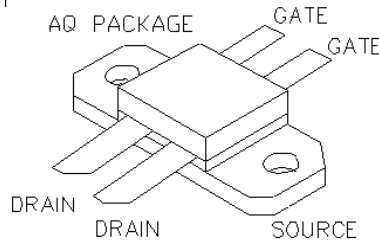




**General Description**

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**

**40 Watts Push - Pull**

**Package Style AQ**

**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
100 Watts	1.75 °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	10			dB	$I_{dq} = 0.4 \text{ A}$ , $V_{ds} = 28.0 \text{ V}$ , $F = 400 \text{ MHz}$
$\eta$	Drain Efficiency		60		%	$I_{dq} = 0.4 \text{ A}$ , $V_{ds} = 28.0 \text{ V}$ , $F = 400 \text{ MHz}$
VSWR	Load Mismatch Tolerance			20:1	Relative	$I_{dq} = 0.4 \text{ A}$ , $V_{ds} = 28.0 \text{ V}$ , $F = 400 \text{ MHz}$

**ELECTRICAL CHARACTERISTICS (EACH SIDE)**

SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS	TEST CONDITIONS
Bvdss	Drain Breakdown Voltage	65			V	$I_{ds} = 0.05 \text{ A}$ , $V_{gs} = 0 \text{ V}$
$I_{dss}$	Zero Bias Drain Current			1	mA	$V_{ds} = 28.0 \text{ V}$ , $V_{gs} = 0 \text{ V}$
$I_{gss}$	Gate Leakage Current			1	uA	$V_{ds} = 0 \text{ V}$ , $V_{gs} = 30 \text{ V}$
$V_{gs}$	Gate Bias for Drain Current	1		7	V	$I_{ds} = 0.1 \text{ A}$ , $V_{gs} = V_{ds}$
gM	Forward Transconductance		0.8		Mho	$V_{ds} = 10 \text{ V}$ , $V_{gs} = 5 \text{ V}$
$R_{dson}$	Saturation Resistance		1		Ohm	$V_{gs} = 20 \text{ V}$ , $I_{ds} = 4 \text{ A}$
$I_{dsat}$	Saturation Current		5.5		Amp	$V_{gs} = 20 \text{ V}$ , $V_{ds} = 10 \text{ V}$
$C_{iss}$	Common Source Input Capacitance		33		pF	$V_{ds} = 28.0 \text{ V}$ , $V_{gs} = 0 \text{ V}$ , $F = 1 \text{ MHz}$
$C_{rss}$	Common Source Feedback Capacitance		4		pF	$V_{ds} = 28.0 \text{ V}$ , $V_{gs} = 0 \text{ V}$ , $F = 1 \text{ MHz}$
$C_{oss}$	Common Source Output Capacitance		20		pF	$V_{ds} = 28.0 \text{ V}$ , $V_{gs} = 0 \text{ V}$ , $F = 1 \text{ MHz}$

