



*****NEW*** DEM Part Number 33160PA ***NEW***
160 Watts, 902-928 MHz Linear Amplifier**

Specifications

Frequency range:	902 to 928 MHz
Power Out (linear):	160 Watts
Power Out (saturated):	>180 Watts (full scale on relative power meter)
Input for rated linear power out:	500 mW, other drive levels optional
Power requirements:	13.8 VDC @ 34 amps minimum
Connectors:	Type "N" female
Size:	10" L x 7.0" W x 4" H
Active devices:	4 - RA20H8994M
Options:	(1) Transceiver (2) Input attenuator (3) Mast Mount preamplifier power (4) PTT-H, PTT-L

The 33160PA is a broadband linear power amplifier covering the entire 33 CM amateur band. It has a linear power output of 160 Watts with 500 mW of drive (optional drive levels available) or a saturated output of over 180 Watts. The output power can be monitored on the built in relative power meter. Type "N" connectors are used on both input and output. The 33160PA requires well-regulated 13.8 VDC at 34 A for full power output. Keying is done by PTT-L (closure to ground) or a PTT-H (positive voltage that will sink or source approximately 2 mA. This design is not recommended for AM ATV use but may be used in any FM, SSB, or CW application. A transceiver option will be available with a built in attenuator option. This allows the DEM33160PA to be interfaced with the 10-watt transverters on the market today.



This amplifier design utilizes the combining of four Mitsubishi RA20H8994M MOSFET hybrid power modules. All regulated voltages and biasing that are required for proper operation are self-contained.

Options include an input attenuator for use with up to 20 watts of drive. A preamplifier DC supply circuit may also be installed for powering mast mount preamplifiers and will be switched by the units PTT circuit if used with a

transceiver. A larger heat sink repeater option will become available in the future. Other custom options may be installed such as a reflected power monitor. Please consult Down East Microwave Inc. with you requirements.



Caution: Do not exceed the specified drive level of 500 mW RF. (with out input attenuator option). Be sure to read your amplifiers data sheet for its drive level configuration. Do not exceed 15 volts on the DC line. When in operation, utilize over voltage protection and any voltage sensing circuits that the power supply in use may offer. With high current drain, voltage sag will inhibit the amplifier's output power performance and with lower quality power supplies, the voltage may soar beyond the amplifiers specified limits when un-keyed and damage the active components.

Use high quality coaxial cables on both RF connections. At 900 MHz., VSWR and insertion loss, become factors even in the shortest lengths of coax. Test all coaxial components at low levels before installing into the final system. Install the amplifier with the heat sink on top or with the fins vertical so the amplifier will convection-cool. The fans are installed to pull air through the heat sink fins in all modes of operation. When the 33160PA 's PTT is actuated, it will draw as much as 12 amps of idle current without RF drive. Therefore, it is recommended to key the amplifier in transmit mode only.

