2009 X-band Downconverter

**2009-72P, -79P Downconverter** - These units convert an X-band signal to 950 - 1450 MHz with a low side local oscillator (LO) (non-inverted spectrum) for loop-back applications. Featuring low phase noise, these units are used to downconvert "clean" (having only this frequency) X-band signals to 950 - 1450 MHz for test purposes. The X-band 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 -10 dB. Connectors are 75 ohm BNC female for the 950 - 1450 MHz output and 50 ohm SMA, 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 an external wall mount power supply. The 2009 can be mounted on an 1 3/4" X 19" rack mount panel (option -R).

**2009-72P, -79P Downconverter Front & Rear Panels**

**EQUIPMENT SPECIFICATIONS**

**Input Characteristics**
- Input Impedance/RL: 50 Ω/10 db
- Frequency: 7.25-7.75 GHz (-72P); 7.95 - 8.45 GHz (-79P)
- Input Level: -10 to -20 dBm
- Input 1 dB: 0 dBm

**Output Characteristics**
- Impedance/RL: 75 Ω/10 db
- Frequency Band: 950 - 1450 MHz

**Channel Characteristics**
- Gain at band center: -10 dB ± 2 dB
- Spurious Response: <-40 dBC, 950-1450 MHz out
- Frequency Response: ±0.5 dB, any 10 MHz increment

**Synthesizer Characteristics**
- Frequency Accuracy: ± 10 ppm max
- Phase Noise @ F (Hz) > 10kHz: -80 dBc/Hz, 100kHz: -90 dBc/Hz, 1MHz: -100 dBc/Hz

**Indicators**
- DC Power; Alarm: Green LED; Red LED

**Other**
- RF In, RF Out Connectors: SMA, female, BNC, 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: 120 ± 10% VAC, 60 Hz, 15 watts max, wall mount Power Supply

**Models**
- 2009-72P: 7.25 - 7.75 GHz in, 950 - 1450 MHz Out, Wall Power Supply
- 2009-79P: 7.95 - 8.45 GHz in, 950 - 1450 MHz Out, Wall Power Supply

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