



FG-100 Operating Instructions

Description

The FG-100 is a fixed gain amplifier. The gain may be customized to be from +6 dB to +14 dB. The standard unit has a gain of +10 dB and a 1 dB gain compression level of +15 dBm. These fixed gain blocks exhibit low 1/f noise as well as a low white noise floor. Typical single side-band phase noise performance is listed below for a carrier frequency of 5 MHz.

10 Hz	-160 dBc/Hz
1 kHz	-174 dBc/Hz
>10kHz	-175 dBc/Hz

Operation

Apply a well filtered +10 to +12 VDC, 100 mA power supply to the feed-through on the side of the gain block. The signal to be amplified should be connected to the SMA labeled "IN". The input and output of the amplifier are AC coupled.

Power Supply

The FG-100 is not protected against a negative polarity voltage on the power supply. Make sure to apply a positive polarity voltage only. For optimum noise performance, the supply voltage should have less than 5mV p-p ripple and be free from glitches. The DC supply should have a voltage between +10 and +12 VDC and be able to source 100 mA of current.

Absolute Maximum Ratings

Input power	+10dBm Maximum
Reverse Power	+20dBm Maximum
DC Supply Voltage	+13 VDC Maximum
Storage Temperature	-10 to +75 °C
Operation Environment	0 to +50 °C

Enclosure 0.85" X 1.5" X 2.0"

Warranty

The FG-100 is warranted to be free of defects under normal operating conditions, as specified, for one year from date of original shipment from SpectraDynamics, Inc (SDI). SDI's obligation and liability under this warranty is expressly limited to repairing or replacing, at SDI's option, any product not meeting the said specifications. This warranty shall be in effect for one (1) year from the date a FG-100 is sold by SDI. SDI makes no other warranty, express or implied, and makes no warranty of the fitness for any particular purpose. SDI's obligation under this warranty shall not include any transportation charges or costs of installation or any liability for direct, indirect, or consequential damages or delay. Any improper use, operation beyond capacity, substitution of parts not approved by SDI, or any alteration or repair by others in such manner as in SDI's reasonable judgement affects the product materially and adversely shall void this warranty. No employee or representative of SDI is authorized to change this warranty in any way or grant any other warranty.