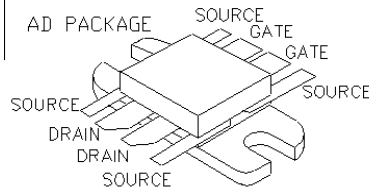




**General Description**

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"<sup>TM</sup> 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**

**20 Watts Push - Pull**

**Package Style AD**

**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
80 Watts	2.1 °C/W	200 °C	-65 °C to 150 °C	4 A	50 V	50V	30V

**RF CHARACTERISTICS ( 20WATTS OUTPUT )**

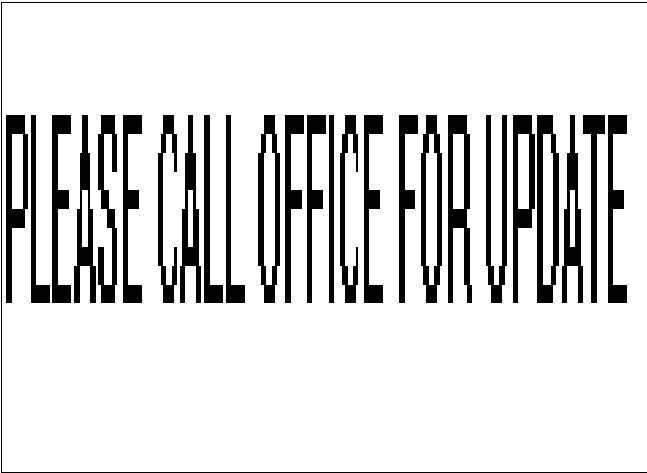
SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS	TEST CONDITIONS
Gps	Common Source Power Gain	10			dB	Idq = 0.8 A, Vds = 12.5V, F = 200 MHz
$\eta$	Drain Efficiency		60		%	Idq = 0.8 A, Vds = 12.5V, F = 200 MHz
VSWR	Load Mismatch Tolerance			20:1	Relative	Idq = 0.8 A, Vds = 12.5V, F = 200 MHz

**ELECTRICAL CHARACTERISTICS (EACH SIDE)**

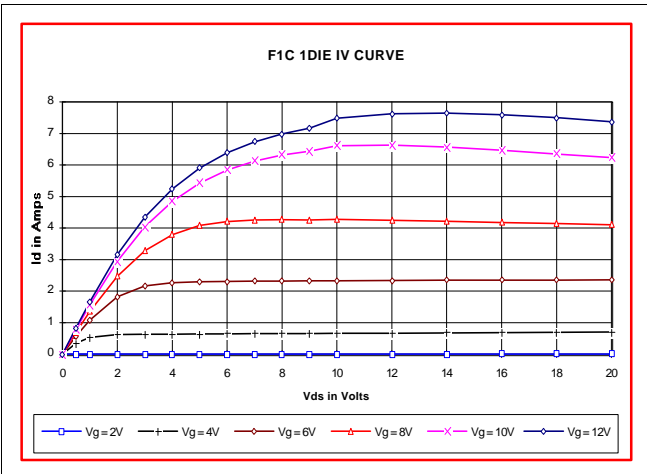
SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS	TEST CONDITIONS
Bvdss	Drain Breakdown Voltage	40			V	Ids = 0.05 A, Vgs = 0V
Idss	Zero Bias Drain Current			1	mA	Vds = 12.5 V, Vgs = 0V
Igss	Gate Leakage Current			1	uA	Vds = 0 V, Vgs = 30V
Vgs	Gate Bias for Drain Current	1		7	V	Ids = 0.1 A, Vgs = Vds
gM	Forward Transconductance		0.8		Mho	Vds = 10V, Vgs = 5V
Rdson	Saturation Resistance		0.7		Ohm	Vgs = 20V, Ids = 8A
Idsat	Saturation Current		7.5		Amp	Vgs = 20V, Vds = 10V
Ciss	Common Source Input Capacitance		40		pF	Vds = 12.5 V, Vgs = 0V, F = 1 MHz
Crss	Common Source Feedback Capacitance		6		pF	Vds = 12.5 V, Vgs = 0V, F = 1 MHz
Coss	Common Source Output Capacitance		30		pF	Vds = 12.5 V, Vgs = 0V, F = 1 MHz

