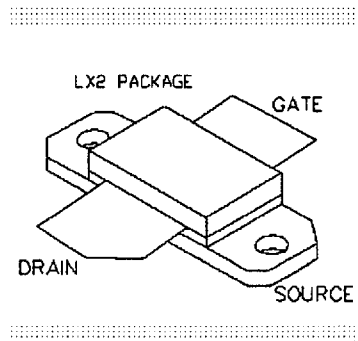




General Description

Silicon DMOS designed specifically for RF applications. Immune to forward and reverse bias secondary breakdown "Polyfet"[™] process features gold metal for greatly extended lifetime. Low output capacitance and high F_t enhance broad band performance.



**PATENTED GOLD METALIZED
SILICON RF POWER MOSFET
USEFUL FOR NARROW AND
BROADBAND APPLICATIONS**

45.0 Watts Single Ended

Package Style LX2

**HIGH EFFICIENCY, LINEAR
HIGH GAIN, LOW NOISE**

ABSOLUTE MAXIMUM RATINGS ($T_c = 25^\circ\text{C}$)

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
120 Watts	1.20 $^\circ\text{C/W}$	200 $^\circ\text{C}$	-65 $^\circ\text{C}$ to 150 $^\circ\text{C}$	6.0 A	70V	70V	30V

RF CHARACTERISTICS (45.0 WATTS OUTPUT)

SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS	TEST CONDITIONS
Gps	Common Source Power Gain	12			dB	$I_{dq} = 1.20\text{ A}$, $V_{ds} = 28.0\text{V}$, $F = 1,000\text{MHz}$
η	Drain Efficiency		55		%	$I_{dq} = 1.20\text{ A}$, $V_{ds} = 28.0\text{V}$, $F = 1,000\text{MHz}$
VSWR	Load Mismatch Tolerance			20:1	Relative	$I_{dq} = 1.20\text{ A}$, $V_{ds} = 28.0\text{V}$, $F = 1,000\text{MHz}$

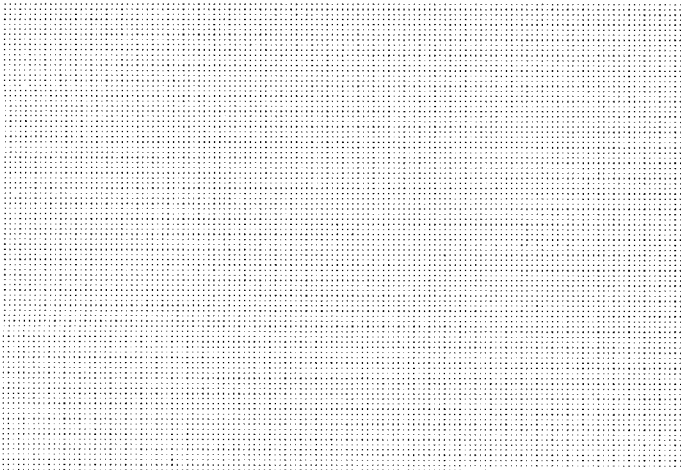
ELECTRICAL CHARACTERISTICS (EACH SIDE)

SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS	TEST CONDITIONS
Bvdss	Drain Breakdown Voltage	65			V	$I_{ds} = 0.15\text{ A}$, $V_{gs} = 0\text{V}$
Idss	Zero Bias Drain Current			3.0	mA	$V_{ds} = 28.0\text{V}$, $V_{gs} = 0\text{V}$
Igss	Gate Leakage Current			1	μA	$V_{ds} = 0\text{V}$, $V_{gs} = 30\text{V}$
Vgs	Gate Bias for Drain Current	1		7	V	$I_{ds} = 0.30\text{ A}$, $V_{gs} = V_{ds}$
gM	Forward Transconductance		2.4		Mho	$V_{ds} = 10\text{V}$, $V_{gs} = 5\text{V}$
Rdson	Saturation Resistance		0.35		Ohm	$V_{gs} = 20\text{V}$, $I_{ds} = 12.00\text{ A}$
Idsat	Saturation Current		18.00		Amp	$V_{gs} = 20\text{V}$, $V_{ds} = 10\text{V}$
Ciss	Common Source Input Capacitance		90.0		pF	$V_{ds} = 28\text{V}$, $V_{gs} = 0\text{V}$, $F = 1\text{ MHz}$
Crss	Common Source Feedback Capacitance		4.5		pF	$V_{ds} = 28\text{V}$, $V_{gs} = 0\text{V}$, $F = 1\text{ MHz}$
Coss	Common Source Output Capacitance		45.0		pF	$V_{ds} = 28\text{V}$, $V_{gs} = 0\text{V}$, $F = 1\text{ MHz}$

