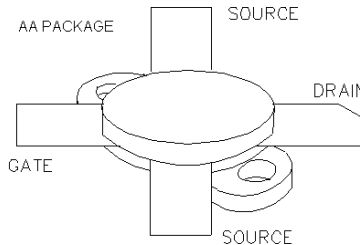




General Description

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

30.0 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
80 Watts	1.95 $^\circ C/W$	200 $^\circ C$	-65 $^\circ C$ to 150 $^\circ C$	4.0 A	70V	70V	30V

RF CHARACTERISTICS (30.0 WATTS OUTPUT)

SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS	TEST CONDITIONS
Gps	Common Source Power Gain	13			dB	$I_{dq} = 0.40$ A, $V_{ds} = 28.0V$, $F = 150$ MHz
η	Drain Efficiency		60		%	$I_{dq} = 0.40$ A, $V_{ds} = 28.0V$, $F = 150$ MHz
VSWR	Load Mismatch Tolerance			20:1	Relative	$I_{dq} = 0.40$ A, $V_{ds} = 28.0V$, $F = 150$ MHz

ELECTRICAL CHARACTERISTICS (EACH SIDE)

SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS	TEST CONDITIONS
Bvdss	Drain Breakdown Voltage	65			V	$I_{ds} = 100$ mA, $V_{gs} = 0V$
I_{dss}	Zero Bias Drain Current			2.0	mA	$V_{ds} = 28.00V$, $V_{gs} = 0V$
I_{gss}	Gate Leakage Current			1	μA	$V_{ds} = 0V$ $V_{gs} = 30V$
V_{gs}	Gate Bias for Drain Current	1		7	V	$I_{ds} = 0.20$ A, $V_{gs} = V_{ds}$
gM	Forward Transconductance		1.6		Mho	$V_{ds} = 10V$, $V_{gs} = 5V$
Rdson	Saturation Resistance		0.70		Ohm	$V_{gs} = 20V$, $I_{ds} = 8.00$ A
I_{dsat}	Saturation Current		11.00		Amp	$V_{gs} = 20V$, $V_{ds} = 10V$
Ciss	Common Source Input Capacitance		66.0		pF	$V_{ds} = 28.0$ $V_{gs} = 0V$, $F = 1$ MHz
Crss	Common Source Feedback Capacitance		8.0		pF	$V_{ds} = 28.0$ $V_{gs} = 0V$, $F = 1$ MHz
Coss	Common Source Output Capacitance		40.0		pF	$V_{ds} = 28.0$ $V_{gs} = 0V$, $F = 1$ MHz