

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

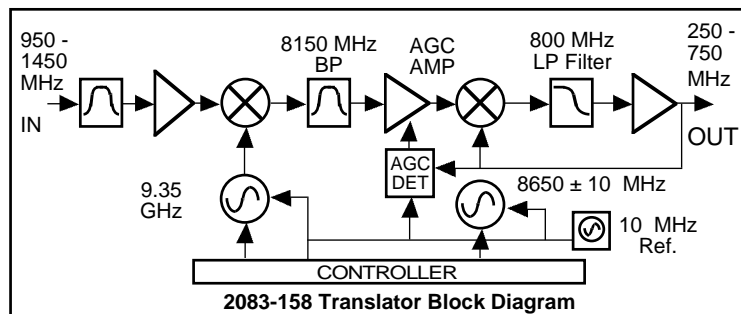
Phase Noise @ F (Hz) >	100	1K	10K	100K	1M
dBc/Hz	-70	-75	-85	-95	-105

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)

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