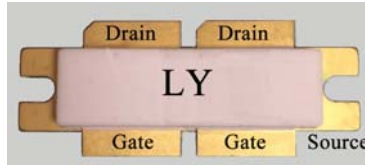




**General Description**

This device is part of Polyfet's latest family of 50VDC LDMOS devices. Being an unmatched device and having low capacitances makes it ideal for broad band applications up to the FM band. 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 0.5 - 108MHz.



**SILICON GATE ENHANCEMENT MODE**

**RF POWER TRANSISTOR**

**500.0 Watts Push-pull**

**Package Style LY**

**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
700 Watts	0.25 °C/W	200 °C	-65 °C to 150 °C	18.0 A	120 V	120 V	+ 11 V - 9 V

**RF CHARACTERISTICS ( 500.0 WATTS OUTPUT )**

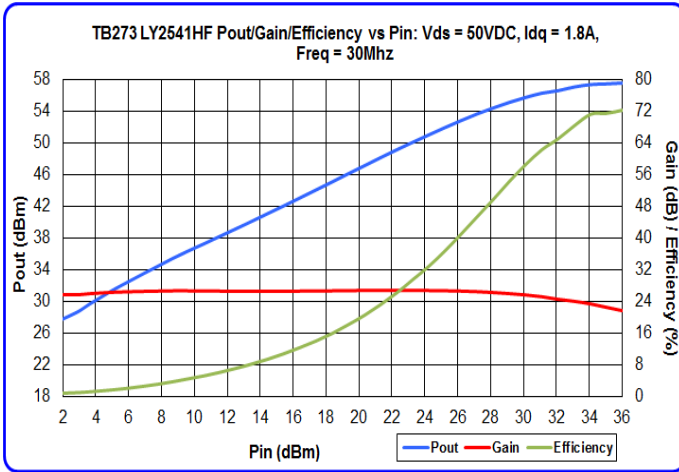
SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS	TEST CONDITIONS
Gps	Common Source Power Gain	24			dB	Idq = 1.80 A, Vds = 50.0 V, F = 30 MHz
η	Drain Efficiency		65		%	Idq = 1.80 A, Vds = 50.0 V, F = 30 MHz
VSWR	Load Mismatch Tolerance			20:1	Relative	Idq = 1.80 A, Vds = 50.0 V, F = 30 MHz

**ELECTRICAL CHARACTERISTICS ( EACH SIDE )**

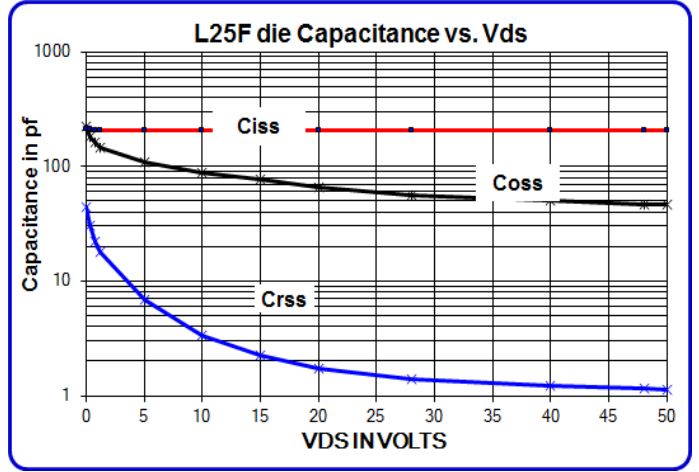
SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS	TEST CONDITIONS
Bvdss	Drain Breakdown Voltage	120			V	Ids = 5.00 mA, Vgs = 0V
Idss	Zero Bias Drain Current			2.0	mA	Vds = 50.0 V, Vgs = 0V
Igss	Gate Leakage Current			1	uA	Vds = 0V Vgs = 10V
Vgs	Gate Bias for Drain Current	2		5	V	Ids = 0.20 A, Vgs = Vds
gM	Forward Transconductance		6.5		Mho	Vds = 10V, Vgs = 5V
Rdson	Saturation Resistance		0.30		Ohm	Vgs = 10 V, Ids = 15.00 A
Idsat	Saturation Current		21.00		Amp	Vgs = 10 V, Vds = 10V
Ciss	Common Source Input Capacitance		200.0		pF	Vds = 50.0 Vgs = 0V, F = 1 MHz
Crss	Common Source Feedback Capacitance		1.2		pF	Vds = 50.0 Vgs = 0V, F = 1 MHz
Coss	Common Source Output Capacitance		45.0		pF	Vds = 50.0 Vgs = 0V, F = 1 MHz

