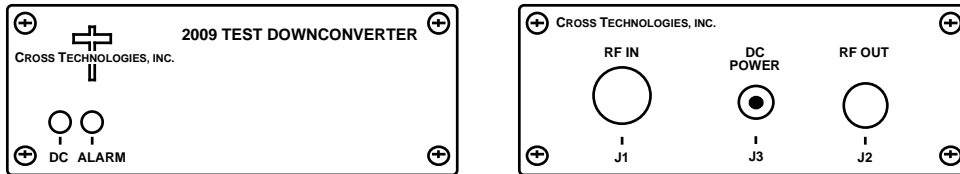


2009-140 Test Downconverter, 14.0 - 14.5 GHz

The 2009-140 Test Downconverter converts a 14.0 - 14.5 GHz signal to 950 - 1450 MHz with a low side local oscillator (LO) (non-inverted spectrum). Featuring low phase noise and high stability, this unit is used to downconvert "clean" (having only this frequency) 14.0 - 14.5 GHz signals to 950 - 1450 MHz for test purposes. The 14.0 - 14.5 GHz input is mixed with a synthesized local oscillator (LO) signal to 950 - 1450 MHz. The mixer output is applied to the output amplifier providing a nominal gain of -20 dB. Connectors are 75Ω type-F (female) for the 950 - 1450 MHz output and 50Ω type-N (female) for the RF input. Front panel LEDs light when DC power is applied (green) and when a PLL alarm occurs (red). DC power is provided by the LNB voltage from the receiver under test or by an external wall mount power supply (**option -P or -P4**). The 2009 can be mounted on an 1 3/4" X 19" rack mount panel (**option -R**). **Option -H** allows the 2009-140 to be operated over an extended -20°C to +60°C temperature range.



Front and Rear Panels

EQUIPMENT SPECIFICATIONS*

Input Characteristics

Impedance / Return Loss 50Ω / 12 db
 Frequency 14.0-14.5 GHz
 Level -15 to 0 dBm
 Input 1 dB compression +5 dBm

Output Characteristics

Impedance / Return Loss 75Ω / 12 db
 Frequency 950 to 1450 MHz
 Level -35 to -20 dBm

Channel Characteristics

Gain at band center -20 dB ±2 dB
 Spurious Response <-40 dBC, 950-1450 MHz out
 Spectrum Sense Non-inverting
 Frequency Response ± 2 dB, 950-1450 MHz; ± 0.5 dB, any 10 MHz increment

Synthesizer Characteristics

Frequency Accuracy ± 2.5ppm max
 Phase Noise @ Freq | 100Hz 1kHz 10kHz 100kHz 1MHz
 dBC/Hz | < -60 < -75 < -80 < -100 < -110

Indicators

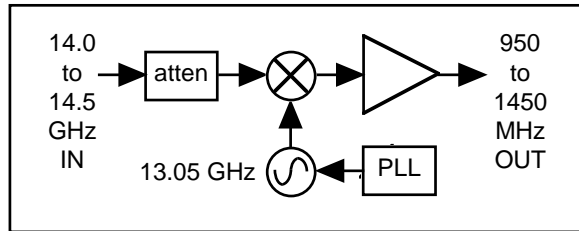
DC Power Green LED
 Alarm Red LED

Other

RF In Connector Type-N (female), 50Ω
 RF Out Connector Type-F (female)
 Size, Bench Top 4.7" wide X 1.75" high X 6.5" deep
 Size, Rack Mount (-R) 19 inch standard chassis 1.75"high X 7.0" deep (optional)
 Power +16 to +20 VDC, 250 ma on RF Out

Options

-H Operates over an extended -20°C to 60°C temp range
 -P 120 VAC Wall Power Supply
 -P4 100-240 ± 10% VAC Wall Power Supply
 -R 1RU Rack Mounting



Block Diagram

*+10°C to +40°C; 2000 meters max elevation; 80% max humidity; Specifications subject to change without notice