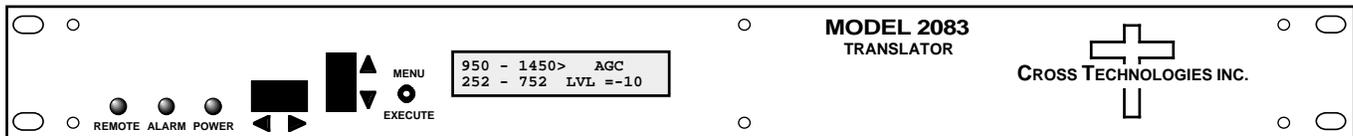


2083-158 Block Translator, 950-1450 to 250-750 MHz

2083-158 Block Translator - The 2083-158 Block Translator converts a 950-1450 MHz block (out of a 250-2150 MHz composite spectrum) to 250-750 MHz block with no spectrum inversion, low group delay and flat frequency response. The 950-1450 MHz input is filtered and translated to the 250-750 MHz block output using dual conversion. The 250-750 MHz block output is **AGC'd to a composite output level that can be set for 0 to -10 dBm (AGC to ± 2 dB of setting) in 1 dB increments. The output translation can be adjusted by ± 10 MHz in 1 MHz increments. In Manual Gain, the gain can be set for +15 to +45 dB, ± 2 dB. Multifunction switches select the AGC'd output level, MGC Gain and the translation frequency 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.



2083-158 Block Translator

EQUIPMENT SPECIFICATIONS*

Input Characteristics

Input Impedance/RL 75Ω /12 dB
 Frequency 950 - 1450 MHz
 Input **Composite** Level -25 to **-45 dBm**
 Input, max. no damage +15 dBm

Output Characteristics

Impedance/RL 75Ω/12 dB
 Frequency 250 - 750 MHz
AGC'd Comp. Level 0 to -10 dBm
 Output 1 dB compression +10 dBm

Channel Characteristics

AGC Set; MGC Gain 0 to -10 dBm, ± 1 dB, selectable in 1 dB steps; MGC Gain = +15 to +45 dB, ± 2 dB
AGC Response 5 ± 2 seconds for 10 dB input level change
 Frequency Response ± 2.0 dB, 500 MHz bandwidth; ± 0.5 dB, 36 MHz increment
 Spurious, Inband < -50 dBc in band, signal dependent; < -50 dBm signal independent; **See NOTE 1**
Spurious, 0.2- 2.2 GHz < -50 dBm; < -50 dBc, 0.25-2.2 GHz feed through rejection; See NOTE 1
 Group Delay, max. 0.015 ns/MHz², parabolic, 0.03ns/MHz, linear, 1 ns ripple, 36 MHz BW
 Frequency Sense Non-inverting

Synthesizer Characteristics

Frequency Accuracy ±0.01 ppm
 Reference 10 MHz Internal
 Frequency Step 1 MHz; ± 10 MHz Translation adjustment

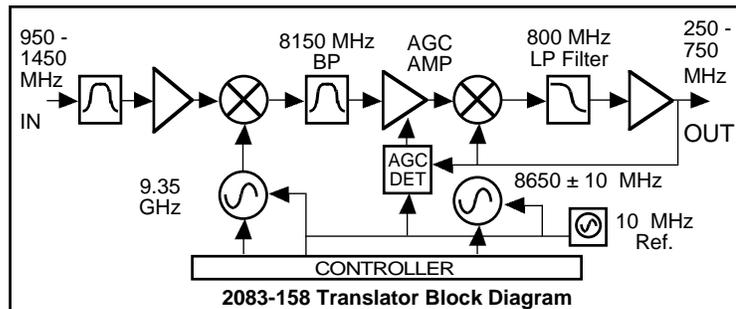
Phase Noise @ F (Hz) >	100	1K	10K	100K	1M
dBc/Hz	-70	-75	-85	-95	-105

Controls, Indicators

Frequency Translation Setting Shown on LCD Display
 Level (AGC), Gain (MGC) Direct readout LCD; manual or remote selection
 Power; Alarm; Remote Green LED; Red LED; Yellow LED
 Remote RS232C, 9600 baud

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.



NOTE 1: dBc is relative to the COMPOSITE Output Level

Available Options

- E** - External 10 MHz Reference input & output
- M&C Interface RS232 Std.**
- Q** - RS485 Remote Interface
- W8** - Ethernet M&C Web Browser Interface
- W18** - Ethernet M&C Web Browser Interface and SNMP

Connector/Impedance

- B** - 75Ω BNC (RF In), 75Ω BNC (RF Out)
- D** - 50Ω BNC (RF In), 50Ω BNC (RF Out)

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