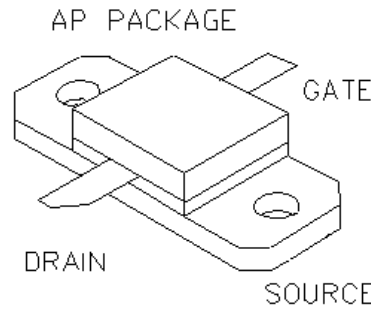




General Description

Silicon VDMOS and LDMOS transistors designed specifically for broadband RF applications. Suitable for Military Radios, Cellular and Paging Amplifier Base Stations, Broadcast FM/AM, MRI, Laser Driver and others.

"Polyfet"TM process features gold metal for greatly extended lifetime. Low output capacitance and high F_t enhance broadband performance



PATENTED GOLD METALIZED SILICON GATE ENHANCEMENT MODE RF POWER VDMOS TRANSISTOR

5 Watts Single Ended

Package Style AP

HIGH EFFICIENCY, LINEAR, HIGH GAIN, LOW NOISE

ABSOLUTE MAXIMUM RATINGS (TC = 25 °C)

| Total Device Dissipation | Junction to Case Thermal Resistance | Maximum Junction Temperature | Storage Temperature | DC Drain Current | Drain to Gate Voltage | Drain to Source Voltage | Gate to Source Voltage |
|--------------------------|-------------------------------------|------------------------------|---------------------|------------------|-----------------------|-------------------------|------------------------|
| 30 Watts | 6 °C/W | 200 °C | -65 °C to 150 °C | 1.6 A | 70 V | 70V | 30V |

RF CHARACTERISTICS (5WATTS OUTPUT)

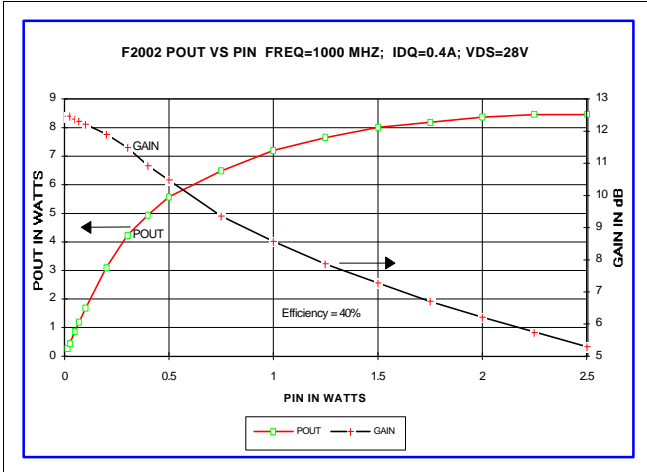
| SYMBOL | PARAMETER | MIN | TYP | MAX | UNITS | TEST CONDITIONS |
|--------|--------------------------|-----|-----|------|----------|----------------------------------------|
| Gps | Common Source Power Gain | 10 | | | dB | Idq = 0.4 A, Vds = 28.0V, F = 1000 MHz |
| η | Drain Efficiency | | 45 | | % | Idq = 0.4 A, Vds = 28.0V, F = 1000 MHz |
| VSWR | Load Mismatch Toleranc | | | 20:1 | Relative | Idq = 0.4 A, Vds = 28.0V, F = 1000 MHz |

ELECTRICAL CHARACTERISTICS (EACH SIDE)

