



2115-202 Block Upconverter, 18.3 to 20.2 GHz

The 2115-202 Block Upconverter converts 250 - 750 MHz to 18.3 - 18.8 GHz and 1650 - 2150 MHz to 19.7 - 20.2 GHz with low phase noise and flat frequency response. Frequency translation is via a 18.05 GHz local oscillator. Front panel LEDs provide indication of DC power, external 10 MHz, and PLL alarm. Gain is 0 ±3 dB. Connectors are SMA female for the RF and BNC female for the IF and external reference input and reference output. The 2115 is powered by a 100-240 ±10% VAC power supply, and housed in a 1RU chassis.



Front Panel

EQUIPMENT SPECIFICATIONS*

Input Characteristics

Impedance/Return Loss 50Ω / 14 dB
 Frequency, Input 1 250 to 750 MHz
 Frequency, Input 2 1650 to 2150 MHz
 Noise Figure, Max. 20 dB max gain
 Input Lvl Range - comp -11 to -31 dBm
 Input Lvl Range/carrier -22 to -42 dBm
 Input 1 dB compression +4 dBm

Output Characteristics

Impedance/Return Loss 50Ω / 10 dB
 Frequency 18.3 to 20.2 GHz
 Output Lvl Range - comp -11 to -31 dBm
 Output Lvl Range/carrier -22 to -42 dBm
 Output 1 dB compression +4 dBm

Channel Characteristics

Gain 0 dB ±3 dB
 Image Rejection > 50 dB, min
 Spurious, Inband < -70 dBm
 Spurious, Out of band, LO < -60 dBm
 Intermodulation < -50 dBc for two carriers each at -14 dBm out
 Frequency Response ± 2 dB, 18.3-18.8 GHz and 19.7-20.2 GHz out; ± 1 dB, 40 MHz BW
 Frequency Sense Non-inverting

LO Characteristics

LO Frequency 18.05 GHz
 Frequency Accuracy ± 0.01 ppm max over temp internal reference; external reference input
 10 MHz In/Out Level 3 dBm ± 3 dB

Phase Noise @ Freq	100 Hz	1kHz	10kHz	100kHz	1 MHz
dBC/Hz	-55	-65	-80	-100	-115

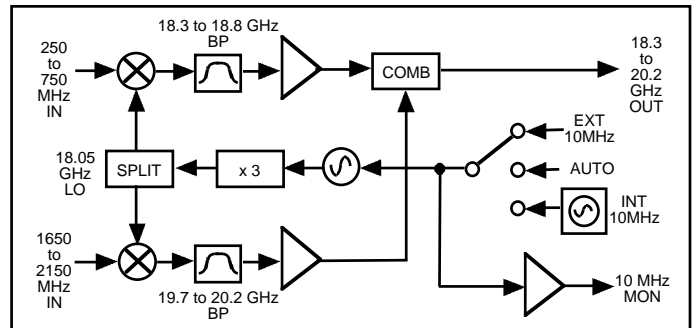
Controls, Indicators

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)

Other

RF Connector SMA (female), 50Ω
 L-Band Connector BNC (female), 50Ω (BNC, 75Ω; Type-F, 75Ω; Type-N, 50Ω optional)
 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 14.0" deep
 Power 100 - 240 ±10% VAC, 47 - 63 Hz, 45 watts max.

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



Block Diagram