# F1209

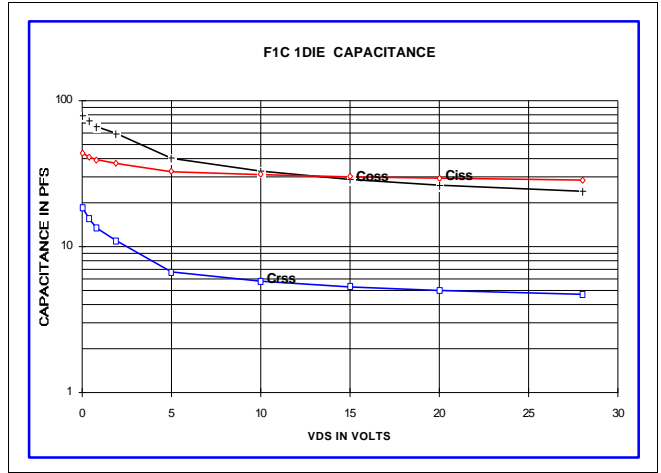
POUT VS PIN GRAPH



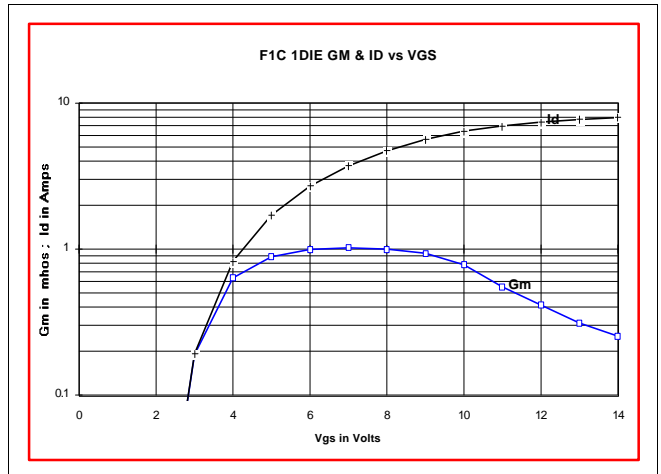
IV CURVE



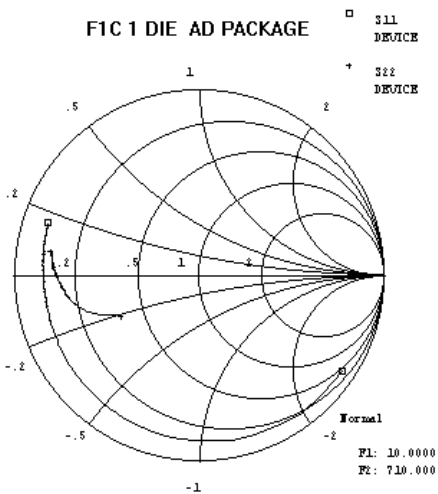
CAPACITANCE VS VOLTAGE



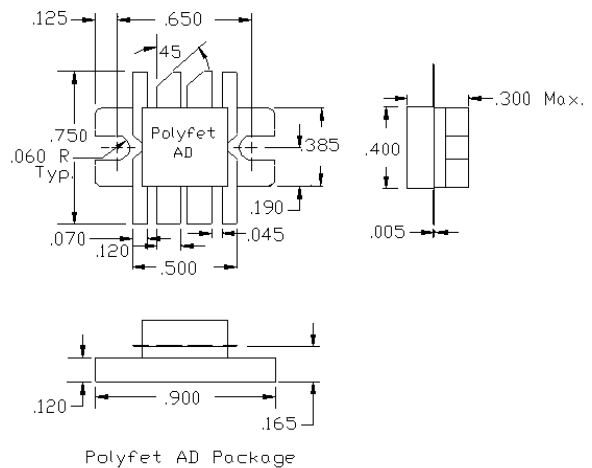
ID AND GM VS VGS



S11 AND S22 SMITH CHART



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