



General Description

LDMOS push-pull transistor designed for pulse avionics applications within 960-1215MHz such as IFF, SSR, ADS-B transponders, and DME. Internal input and output impedance matching. Back-to-back gate diodes for enhanced ESD protection. High drain breakdown voltage. Suitable operating voltage range is 40-50VDC.



SILICON GATE ENHANCEMENT MODE

RF POWER LDMOS TRANSISTOR

800.0 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
875 Watts	0.02 °C/W	200 °C	-65 °C to 150 °C	22.0 A	110 V	110 V	+ 11 V - 9 V

RF CHARACTERISTICS (800.0 WATTS OUTPUT)

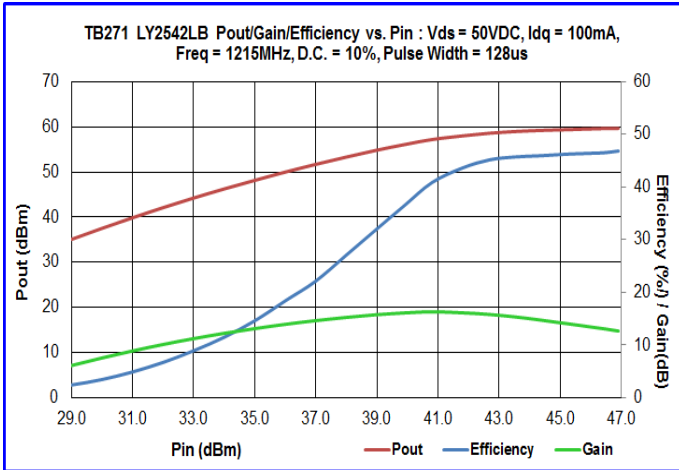
SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS	TEST CONDITIONS
Gps	Common Source Power Gain	13			dB	Idq = 0.10 A, Vds = 50.0 V, F = 1,215 MHz
η	Drain Efficiency		45		%	Idq = 0.10 A, Vds = 50.0 V, F = 1,215 MHz
VSWR	Load Mismatch Tolerance			10	Relative	Idq = 0.10 A, Vds = 50.0 V, F = 1,215 MHz

ELECTRICAL CHARACTERISTICS (EACH SIDE)

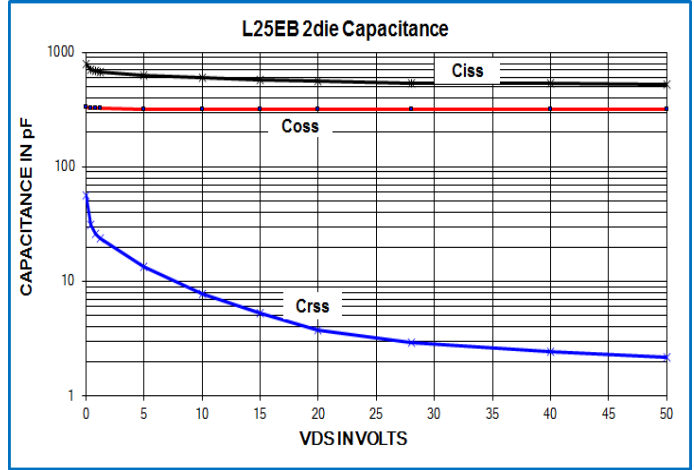
SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS	TEST CONDITIONS
Bvdss	Drain Breakdown Voltage	110			V	Ids = 10.00 mA, Vgs = 0V
Idss	Zero Bias Drain Current			4.0	mA	Vds = 50.0 V, Vgs = 0V
Igss	Gate Leakage Current			1	uA	Vds = 0V Vgs = 10V
Vgs	Gate Bias for Drain Current	2		5	V	Ids = 0.40 A, Vgs = Vds
gM	Forward Transconductance		16.0		Mho	Vds = 10V, Vgs = 5V
Rdson	Saturation Resistance		0.15		Ohm	Vgs = 10 V, Ids = 30.00 A
Idsat	Saturation Current		45.00		Amp	Vgs = 10 V, Vds = 10V
Ciss	Common Source Input Capacitance		320.0		pF	Vds = 50.0 Vgs = 0V, F = 1 MHz
Crss	Common Source Feedback Capacitance		2.2		pF	Vds = 50.0 Vgs = 0V, F = 1 MHz
Coss	Common Source Output Capacitance		525.0		pF	Vds = 50.0 Vgs = 0V, F = 1 MHz

