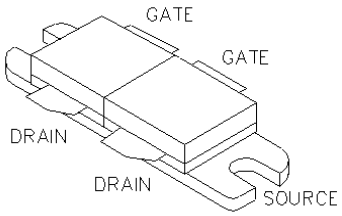
polyfet rf devices

LR301

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 low feedback and output capacitances, resulting in high F_t transistors with high input impedance and high efficiency.



SILICON GATE ENHANCEMENT MODE

RF POWER LDMOS TRANSISTOR

300.0 Watts Push - Pull

Package Style LR

HIGH EFFICIENCY, LINEAR
HIGH GAIN, LOW NOISE

ABSOLUTE MAXIMUM RATINGS (T = 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
465 Watts	0.38 °C/W	200 °C	-65 °C to 150 °C	28.0 A	70 V	70 V	20 V

RF CHARACTERISTICS (300.0 WATTS OUTPUT)

SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS	TEST CONDITIONS
Gps	Common Source Power Gain	13			dB	Idq = 0.80 A, Vds = 28.0 V, F = 350 MHz
η	Drain Efficiency		50		%	Idq = 0.80 A, Vds = 28.0 V, F = 350 MHz
VSWR	Load Mismatch Tolerance			5:1	Relative	Idq = 0.80 A, Vds = 28.0 V, F = 350 MHz

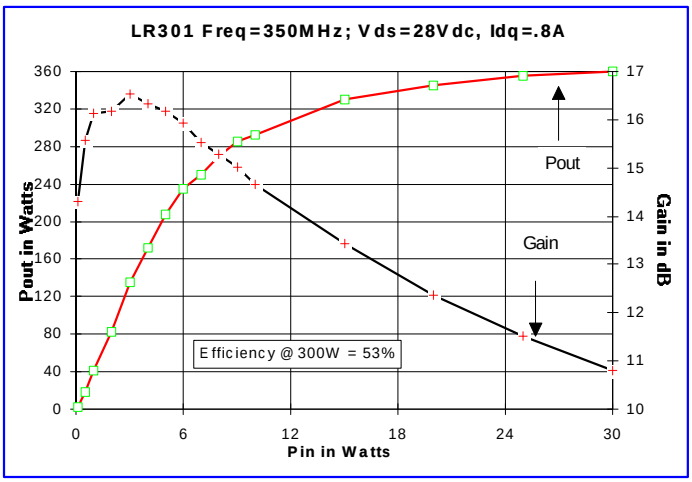
ELECTRICAL CHARACTERISTICS (EACH SIDE)

SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS	TEST CONDITIONS
Bvdss	Drain Breakdown Voltage	65			V	Ids = 0.25 mA, Vgs = 0V
Idss	Zero Bias Drain Current			1.0	mA	Vds = 28.0 V, Vgs = 0V
Igss	Gate Leakage Current			1	uA	Vds = 0V Vgs = 30V
Vgs	Gate Bias for Drain Current	2		5	V	Ids = 0.30 A, Vgs = Vds
gM	Forward Transconductance		7.2		Mho	Vds = 10V, Vgs = 5V
Rdson	Saturation Resistance		0.15		Ohm	Vgs = 20V, Ids = 16.00 A
Idsat	Saturation Current		50.00		Amp	Vgs = 20V, Vds = 10V
Ciss	Common Source Input Capacitance		200.0		pF	Vds = 28.0 Vgs = 0V, F = 1 MHz
Crss	Common Source Feedback Capacitance		10.0		pF	Vds = 28.0 Vgs = 0V, F = 1 MHz
Coss	Common Source Output Capacitance		135.0		pF	Vds = 28.0 Vgs = 0V, F = 1 MHz

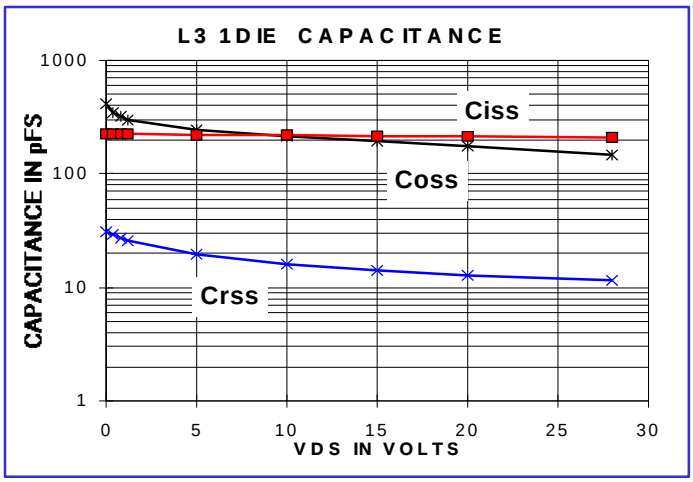
1110 Avenida Acaso, Camarillo, Ca 93012 Tel:(805) 484-4210 FAX: (805) 484-3393 EMAIL:Sell@polyfet.com URL:www.polyfet.com

