, out of band: < -30 dBc, 1.6- 2.2 GHz and 2.3-3.0 GHz and Input feed through rejection; See NOTE 1
- Group Delay, max.: 0.03 ns/MHz², parabolic, 0.1ns/MHz, linear, 1 ns ripple, 20 MHz BW
- Frequency Sense: Non-inverting

**Synthesizer Characteristics**
- Translation Accuracy: ±1 ppm; Option -H, ±0.01 ppm
- Reference: 10 MHz Internal; Option -E, Internal/ External selection
- Frequency Step: 1 MHz; ± 10 MHz Translation adjustment: Option -X10, 10 Hz translation step adjustment

**Available Options**
- E - External 10 MHz Input & Output
- H - High Stability (±0.01 ppm) Internal Ref
- X10 - 10 Hz Tuning
- 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

**Contact Cross for other options**