LY2542LB

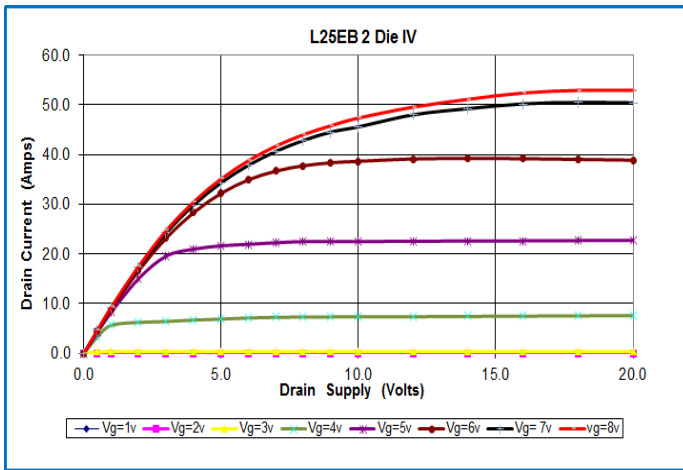
POUT VS PIN GRAPH



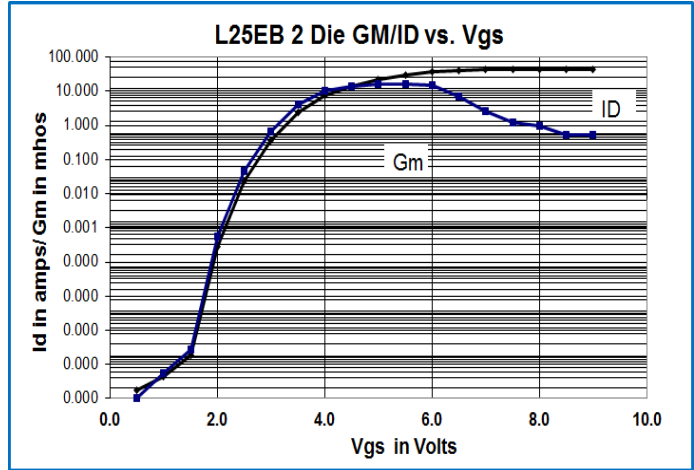
CAPACITANCE VS VOLTAGE



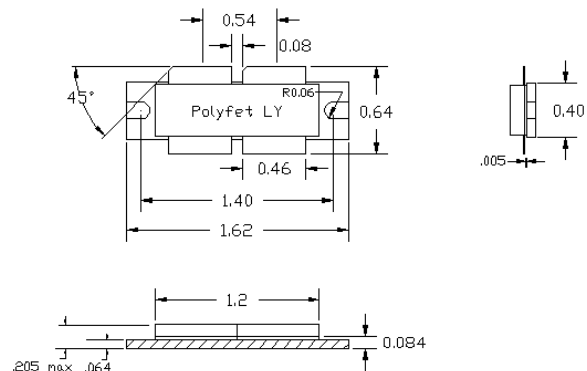
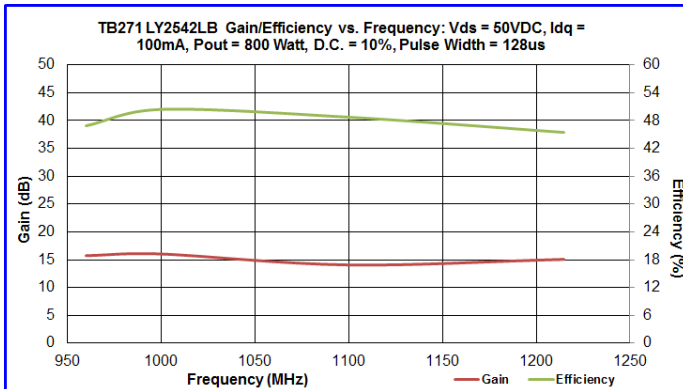
IV CURVE



ID & GM VS VGS



PACKAGE DIMENSIONS IN INCHES



Polyfet LY Package
CPC Flange Material

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