2116-14T12 Block Translator, 14.0 - 14.5 GHz to 11.7 - 12.2 GHz

The 2116-14T12 Block Translator converts 14.0 - 14.5 GHz to 11.7 - 12.2 GHz with a local oscillator at 2.3 GHz. Front panel LEDs provide indication of external 10 MHz (yellow), PLL alarm (red), and DC power (green). The gain is -30 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 housed 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 11.7 to 12.2 GHz
Output Level Range (#1) -60 to -30 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 < -45 dBc
Frequency Response ±1.5 dB, over frequency band; ± 0.5 dB, 40 MHz BW
Frequency Sense Non-inverting

LO Characteristics
LO Frequency 2.3 GHz
Frequency Accuracy ± 0.01 ppm max over temp internal reference; ext. ref. input
10 MHz In/Out Level ±3 dBm ± 3 dB

<table>
<thead>
<tr>
<th>Phase Noise @ F (Hz)</th>
<th>100</th>
<th>1K</th>
<th>10K</th>
<th>100K</th>
<th>1M</th>
</tr>
</thead>
<tbody>
<tr>
<td>dBC/Hz</td>
<td>-70</td>
<td>-80</td>
<td>-90</td>
<td>-100</td>
<td>-110</td>
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</tbody>
</table>

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), 50Q
10 MHz Connectors BNC (female), 50Q/75Q
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.

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