



2116-14T11 Block Translator, 14.0 - 14.5 GHz to 10.95 - 11.45 GHz

The 2116-14T11 Block Translator converts 14.0 - 14.5 GHz to 10.95 - 11.45 GHz with a local oscillator at 3.05 GHz. Front panel LEDs provide indication of DC Power, External 10 MHz, and PLL Alarm. The gain is -40 dB to Output #1 and -50 to Output #2. Connectors are SMA female for RF and BNC female for the external reference input and reference output. A three-way switch controls which 10 MHz reference is being used. In the INT position, the internal reference is used, in the EXT position, the external reference is used, and in the AUTO position, the internal reference is used unless a +3 dBm ± 3 dB, 10MHz reference signal is connected to the external reference input. The 2116 is powered by a 100-240 ±10% VAC power supply, and mounted in a 1 3/4" X 19" X 14" rack mount chassis.



Front Panel

EQUIPMENT SPECIFICATIONS*

Input Characteristics

Impedance / Return Loss 50Ω / 15 dB, typ., 14dB min.
 Frequency 14.0 to 14.5 GHz
 Input Level range -30 to 0 dBm
 Input 1 dB compression **+10 dBm**

Output Characteristics

Impedance/Return Loss 50Ω / 15 dB, typ., 14dB min.
 Frequency 10.95 to 11.45 GHz
 Output Level Range (#1) -70 to -40 dBm
 Output Level Range (#2) -80 to -50 dBm

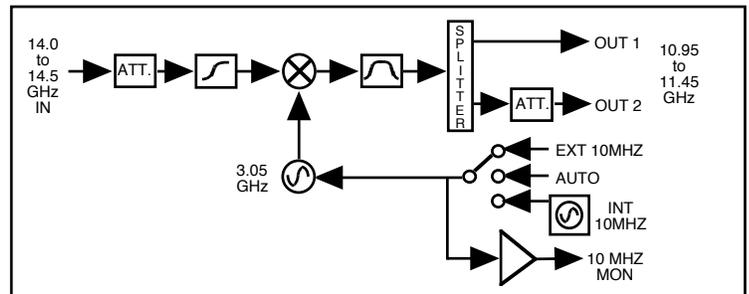
Channel Characteristics

Gain -30 dB ±2 dB (Output #1); -50 dB ±2 dB (Output #2)
 Input/Output Isolation 60 dB, min
 Intermodulation < -50 dBC for two carriers each at -13 dBm in
 Spurious < -40 dBC
 Frequency Response ±1.5 dB, over frequency band; ± 0.5 dB, 40 MHz BW
 Frequency Sense Non-inverting

LO Characteristics

LO Frequency 3.05 GHz
 Frequency Accuracy ± 0.01 ppm max over temp internal reference; ext. ref. input
 10 MHz In/Out Level +3 dBm ± 3 dB

Phase Noise @ F (Hz) >	100	1K	10K	100K	1M
dBC/Hz	-70	-80	-90	-100	-110



Block Diagram

Controls, Indicators

Power Green LED
 PLL Alarm Red LED, External contact closure
 Ext 10 MHz Yellow LED, indicates external 10 MHz reference selected (rear panel DPDT switch)
 10 MHz Reference 3-way Switch (selects INTERNAL, EXTERNAL, or AUTO mode)

Other

RF Connectors SMA (female), 50Ω
 10 MHz Connectors BNC (female), 50Ω/75Ω
 Alarm Connector DB9 - NO or NC contact closure on Alarm
 Size 19 inch standard chassis 1.75" high X 14" deep
 Power 100-240 ±10% VAC, 47 - 63 Hz, 45 watts max.

Available Options
 Connectors/Impedance
 NN - 50Ω N-type (RF)

*0°C to 50°C; Specifications subject to change without notice