LR301

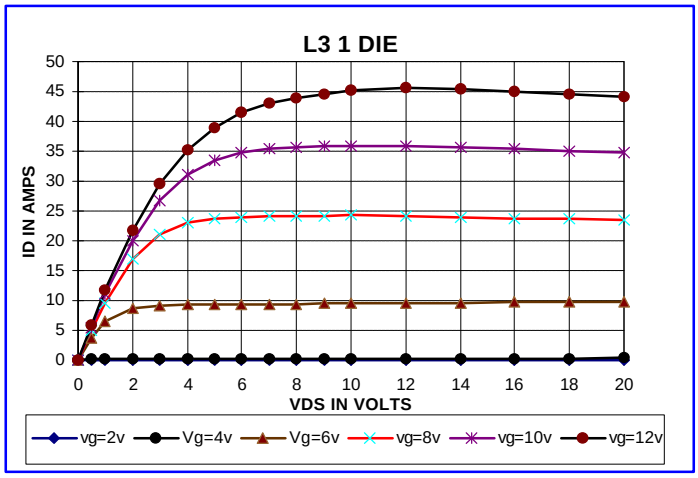
POUT VS PIN GRAPH



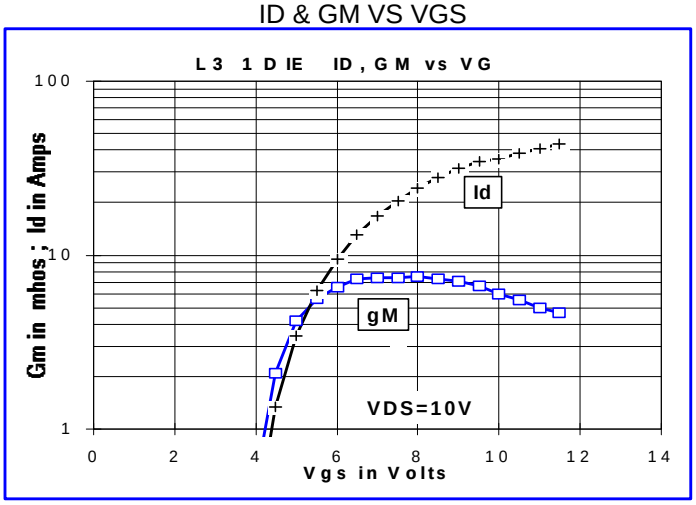
CAPACITANCE VS VOLTAGE



IV CURVE



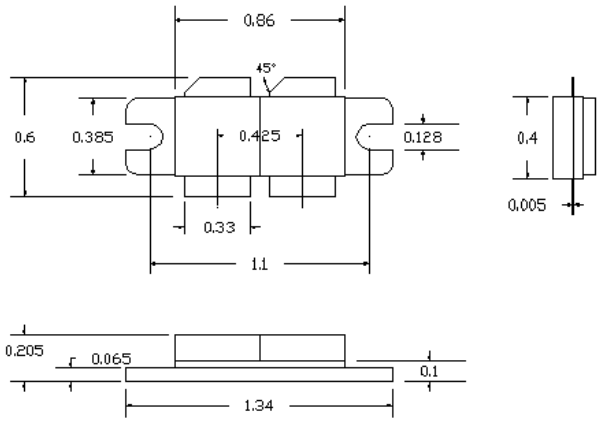
ID & GM VS VGS



Zin Zout

LR301 Vdd=28V Idq=800mA Pout=300W					
Freq(MHz)		350			
		2.8			
Zin		-j0.7			
		3.6			
Zout		+j3.2			

PACKAGE DIMENSIONS IN INCHES



POLYFET LR PACKAGE

Tolerance .XX +/-0.01 .XXX +/-.005 inches

POLYFET RF DEVICES

REVISION 02/27/2006

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