The 2083-1320 Block Translator converts a 1350-1560 MHz block to 2050-2260 MHz block with no spectrum inversion, low group delay and flat frequency response. The 1350-1560 MHz input is mixed with synthesized local oscillator (LO) signals, first to 3100 MHz center frequency and finally to the 2050-2260 MHz block output. The gain can be set for 0 to +20 dB in 1 dB increments. The output translation can be adjusted by ± 10 MHz in 1 MHz (10 Hz, Option -X10) increments. Multifunction switches select the Gain, the translation frequency 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 BNC 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**
- Input Impedance/RL: 50Ω/12 dB
- Frequency: 1350 - 1560 MHz
- Input Composite Level: -70 to -50 dBm
- Input, max. no damage: +15 dBm

**Output Characteristics**
- Impedance/RL: 50Ω/12 dB
- Frequency: 2050 - 2260 MHz
- 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
- 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 1.54-1.56 GHz feed through rejection; See NOTE 1
- Group Delay, Max.: 0.03 ns/MHz², parabolic, 0.1 ns/MHz, linear, 1 ns ripple, 20 MHz BW
- Frequency Sense: Non-inverting

**Synthesizer Characteristics**
- Translation; Accuracy: 700 MHz; 1ppm; 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

**Controls, Indicators**
- Frequency Translation: Direct readout LCD; manual or remote selection
- Gain (MGC): Direct readout LCD; manual or remote selection
- Ext. ref. (Option -E): Direct readout LCD; manual or remote selection
- Power: Green LED; Red LED; Yellow LED
- Remote: RS232C, 9600 baud; RS485, Ethernet Options
- RF In/RF Out Connector: BNC (female)
- Alarm/Remote Controller: 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**
- 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

**Connectors/Impedance**
- RF In/RF Out Connector: BNC (female)
- Alarm/Remote Connector: DB9 (female) - NO or NC contact closure on Alarm

**Notes**
- dBc is relative to the COMPOSITE Output Level
- +10 to +40 degrees C; Specifications subject to change without notice