

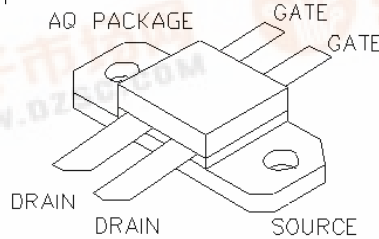


F2211

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

15Watts Push - Pull

Package Style AQ

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 | 3.2 A | 50 V | 50V | 30V |

RF CHARACTERISTICS (15WATTS OUTPUT)

| SYMBOL | PARAMETER | MIN | TYP | MAX | UNITS | TEST CONDITIONS |
|--------|--------------------------|-----|-----|------|----------|--|
| Gps | Common Source Power Gain | 10 | | | dB | $I_{dq} = 0.4 A, V_{ds} = 12.5 V, F = 400 MHz$ |
| η | Drain Efficiency | | 45 | | % | $I_{dq} = 0.4 A, V_{ds} = 12.5 V, F = 400 MHz$ |
| VSWR | Load Mismatch Toleranc | | | 20:1 | Relative | $I_{dq} = 0.4 A, V_{ds} = 12.5 V, F = 400 MHz$ |

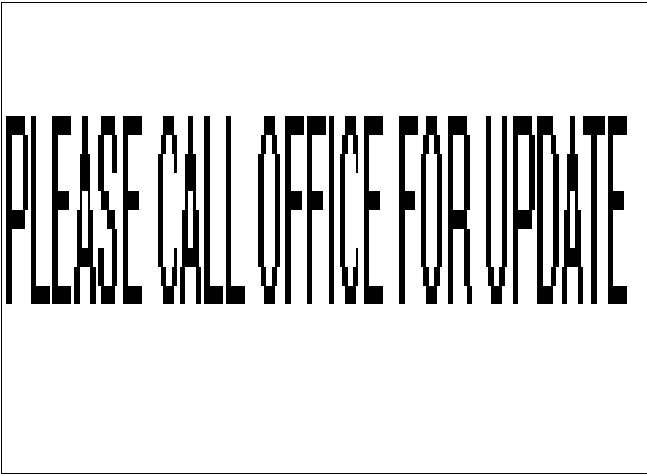
ELECTRICAL CHARACTERISTICS (EACH SIDE)

| SYMBOL | PARAMETER | MIN | TYP | MAX | UNITS | TEST CONDITIONS |
|------------|-----------------------------------|-----|-----|-----|-------|---|
| Bvdss | Drain Breakdown Voltag | 40 | | | V | $I_{ds} = 0.02 A, V_{gs} = 0V$ |
| I_{dss} | Zero Bias Drain Curren | | | 0.4 | mA | $V_{ds} = 12.5 V, V_{gs} = 0V$ |
| I_{gss} | Gate Leakage Curren | | | 1 | uA | $V_{ds} = 0 V, V_{gs} = 30V$ |
| Vgs | Gate Bias for Drain Curren | 1 | | 7 | V | $I_{ds} = 0.04 A, V_{gs} = V_{ds}$ |
| gM | Forward Transconductanc | | 0.4 | | Mho | $V_{ds} = 10V, V_{gs} = 5V$ |
| Rdson | Saturation Resistanc | | 1.2 | | Ohm | $V_{gs} = 20V, I_{ds} = 3.2A$ |
| I_{dsat} | Saturation Curren | | 4.6 | | Amp | $V_{gs} = 20V, V_{ds} = 10V$ |
| Ciss | Common Source Input Capacitanc | | 15 | | pF | $V_{ds} = 12.5 V, V_{gs} = 0V, F = 1 MHz$ |
| Crss | Common Source Feedback Capacitanc | | 2.4 | | pF | $V_{ds} = 12.5 V, V_{gs} = 0V, F = 1 MHz$ |
| Coss | Common Source Output Capacitanc | | 16 | | pF | $V_{ds} = 12.5 V, V_{gs} = 0V, F = 1 MHz$ |

