



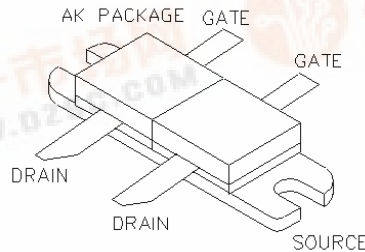
polyfet rf devices

F2041

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 Gemini

Package Style AK

**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
70 Watts	2.5 °C/W	200 °C	-65 °C to 150 °C	4.8 A	70 V	70V	30V

RF CHARACTERISTICS (15WATTS OUTPUT)

SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS	TEST CONDITIONS
Gps	Common Source Power Gain	10			dB	$I_{dq} = 1.2 \text{ A}$, $V_{ds} = 28.0 \text{ V}$, $F = 1000 \text{ MHz}$
η	Drain Efficiency		45		%	$I_{dq} = 1.2 \text{ A}$, $V_{ds} = 28.0 \text{ V}$, $F = 1000 \text{ MHz}$
VSWR	Load Mismatch Toleranc			20:1	Relative	$I_{dq} = 1.2 \text{ A}$, $V_{ds} = 28.0 \text{ V}$, $F = 1000 \text{ MHz}$

ELECTRICAL CHARACTERISTICS (EACH SIDE)

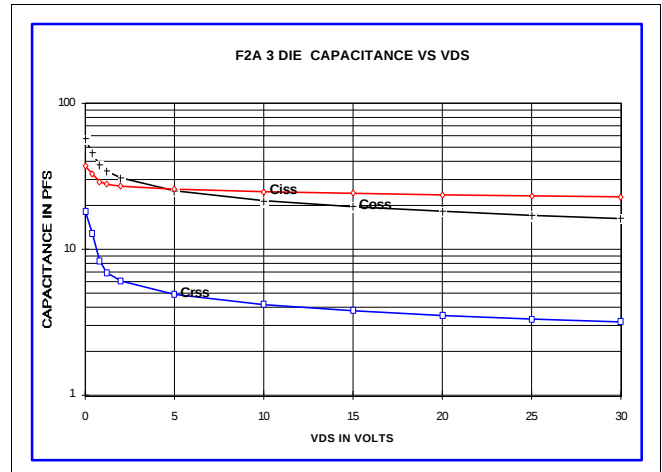
SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS	TEST CONDITIONS
Bvdss	Drain Breakdown Voltag	65			V	$I_{ds} = 0.03 \text{ A}$, $V_{gs} = 0 \text{ V}$
I_{dss}	Zero Bias Drain Curren			0.6	mA	$V_{ds} = 28.0 \text{ V}$, $V_{gs} = 0 \text{ V}$
I_{gss}	Gate Leakage Curren			1	uA	$V_{ds} = 0 \text{ V}$, $V_{gs} = 30 \text{ V}$
V_{gs}	Gate Bias for Drain Curren	1		7	V	$I_{ds} = 0.06 \text{ A}$, $V_{gs} = V_{ds}$
g_m	Forward Transconductanc		0.6		Mho	$V_{ds} = 10 \text{ V}$, $V_{gs} = 5 \text{ V}$
R_{dson}	Saturation Resistanc		1.4		Ohm	$V_{gs} = 20 \text{ V}$, $I_{ds} = 3 \text{ A}$
I_{dsat}	Saturation Curren		3.6		Amp	$V_{gs} = 20 \text{ V}$, $V_{ds} = 10 \text{ V}$
C_{iss}	Common Source Input Capacitanc		27		pF	$V_{ds} = 28.0 \text{ V}$, $V_{gs} = 0 \text{ V}$, $F = 1 \text{ MHz}$
C_{rss}	Common Source Feedback Capacitanc		3		pF	$V_{ds} = 28.0 \text{ V}$, $V_{gs} = 0 \text{ V}$, $F = 1 \text{ MHz}$
C_{oss}	Common Source Output Capacitanc		18		pF	$V_{ds} = 28.0 \text{ V}$, $V_{gs} = 0 \text{ V}$, $F = 1 \text{ MHz}$

F2041

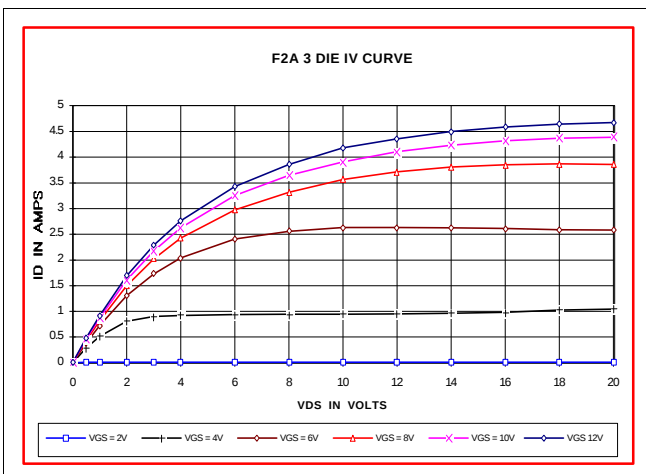
POUT VS PIN GRAPH

PLEASE CALL OFFICE FOR UPDATE

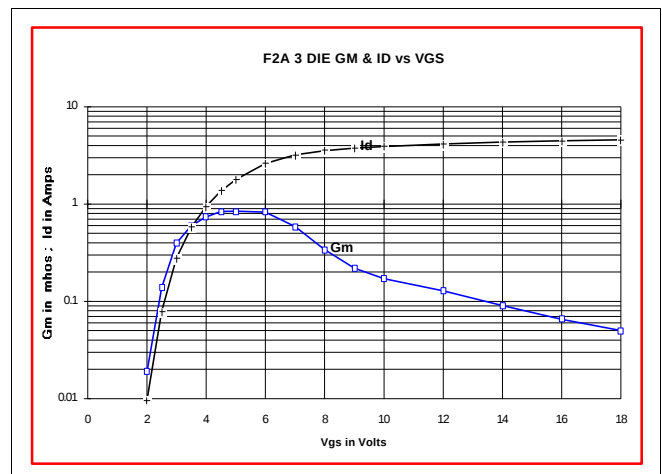
CAPACITANCE VS VOLTAGE



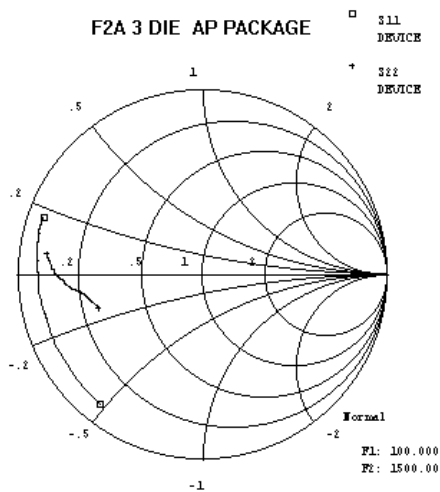
IV CURVE



ID AND GM VS VGS



S11 AND S22 SMITH CHART



PACKAGE DIMENSIONS IN INCHES

