



Features

Frequency Range: 1 to 6 GHz

Gain: 30 dB ± 2 dB

Noise Figure: + 5.7 dB max

P_{out} @ 1 dB Gain Compression: +13 dBm

Three Year Warranty



Description

The model PAM-6000 is a broadband, high gain, bench top microwave preamplifier. The PAM-6000 has a frequency range of 1 to 6 GHz. It is primarily intended for microwave EMI emission testing. However, it can be used for other application that require signal amplification.

The simple front panel consists of power switch, battery low indicator and two 50Ω N type input and output connectors. The preamplifier has minimal gain variation for the entire frequency range for convenience and to reduce EMI measurement errors. The PAM-6000 can be powered by the supplied 6 VDC, 500 mA adapter or the internal NiMH rechargeable batteries. When the batteries are fully charged the preamplifier can operate up to 8 hours.

Each preamplifier is individually calibrated using equipment traceable to NIST. The data and certificate of calibration is shipped with each preamplifier. Optional accredited calibration service is available upon request.

Application

The PAM-6000 preamplifier increases measurement system sensitivity to low amplitude signals from equipment under test during EMI emissions testing from 1 to 6 GHz. It is typically

During EMI emissions measurements the receiving antenna is typically placed at a distance of 1 to 10 meters from the equipment under test. Testing at these distances require the use of long cables to connect the antenna to the EMI receiver. Longer cable runs have higher signal losses in the microwave frequency range. In addition, a typical horn or log periodic antennas operating above 1 GHz can have antenna factors in the range of 25 to 35 dB/m from 1 to 6 GHz. The combination of higher cable loss and antenna factors reduces the ability of the receiver to display the signal above its floor noise. Therefore, a high gain preamplifier is an indispensable part of a microwave EMI emissions measurement system.

Because the PAM-6000 can also operate on battery power, it can be used in test locations where AC power is not available or not easily accessible.

Specifications

Frequency Range	1 to 6 GHz
Intended Application	EMC measurements
Gain	30 dB ± 2 dB
Noise Figure	5.7 dB max
P_{out} @ 1 dB compression	+13 dBm min
Max Input	+10 VDC, 2 dBm
VSWR Input / Output	2.1 : 1 / 1.8.1 (Average)
Connector Type	50Ω, N type (female)
Power Input	6 VDC, 500A
Battery Power	6 V, NimH
Dimensions	7.5 x 5 x 3 inches 9 x 13 x 7.6 cm
Weight	3.3 lbs. / 1.5 kg

Typical Gain