# LY2541HF

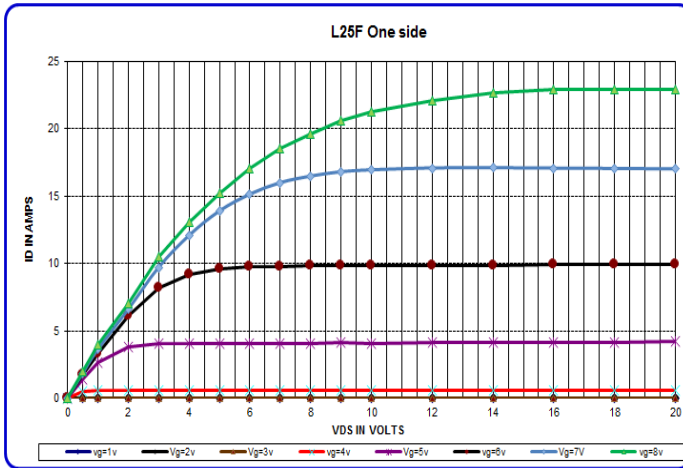
POUT VS PIN GRAPH



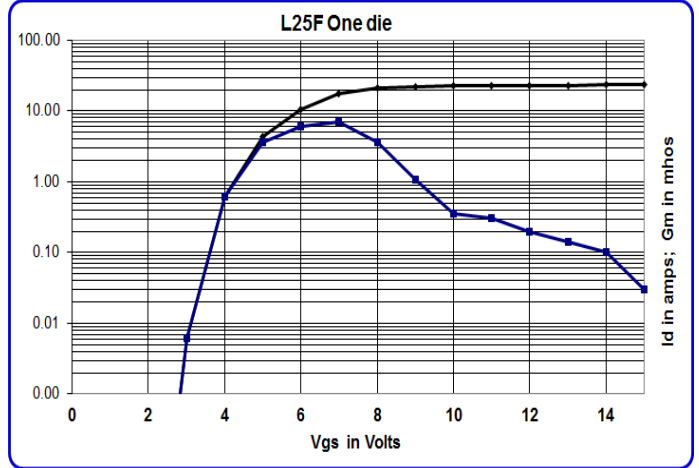
CAPACITANCE VS VOLTAGE



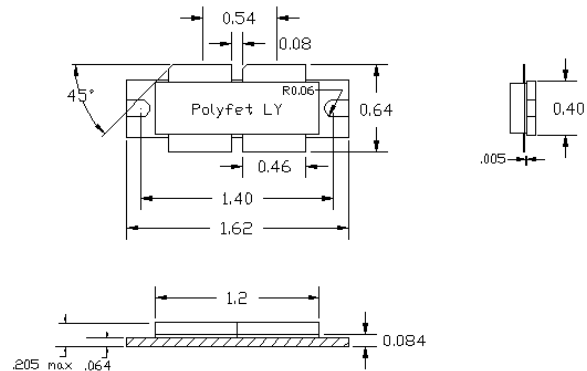
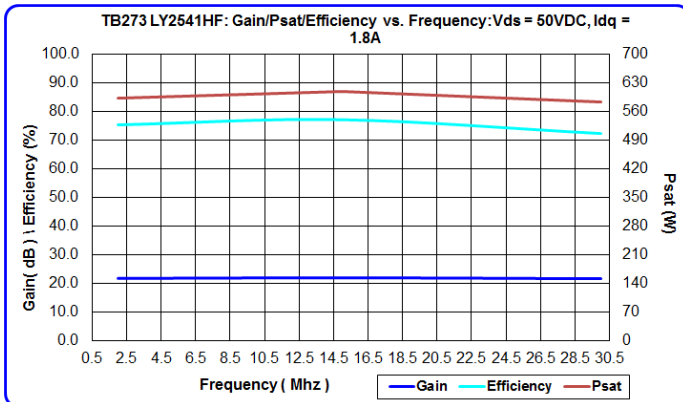
IV CURVE



ID & GM VS VGS



PACKAGE DIMENSIONS IN INCHES



Polyfet LY Package  
CPC Flange Material

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