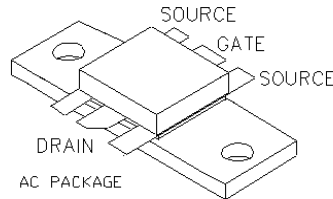




General Description

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"™ 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 Single Ended

Package Style AC

**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	3.13 °C/W	200 °C	-65 °C to 150 °C	2 A	70 V	70V	30V

RF CHARACTERISTICS (20WATTS OUTPUT)

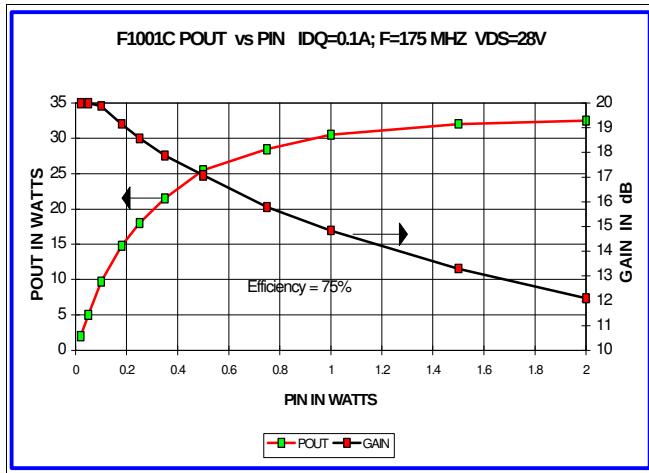
SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS	TEST CONDITIONS
Gps	Common Source Power Gain	16			dB	Idq = 0.2 A, Vds = 28.0V, F = 175 MHz
η	Drain Efficiency		60		%	Idq = 0.2 A, Vds = 28.0V, F = 175 MHz
VSWR	Load Mismatch Tolerance			20:1	Relative	Idq = 0.2 A, Vds = 28.0V, F = 175 MHz

ELECTRICAL CHARACTERISTICS (EACH SIDE)

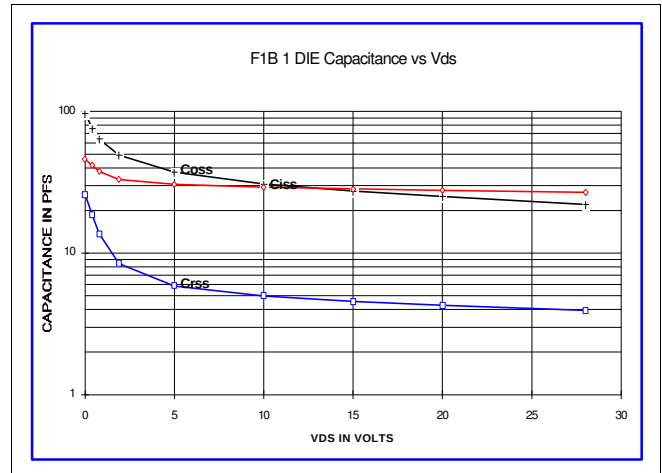
SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS	TEST CONDITIONS
Bvdss	Drain Breakdown Voltage	65			V	Ids = 0.05A, Vgs = 0V
Idss	Zero Bias Drain Current			1	mA	Vds = 28.0 V, Vgs = 0V
Igss	Gate Leakage Current			1	uA	Vds = 0 V, Vgs = 30V
Vgs	Gate Bias for Drain Current	1		7	V	Ids = 0.1 A, Vgs = Vds
gM	Forward Transconductance		0.8		Mho	Vds = 10V, Vgs = 5V
Rdson	Saturation Resistance		1		Ohm	Vgs = 20V, Ids = 4A
Idsat	Saturation Current		5.5		Amp	Vgs = 20V, Vds = 10V
Ciss	Common Source Input Capacitance		33		pF	Vds = 28.0 V, Vgs = 0V, F = 1 MHz
Crss	Common Source Feedback Capacitance		4		pF	Vds = 28.0 V, Vgs = 0V, F = 1 MHz
Coss	Common Source Output Capacitance		20		pF	Vds = 28.0 V, Vgs = 0V, F = 1 MHz

F1001C

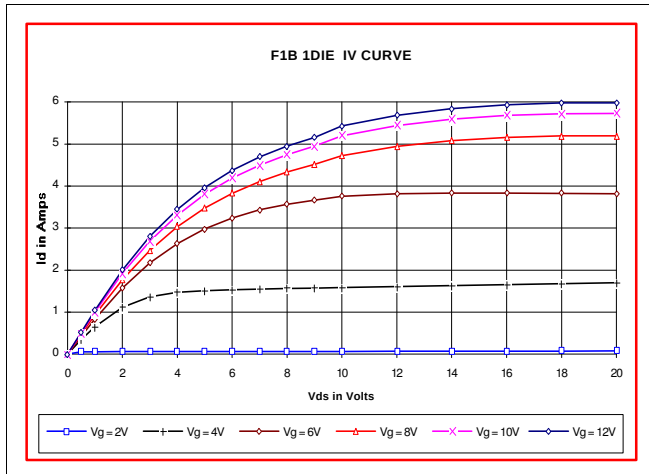
POUT VS PIN GRAPH



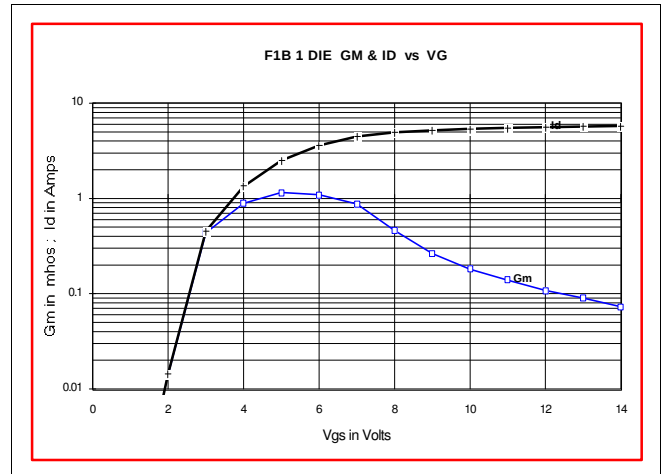
CAPACITANCE VS VOLTAGE



IV CURVE

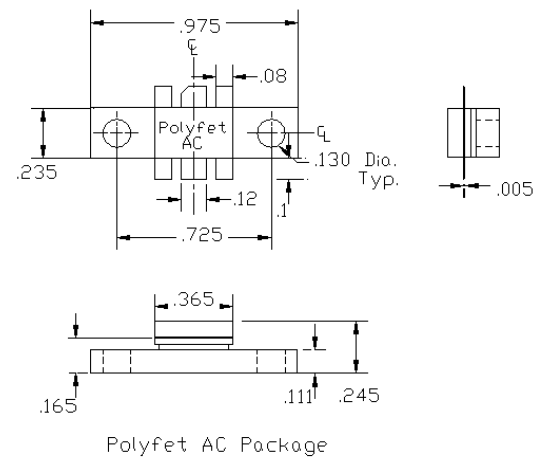


ID AND GM VS VGS



S11 AND S22 SMITH CHART

PACKAGE DIMENSIONS IN INCHES



POLYFET RF DEVICES

REVISION 8/1/97