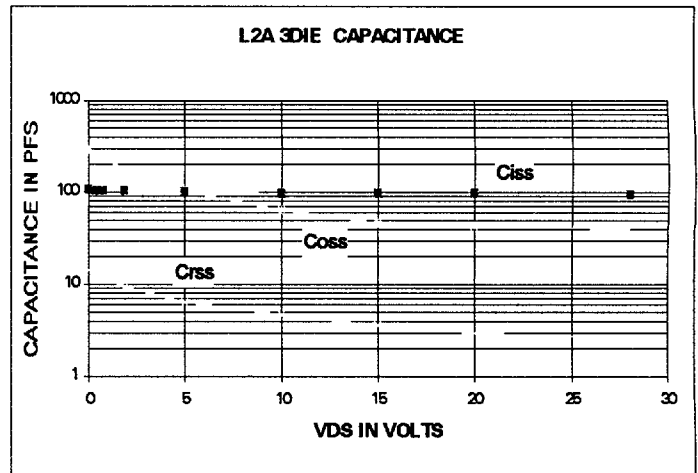
POLYFET RF DEVICES

L2083

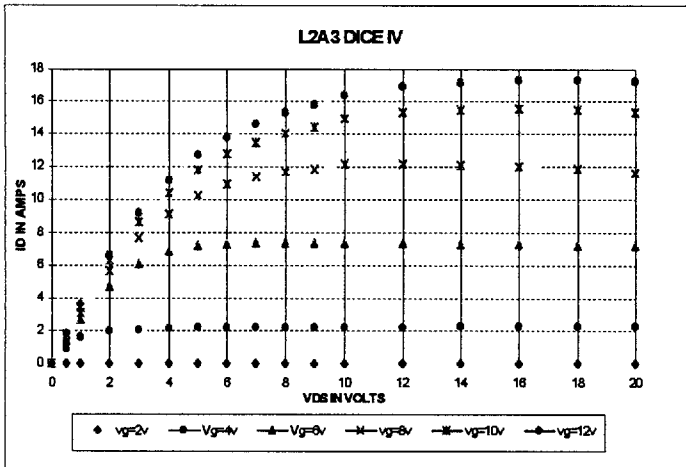
POUT VS PIN GRAPH



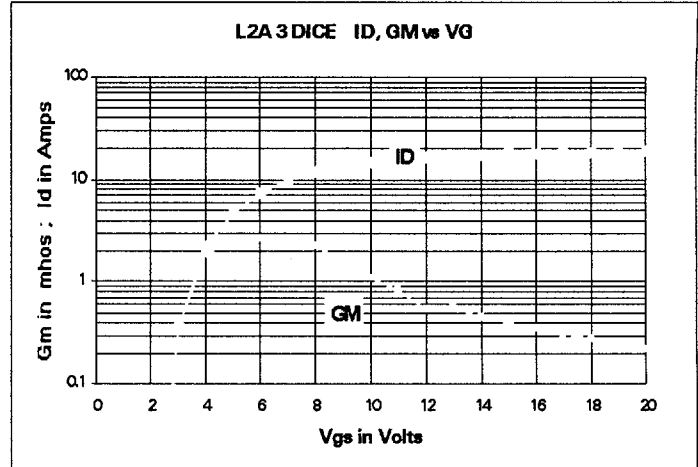
CAPACITANCE VS VOLTAGE



IV CURVE



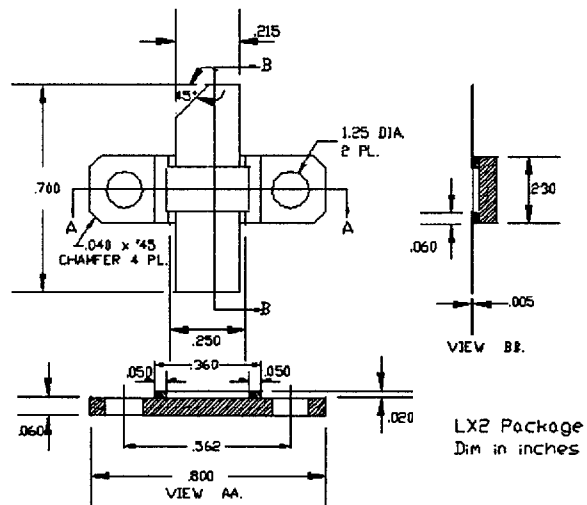
ID & GM VS VGS



S11 & S22 SMITH CHART



PACKAGE DIMENSIONS IN INCHES



PLEASE CALL OFFICE FOR UPDATE

POLYFET RF DEVICES

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