

Overall Technical Description

Model Series MCA8030

This is a 40% duty amplifier operating in the 896 - 938 MHz frequency band with 30 Watts of output power and is intended for boosting output power from Mobile Transceiver .

The amplifier has been designed to work with an Input of 10-15 Watts of RF power from a 14 VDC source.

The Input and Output connectors are of "Type "TNC"" Female design. The input for the amplifier is obtained from the mobile transceiver while in transmit mode. This input power is amplified 3 to 5 db. There is not a variable power adjust circuit built into this amplifier. It relies upon the input power level to determine the output power level. In no case shall this amplifier produce more than 40 Watts of output power as the transistor is rated at 45 Watts in the designed operational band for this application. The output of the amplifier is directed through a suitable relay for the By-Pass requirement and then through a 9 Pole Low Pass Filter of Chebychev design.

Double shielded Teflon cables are used for all high power RF interconnections.

An RF sampling circuit is mounted on the Low Pass Filter and provides a DC voltage when the amplifier is operating. This voltage is used to activate a low power relay which activates the RF relay for transmit mode. The normal operation of this unit is in the passive state to allow reception from the antenna, through the MCA, via By Pass relays, to the transceiver.