



Model: AMP-900/20

NEW 900 MHz ANALOG/DIGITAL HIGH POWER AMPLIFIER



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is a 20-watt RF MOSFET Amplifier Module for 12.5-volt mobile radios that operate in the 896- to 941-MHz range. A special band pass filter for 902-928 MHz has been used with a great rejection of unwanted frequencies out of the band. The battery can be connected directly to the drain of the enhancement-mode MOSFET transistors. Without the gate voltage ($V_{GG}=0V$), only a small leakage current flows into the drain and the RF input signal attenuates up to 60 dB. The output power and drain current increase as the gate voltage increases. With a gate voltage around 4V (minimum), output power and drain current increases substantially. The nominal output power becomes available at 4.5V (typical) and 5V (maximum). At $V_{GG}=5V$, the typical gate current is 1 mA. This module is designed for non-linear FM modulation, but may also be used for linear modulation by setting the drain quiescent current with the gate voltage and controlling the output power with the input power.

FEATURES

- Enhancement-Mode MOSFET Transistors
($I_{DD} \approx 0$ @ $V_{DD}=12.5V$, $V_{GG}=0V$)
- $P_{out} > 20W$, $\tau > 25\%$ @ $V_{DD}=12.5V$, $V_{GG}=5V$, $P_{in}=50mW$
- Broadband Frequency Range: 896-941MHz
- Low-Power Control Current $I_{GG}=1mA$ (typ) at $V_{GG}=5V$
- Module Size: 66 x 21 x 9.88 mm
- Linear operation is possible by setting the quiescent drain current with the gate voltage and controlling the output power with the input power

TYPICAL PERFORMANCE ($T_{case} = +25^{\circ}C$, $Z_C = Z_L = 50\Omega$, unless otherwise specified)