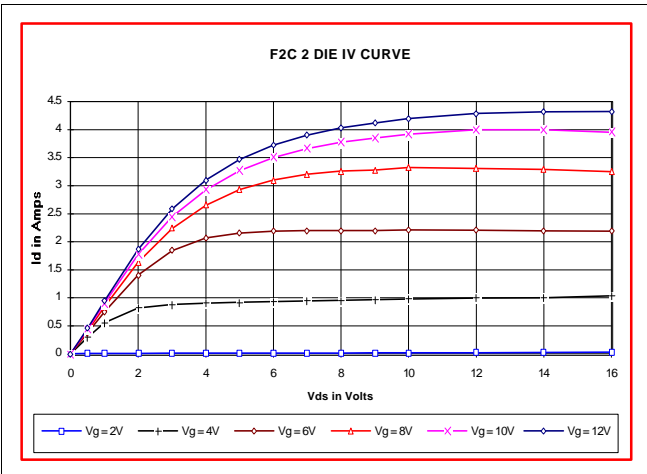


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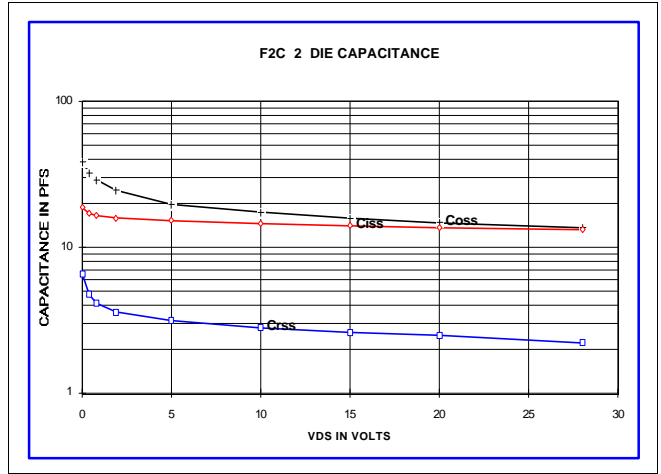
POUT VS PIN GRAPH



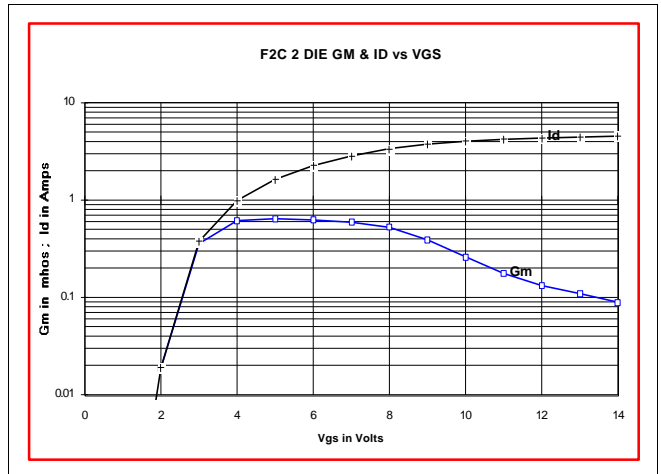
IV CURVE



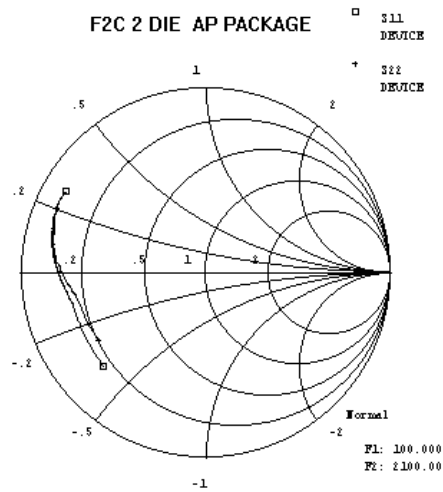
CAPACITANCE VS VOLTAGE



ID AND GM VS VGS



S11 AND S22 SMITH CHART



PACKAGE DIMENSIONS IN INCHES

