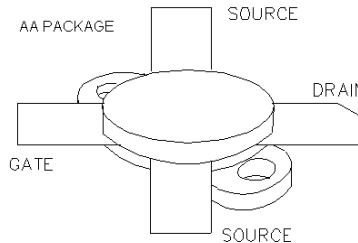




**General Description**

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 MOD  
RF POWER VDMOSTRANSISTOR**

**5.0 Watts Single Ended  
Package Style AA  
HIGH EFFICIENCY, LINEAR  
HIGH GAIN, LOW NOISE**

**ABSOLUTE MAXIMUM RATINGS (  $T_C = 25^\circ C$  )**

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
20 Watts	10.00 $^\circ C/W$	200 $^\circ C$	-65 $^\circ C$ to 150 $^\circ C$	0.8 A	70V	70V	30V

**RF CHARACTERISTICS ( 5.0 WATTS OUTPUT )**

SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS	TEST CONDITIONS
Gps	Common Source Power Gain	11			dB	$I_{dq} = 0.20$ A, $V_{ds} = 28.0$ V, $F = 400$ MHz
$\eta$	Drain Efficiency		45		%	$I_{dq} = 0.20$ A, $V_{ds} = 28.0$ V, $F = 400$ MHz
VSWR	Load Mismatch Tolerance			20:1	Relative	$I_{dq} = 0.20$ A, $V_{ds} = 28.0$ V, $F = 400$ MHz

**ELECTRICAL CHARACTERISTICS ( EACH SIDE )**

SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS	TEST CONDITIONS
Bvdss	Drain Breakdown Voltage	65			V	$I_{ds} = 0.01$ A, $V_{gs} = 0V$
$I_{dss}$	Zero Bias Drain Current			0.2	mA	$V_{ds} = 28.0$ V, $V_{gs} = 0V$
$I_{gss}$	Gate Leakage Current			1	$\mu A$	$V_{ds} = 0V$ $V_{gs} = 30V$
$V_{gs}$	Gate Bias for Drain Current	1		7	V	$I_{ds} = 0.02$ A, $V_{gs} = V_{ds}$
gM	Forward Transconductance		0.2		Mho	$V_{ds} = 10V$ , $V_{gs} = 5V$
Rdson	Saturation Resistance		3.50		Ohm	$V_{gs} = 20V$ , $I_{ds} = 1.00$ A
$I_{dsat}$	Saturation Current		1.20		Amp	$V_{gs} = 20V$ , $V_{ds} = 10V$
Ciss	Common Source Input Capacitance		9.0		pF	$V_{ds} = 28.0$ $V_{gs} = 0V$ , $F = 1$ MHz
Crss	Common Source Feedback Capacitance		1.0		pF	$V_{ds} = 28.0$ $V_{gs} = 0V$ , $F = 1$ MHz
Coss	Common Source Output Capacitance		6.0		pF	$V_{ds} = 28.0$ $V_{gs} = 0V$ , $F = 1$ MHz