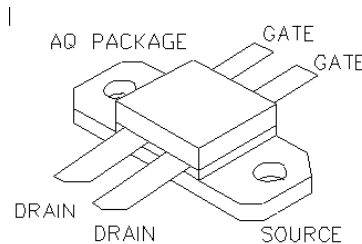




General Description

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

20.0 Watts Push - Pull

Package Style AQ

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
110 Watts	1.50 °C/W	200 °C	-65 °C to 150 °C	2.8 A	80 V	80 V	+ 11 V - 9 V

RF CHARACTERISTICS (20.0 WATTS OUTPUT)

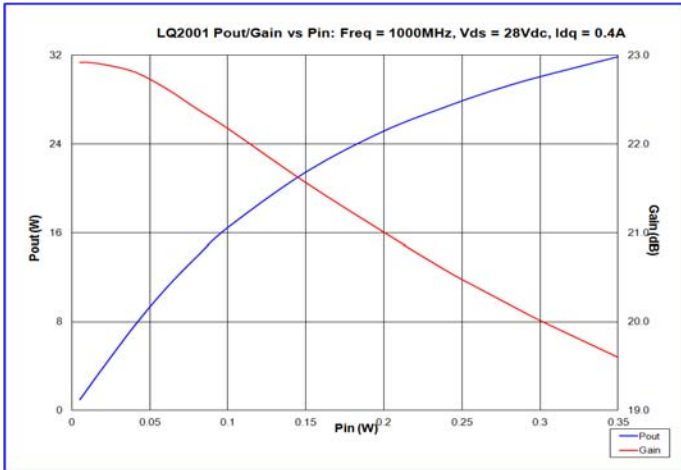
SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS	TEST CONDITIONS
Gps	Common Source Power Gain	19			dB	Idq = 0.40 A, Vds = 28.0 V, F =1,000 MHz
η	Drain Efficiency		40		%	Idq = 0.40 A, Vds = 28.0 V, F =1,000 MHz
VSWR	Load Mismatch Tolerance			20:1	Relative	Idq = 0.40 A, Vds = 28.0 V, F =1,000 MHz

ELECTRICAL CHARACTERISTICS (EACH SIDE)

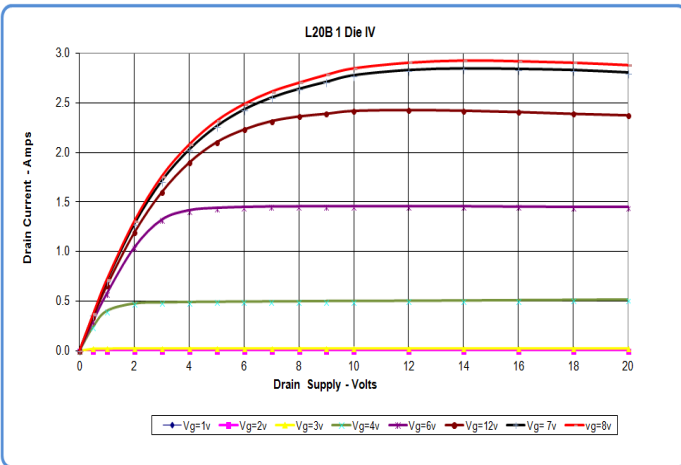
SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS	TEST CONDITIONS
Bvdss	Drain Breakdown Voltage	70			V	Ids = 20.00 mA, Vgs = 0V
Idss	Zero Bias Drain Current			1.0	mA	Vds = 28.0 V, Vgs = 0V
Igss	Gate Leakage Current			1	uA	Vds = 0V Vgs = 10V
Vgs	Gate Bias for Drain Current	2		5	V	Ids = 0.10 A, Vgs = Vds
gM	Forward Transconductance		1.0		Mho	Vds = 10V, Vgs = 5V
Rdson	Saturation Resistance		1.40		Ohm	Vgs = 10 V, Ids = 2.80 A
Idsat	Saturation Current		2.80		Amp	Vgs = 10 V, Vds = 10V
Ciss	Common Source Input Capacitance		17.0		pF	Vds = 28.0 Vgs = 0V, F = 1 MHz
Crss	Common Source Feedback Capacitance		0.3		pF	Vds = 28.0 Vgs = 0V, F = 1 MHz
Coss	Common Source Output Capacitance		6.0		pF	Vds = 28.0 Vgs = 0V, F = 1 MHz

