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75 Ohm Power Measurements

Using LadyBug Power Sensors

Dating back into the 1930's, much the RF industry has been built around a 50 ohm characteristic impedance. Most RF test equipment has been designed around this 50 ohm standard. Many industries however, such as CATV and the Television Satellite industry, are optimized around a 75 ohm standard.

To service the test requirements of these important industries, LadyBug recommends and sells a Minimum Loss Pad that attaches directly to its RF Power sensors and provides accurate power measurements with proper loading for 75 ohm systems. The pad provides service to 3GHz. Add Option MLP to your sensor order as indicated in the table below.

To use the pad with LadyBug's applications, simply select the Offsets & Response tab then check the Minimum Loss Pad (75 ohm) line. The power measurements are now adjusted and read correctly with the 75 ohm pad is installed. Check out the videos section of our site for additional information.

Recommended sensors

LB559A-ONM-MLP CW only sensor	10MHz -12.5 GHz
LB478A-ONM-MLP CW, Peak and Pulse sensor	10MHz - 8 GHz
LB479A-ONM-MLP CW, Peak & Pulse sens 80dB Dynamic Range	10MHz - 8 GHz
LB480A-ONM-MLP CW, Peak & Pulse and Pulse Profile sensor	50MHz - 8 GHz

Minimum loss pads are simple resistive devices that present 50 ohms on one side and 75 on the other. The 5.72 dB loss associated with these devices is calibrated out when the Minimum Loss Pad offset is selected in LadyBug's software. And because LadyBug sensors have a very good dynamic range, the loss in sensitivity is minor. The schematic diagram below is of a 75 ohm MLP.