Q5 SIGNAL 23cm 25W Linear Amplifier

A Down East Microwave Product Manufactured by Q5 SIGNAL, LLC

Part Number 2330PA____ SN_____

Frequency Range:	2330PA(S): 1270 - 1300 MHz 2330PATV(S): 1240 - 1270 MHz
Power Output :	25 Watts linear, +30W Saturated
Input Drive Level:	☐ 100 mw ☐ 1 watt ☐ 3 watt ☐ 10 watt
DC Power Requirement:	13.8 VDC @ 10A
Connectors:	Type N Female
Special Options:	

Description:

The **2330PA** and **2330PATV** are broadband linear power amplifiers optimized for their specified frequency range in the 23cm amateur band. Type "N" Female connectors are used on both RF Input and Output. There is a DC Power Connector and a supplied matching pre-wired DC Power Plug. The **2330PA(TV)** requires a well-regulated 13.8 VDC at 10A for full power output. Keying is accomplished by connecting the amplifier's RCA Phono Jack center-pin to ground.

Specification Review:

Part Number: The **2330PA(TV)** is designed for transmitting only. The **2330PA(TV)S** has RF- switching circuitry allowing a receive signal to pass through the amplifier for Transceiver operation.

Frequency Range: Each version is optimized for its frequency range within the 23cm Band.

Power Output: Power output is optimized for a minimum of 25 watts linear or +30 watts saturated. This power level is only achieved with the specified operating voltage of 13.8 VDC and at the maximum specified drive level selected at the time of ordering. The amplifier will operate out of the selected frequency range at reduced levels.

Input Drive level: The Input Drive Level is the power level that will produce the maximum linear output power. Saturated output power will be achieved 1 or 2 dB above that level. It should also be considered the maximum drive power level.

DC Power Requirement: This is the specified voltage that all RF power measurements are made. The DC current specification is the drain at maximum output power. The Amplifier will have an idle current of 3 - 6 Amps with no drive applied.

Connectors: Connectors are Type N. Other connector options may be available. Contact Q5 Signal with your special requirements.

Instructions for Setup and Use:

Connect the amplifier in your circuit or on your test bench to your transmitter and quality load or antenna within the 23cm band. The use of a RF Power meter to measure the amplifier's output is suggested during initial testing. Use quality RF cables specified for use at 1.3GHz or above on both RF ports of the amplifier. Connect the Red/Black zip cord to a regulated 13.8 VDC supply. We recommend making the zip cord as short as possible in the final installation.

Apply DC power. The cooling fan may start if the heat sink temperature is above 75°F. Activate PTT by grounding the center-pin of the RCA Phono Jack. If you have a current meter in your DC supply, it will show about 3 - 6 Amps of current drain. If possible, set the TX power of your transmitter to the lowest possible setting. Apply RF power to the amplifier. Verify an increase in current drain and RF Power output. Slowly increase the drive power until the specified drive power and output power is reached.

Caution: Do not exceed 3dB over the indicated RF drive level or 15 volts on the DC line. Test all external coaxial relays for VSWR and insertion loss before use. The amplifier may be mounted in any position but it is best to install the amplifier with the heat sink on top or with the fins vertical so the amplifier will convection-cool with the help of the fan. It is not recommended to keep the amplifier continuously keyed in any type of operation but transmitting of up to 15 minutes is acceptable. Use only the supplied DC power cord after installing your fuse of choice. Install protection diodes for reverse and over voltage protection.