LQ2001

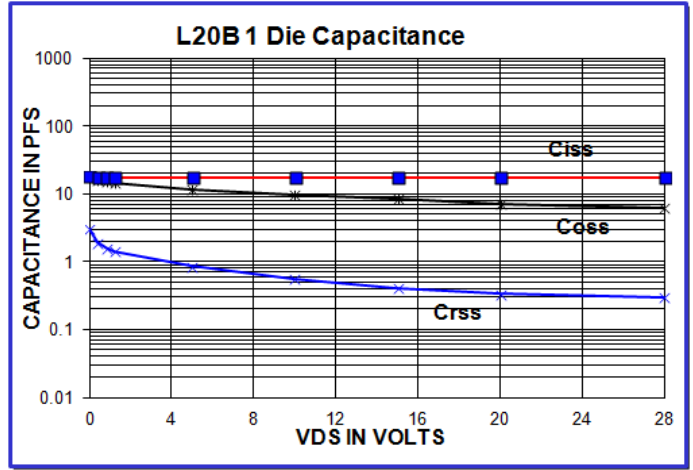
POUT VS PIN GRAPH



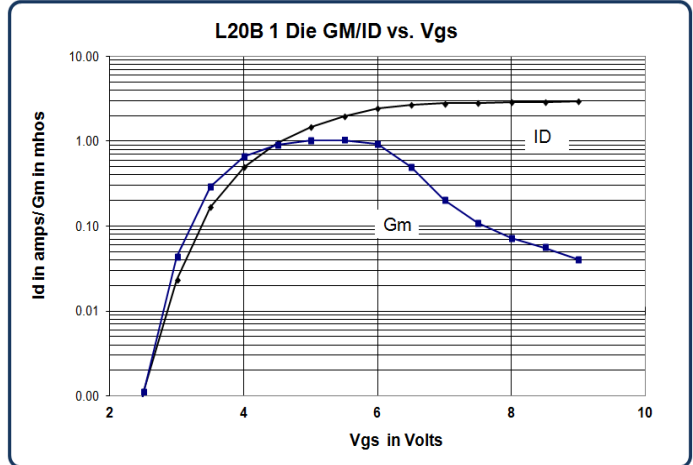
IV CURVE



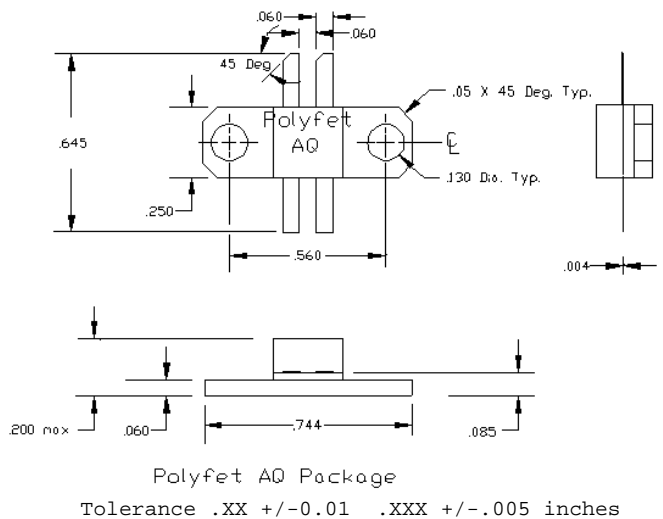
CAPACITANCE VS VOLTAGE



ID & GM VS VGS



PACKAGE DIMENSIONS IN INCHES



LQ2001Gain/Efficiency vs Freq: Pout = 20W, Vds = 28Vdc, Idq = 0.4A