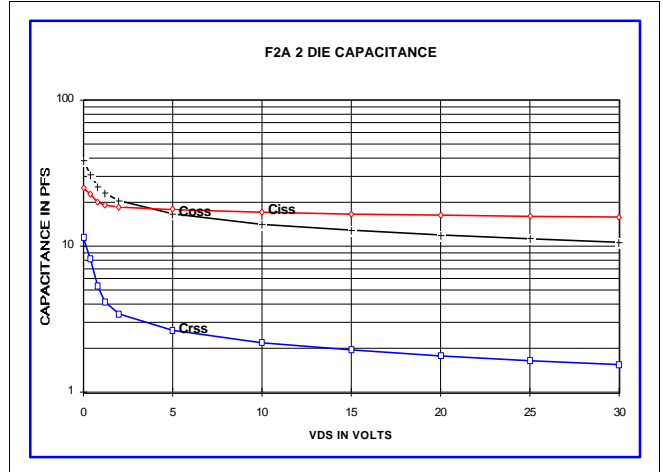
| SYMBOL | PARAMETER | MIN | TYP | MAX | UNITS | TEST CONDITIONS |
|--------|-----------------------------------|-----|-----|-----|-------|-----------------------------------|
| Bvdss | Drain Breakdown Voltag | 65 | | | V | Ids = 0.02 A, Vgs = 0V |
| Idss | Zero Bias Drain Curren | | | 0.4 | mA | Vds = 28.0 V, Vgs = 0V |
| Igss | Gate Leakage Curren | | | 1 | uA | Vds = 0 V, Vgs = 30V |
| Vgs | Gate Bias for Drain Curren | 1 | | 7 | V | Ids = 0.04 A, Vgs = Vds |
| gM | Forward Transconductanc | | 0.4 | | Mho | Vds = 10V, Vgs = 5V |
| Rdson | Saturation Resistanc | | 2.1 | | Ohm | Vgs = 20V, Ids = 2A |
| Idsat | Saturation Curren | | 2.4 | | Amp | Vgs = 20V, Vds = 10V |
| Ciss | Common Source Input Capacitanc | | 18 | | pF | Vds = 28.0 V, Vgs = 0V, F = 1 MHz |
| Crss | Common Source Feedback Capacitanc | | 2 | | pF | Vds = 28.0 V, Vgs = 0V, F = 1 MHz |
| Coss | Common Source Output Capacitanc | | 12 | | pF | Vds = 28.0 V, Vgs = 0V, F = 1 MHz |

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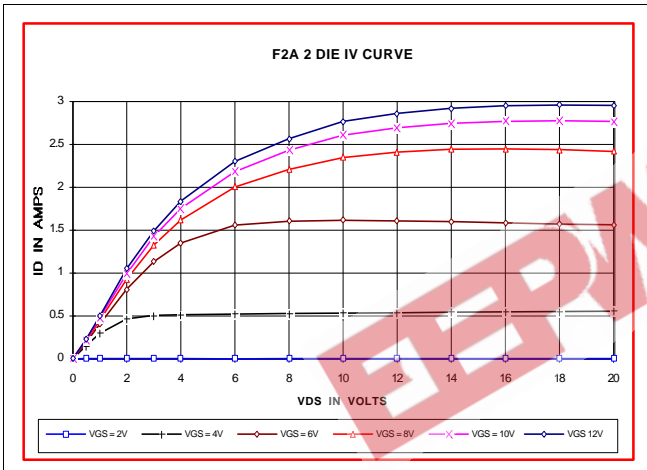
POUT VS PIN GRAPH



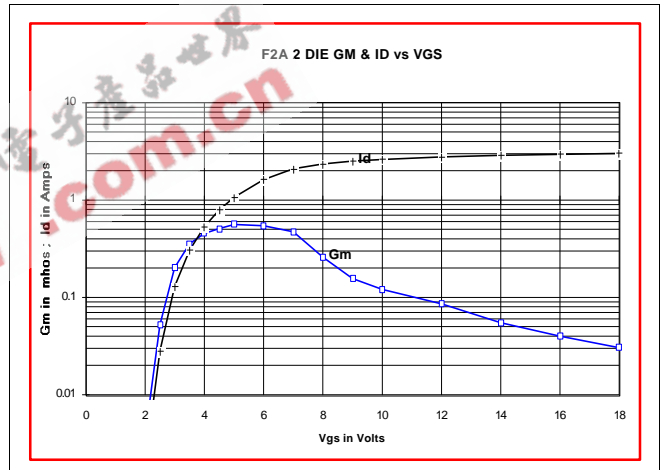
CAPACITANCE VS VOLTAGE



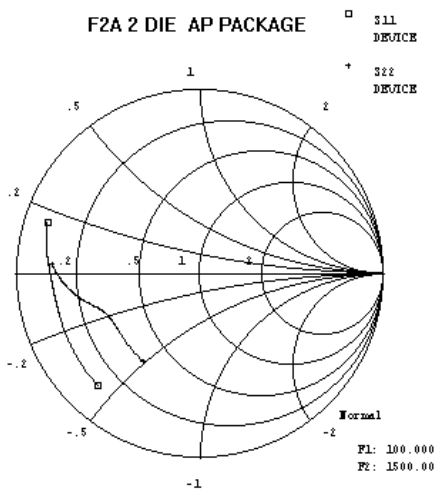
IV CURVE



ID AND GM VS VGS



S11 AND S22 SMITH CHART



PACKAGE DIMENSIONS IN INCHES

