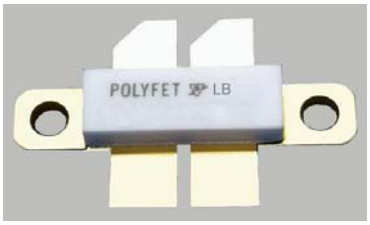
polyfet rf devices

LB2301

General Description

This device is part of Polyfet's latest family of 28VDC LDMOS devices. Being an unmatched device and having low capacitances makes it ideal for broad band applications such as communications and broadcast. It is also suitable for various narrow band applications. Employing back-to-back gate diodes for enhanced ESD protection and having a high drain breakdown voltage makes this device highly rugged. The suitable frequency range of this device is 1-1100MHz



SILICON GATE ENHANCEMENT MODE

RF POWER LDMOS TRANSISTOR

125.0 Watts Push - Pull

Package Style LB

HIGH EFFICIENCY, LINEAR

HIGH GAIN, LOW NOISE

ROHS COMPLIANT

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
360 Watts	0.48 °C/W	200 °C	-65 °C to 150 °C	15.0 A	80 V	80 V	+ 11 V - 9 V

RF CHARACTERISTICS (125.0 WATTS OUTPUT)

SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS	TEST CONDITIONS
Gps	Common Source Power Gain	18			dB	Idq = 0.40 A, Vds = 28.0 V, F = 500 MHz
η	Drain Efficiency		50		%	Idq = 0.40 A, Vds = 28.0 V, F = 500 MHz
VSWR	Load Mismatch Tolerance			20:1	Relative	Idq = 0.40 A, Vds = 28.0 V, F = 500 MHz

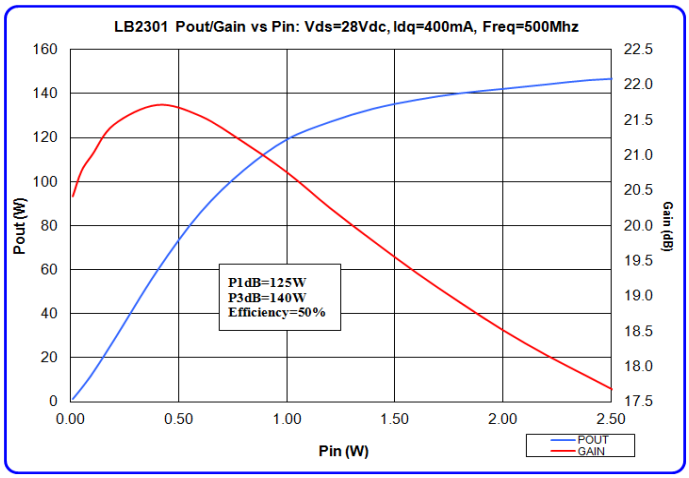
ELECTRICAL CHARACTERISTICS (EACH SIDE)

SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS	TEST CONDITIONS
Bvdss	Drain Breakdown Voltage	70			V	Ids = 5.00 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 = 10V
Vgs	Gate Bias for Drain Current	2		5	V	Ids = 0.10 A, Vgs = Vds
gM	Forward Transconductance		5.0		Mho	Vds = 10V, Vgs = 5V
Rdson	Saturation Resistance		0.35		Ohm	Vgs = 10 V, Ids = 10.00 A
Idsat	Saturation Current		15.00		Amp	Vgs = 10 V, Vds = 10V
Ciss	Common Source Input Capacitance		70.0		pF	Vds = 28.0 Vgs = 0V, F = 1 MHz
Crss	Common Source Feedback Capacitance		1.4		pF	Vds = 28.0 Vgs = 0V, F = 1 MHz
Coss	Common Source Output Capacitance		25.0		pF	Vds = 28.0 Vgs = 0V, F = 1 MHz

