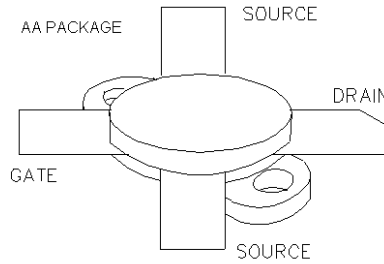




**General Description**

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**

**40Watts Single Ended  
Package Style AA**

**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	1.95 °C/W	200 °C	-65 °C to 150 °C	4 A	70 V	70V	30V

**RF CHARACTERISTICS ( 40WATTS OUTPUT )**

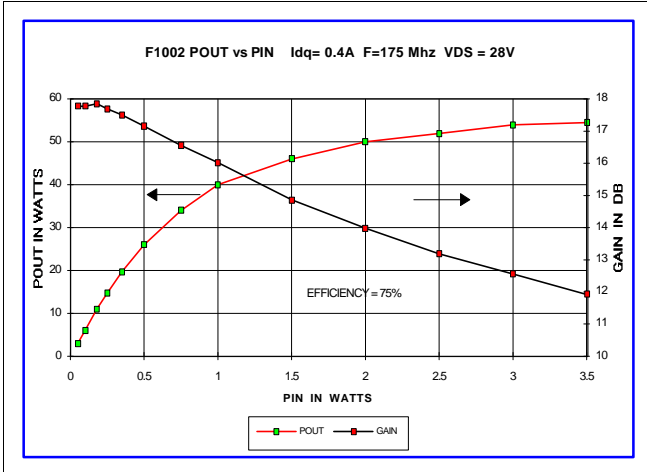
SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS	TEST CONDITIONS
Gps	Common Source Power Gain	15			dB	$I_{dq} = 0.4 A, V_{ds} = 28.0 V, F = 175 MHz$
$\eta$	Drain Efficiency		60		%	$I_{dq} = 0.4 A, V_{ds} = 28.0 V, F = 175 MHz$
VSWR	Load Mismatch Toleranc			20:1	Relative	$I_{dq} = 0.4 A, V_{ds} = 28.0 V, F = 175 MHz$

**ELECTRICAL CHARACTERISTICS (EACH SIDE)**

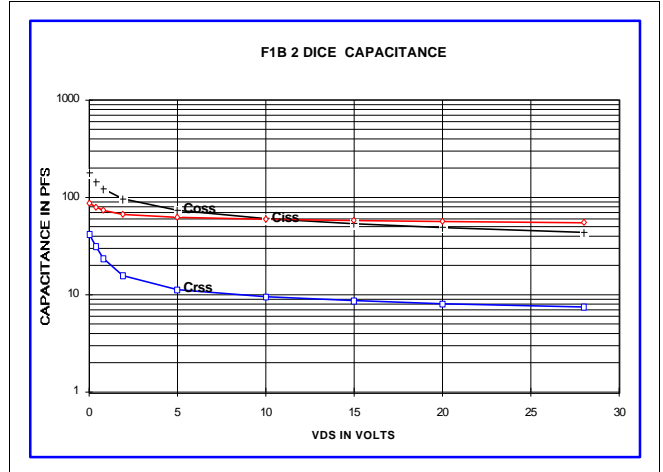
SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS	TEST CONDITIONS
Bvdss	Drain Breakdown Voltag	65			V	$I_{ds} = 0.1 A, V_{gs} = 0V$
Idss	Zero Bias Drain Curren			2	mA	$V_{ds} = 28.0 V, V_{gs} = 0V$
Igss	Gate Leakage Curren			1	uA	$V_{ds} = 0 V, V_{gs} = 30V$
Vgs	Gate Bias for Drain Curren	1		7	V	$I_{ds} = 0.2 A, V_{gs} = V_{ds}$
gM	Forward Transconductanc		1.6		Mho	$V_{ds} = 10V, V_{gs} = 5V$
Rdson	Saturation Resistanc		0.7		Ohm	$V_{gs} = 20V, I_{ds} = 8A$
Idsat	Saturation Curren		11		Amp	$V_{gs} = 20V, V_{ds} = 10V$
Ciss	Common Source Input Capacitanc		66		pF	$V_{ds} = 28.0 V, V_{gs} = 0V, F = 1 MHz$
Crss	Common Source Feedback Capacitanc		8		pF	$V_{ds} = 28.0 V, V_{gs} = 0V, F = 1 MHz$
Coss	Common Source Output Capacitanc		40		pF	$V_{ds} = 28.0 V, V_{gs} = 0V, F = 1 MHz$

# F1002

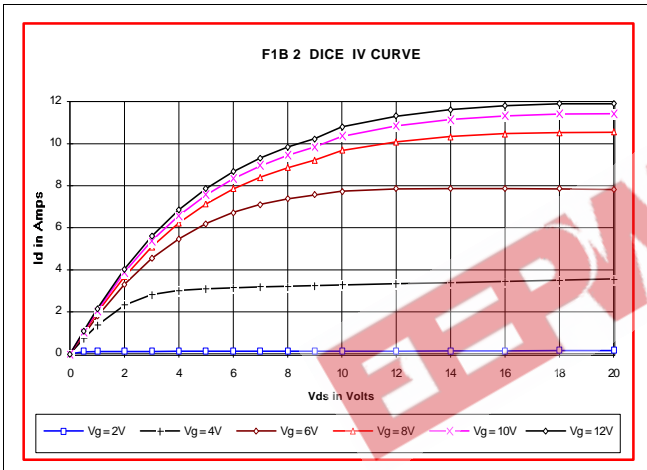
POUT VS PIN GRAPH



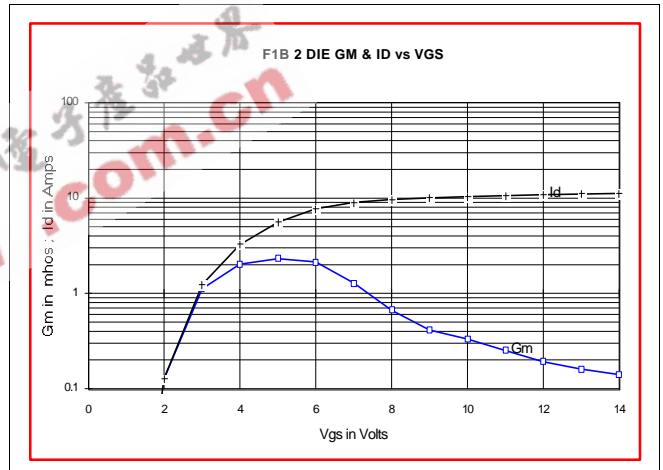
CAPACITANCE VS VOLTAGE



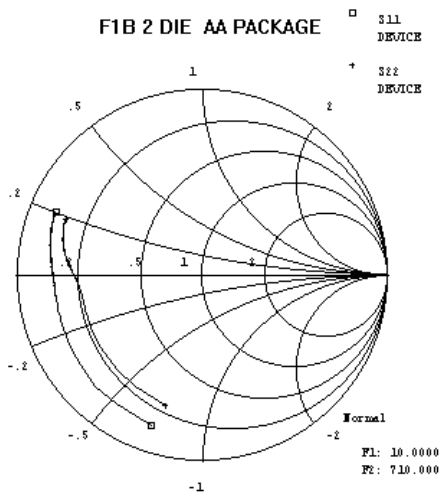
IV CURVE



ID AND GM VS VGS



S11 AND S22 SMITH CHART



PACKAGE DIMENSIONS IN INCHES

