Low Noise Pre-Amplifier

310-010152-002

The 310-010152-002 Low Noise Pre-Amplifier and companion external low noise amplifier (LNA) are used to amplify low level microwave signals. The Pre-Amplifier contains an AC/DC power supply, internal low noise amplifier, and a bias tee to source a DC bias voltage on the RF input connector.

To overcome cable loss between the test antenna and the Pre-Amplifier assembly, a remote low noise amplifier (LNA) is mounted directly onto the 10 GHz antenna. A bias tee inside the Pre-Amplifier chassis powers the remote LNA through the coax cable interconnecting the pre-amplifier and the 10 GHz test antenna.

The 10 GHz signal is amplified, travels through the coax cable and then is applied to the Pre-Amplifier at the RF input connector.   Using this configuration, the Pre-Amplifier can be interfaced to the 10 GHz test antenna with cables having insertion loss as high as 20 dB without significantly degrading the overall system sensitivity.

310-010152-002 Pre-Amplifier	
Frequency Range	9.5—10.5 GHz
Gain	23—28 dB
	24 dB typical
Input and Output VSWR	2.5:1 max
Noise Figure	3.0 dB typical
	3.8 dB max
Output P1dB	+10 dBm
Bias Supply	11.4V at 200mA max
Bias Fuse	500mA (5x20mm, fast acting)
Operating Temperature	0 to + 40 degrees Centigrade
Operating Humidity	95% relative humidity, noncondensing
Power Supply	110/220 VAC (auto-adjusting), 48–63 Hz, 15 watts
Supply Fuse	1A (5x20mm, slo-blo, 250V)
Size	8.37" x 1.75" x 10.75" (Width x Height x Depth)
Weight	2.5 pounds nominal
RF Connectors	N-Type Female

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D I S T I N C T I V E   S O L U T I O N S

310-010091-001 Low Noise Amplifier

Frequency Range	9.5—10.5 GHz
Gain	24—29 dB
	26 dB typical
Input VSWR	2.2:1 max
Noise Figure	2.0 dB max
Output P1dB	+8 dBm
Supply Power	10.0 - 15.0V at 80mA, Powered through RF output connector
RF Connectors	SMA Female (jack)
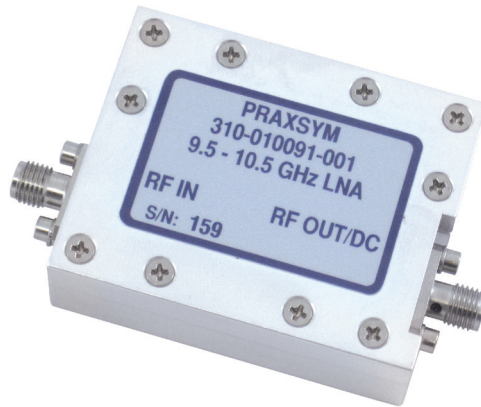
820-020005-001 Low Noise Amplifier

Frequency Range	9.5—10.5 GHz
Gain	25—30 dB
	27 dB typical
Input VSWR	2.2:1 max
Noise Figure	2.0 dB max
Output P1dB	+10 dBm
Supply Power	11.0 - 16.0V at 80mA, Powered through RF output connector
RF Connectors	N-Type Female

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