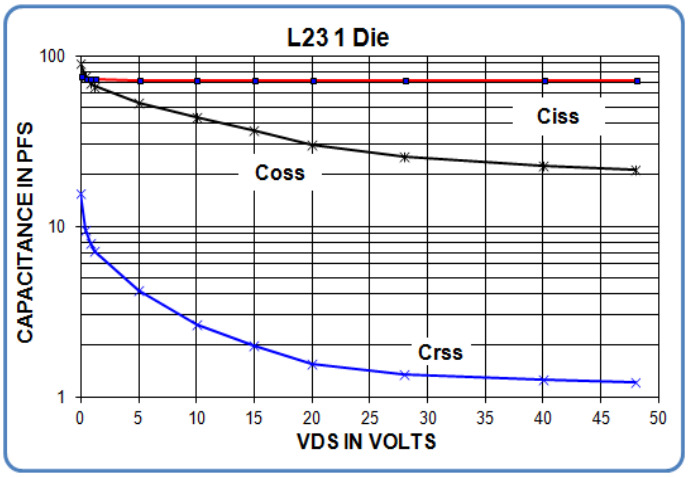
1110 Avenida Acaso, Camarillo, Ca 93012 Tel:(805) 484-4210 FAX: (805) 484-3393 EMAIL:Sell@polyfet.com URL:www.polyfet.com

LB2301

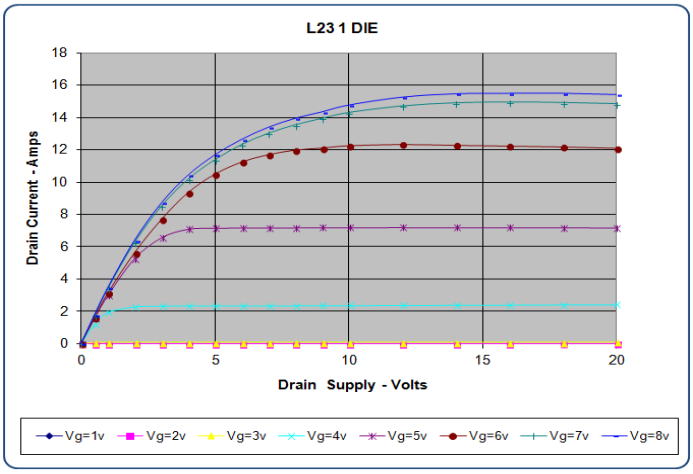
POUT VS PIN GRAPH



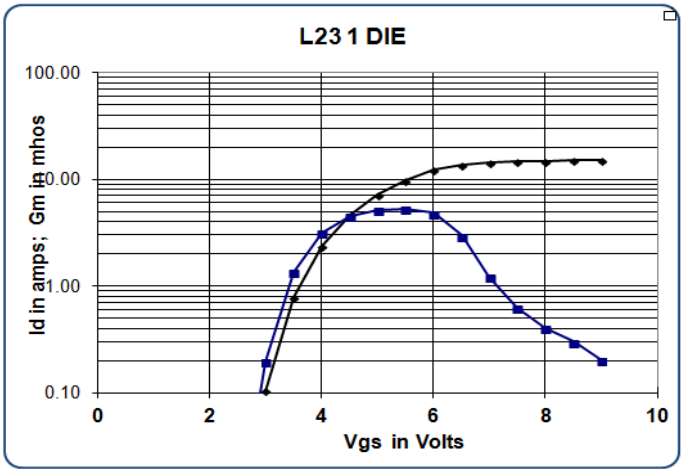
CAPACITANCE VS VOLTAGE



IV CURVE

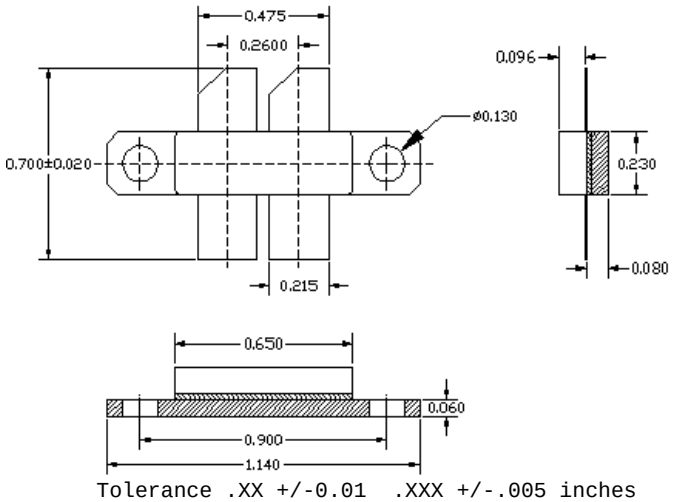


ID & GM VS VGS



Zin Zout

PACKAGE DIMENSIONS IN INCHES



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

POLYFET RF DEVICES

REVISION 11/21/2014

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