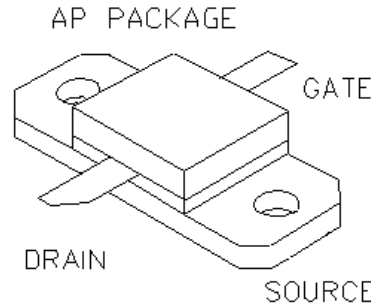




**General Description**

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**

**10Watts 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
50 Watts	3.5 °C/W	200 °C	-65 °C to 150 °C	2 A	50 V	50V	30V

**RF CHARACTERISTICS ( 10WATTS OUTPUT )**

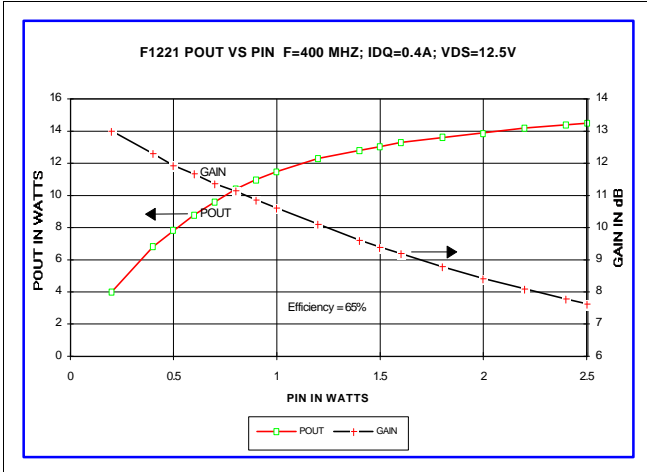
SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS	TEST CONDITIONS
Gps	Common Source Power Gain	10			dB	Idq = 0.4 A, Vds = 12.5V, F = 400 MHz
$\eta$	Drain Efficiency		60		%	Idq = 0.4 A, Vds = 12.5V, F = 400 MHz
VSWR	Load Mismatch Toleranc			20:1	Relative	Idq = 0.4 A, Vds = 12.5V, F = 400 MHz

**ELECTRICAL CHARACTERISTICS (EACH SIDE)**

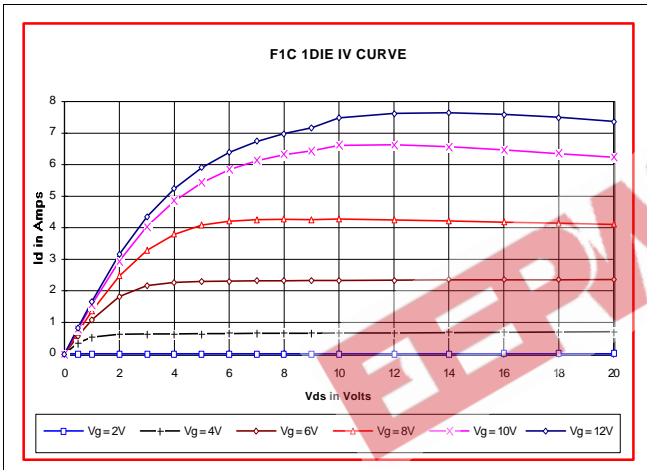
SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS	TEST CONDITIONS
Bvdss	Drain Breakdown Voltag	40			V	Ids = 0.05 A, Vgs = 0V
Idss	Zero Bias Drain Curren			1	mA	Vds = 12.5 V, Vgs = 0V
Igss	Gate Leakage Curren			1	uA	Vds = 0 V, Vgs = 30V
Vgs	Gate Bias for Drain Curren	1		7	V	Ids = 0.1 A, Vgs = Vds
gM	Forward Transconductanc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

# F1221

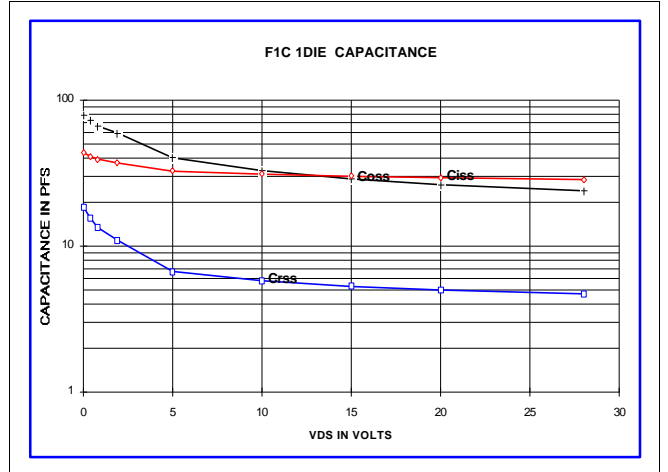
POUT VS PIN GRAPH



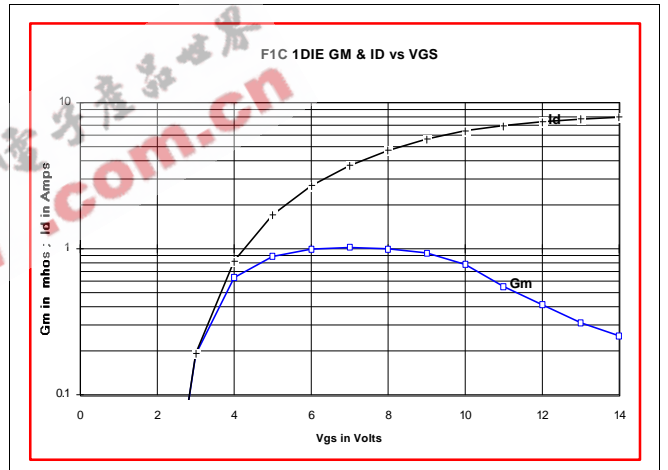
IV CURVE



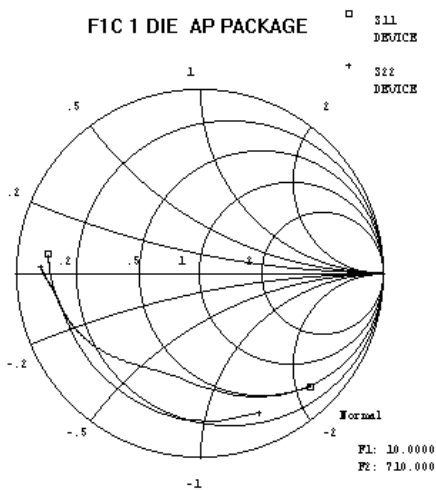
CAPACITANCE VS VOLTAGE



ID AND GM VS VGS



S11 AND S22 SMITH CHART



PACKAGE DIMENSIONS IN INCHES

