

TB271

Frequency=960-1215MHz

Pout=800 Watts (Pulse width 128us, Duty Cycle 10%)

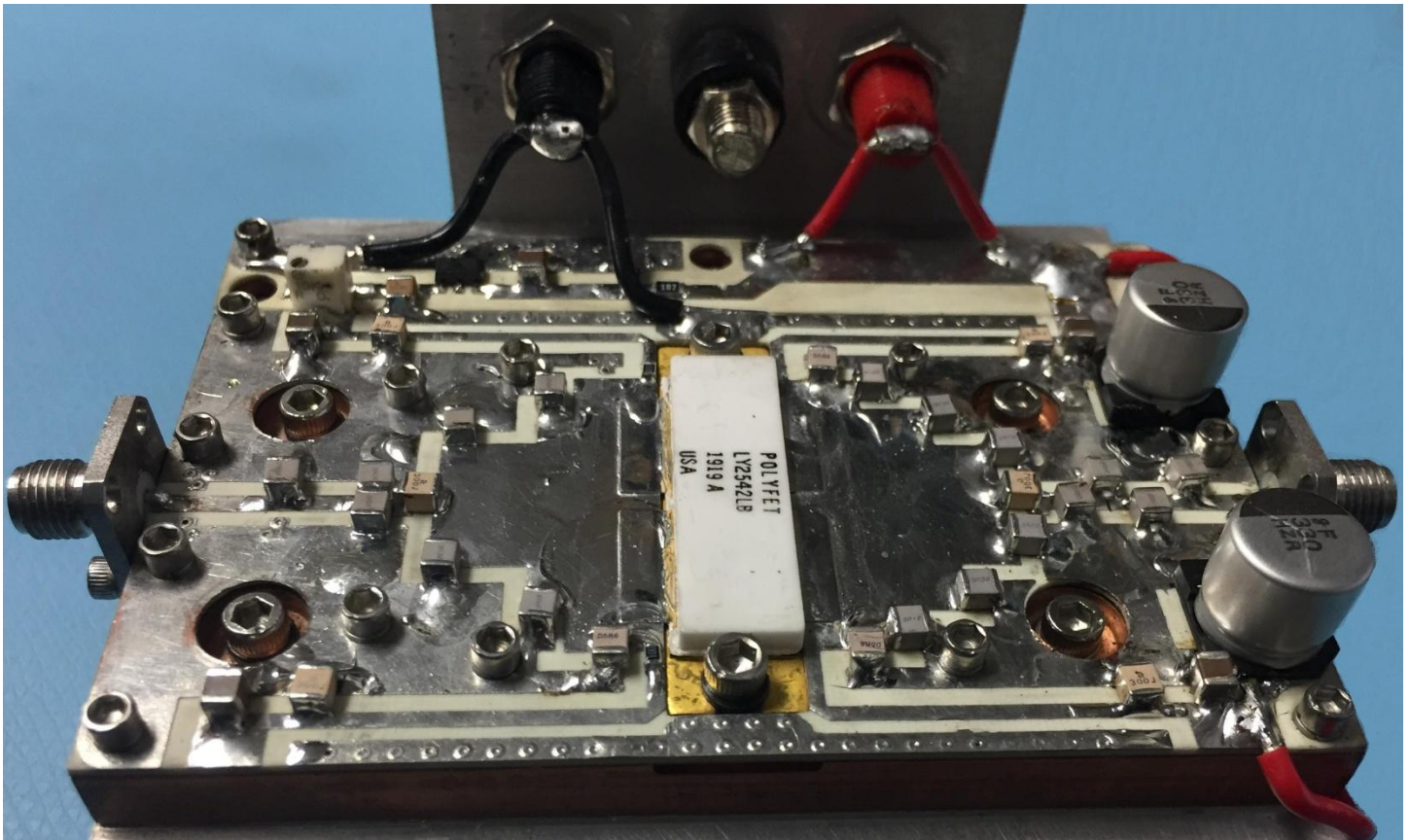
Gain=15dB

Vds=50VDC

Idq=100mA

47.5 %(avg) Efficiency

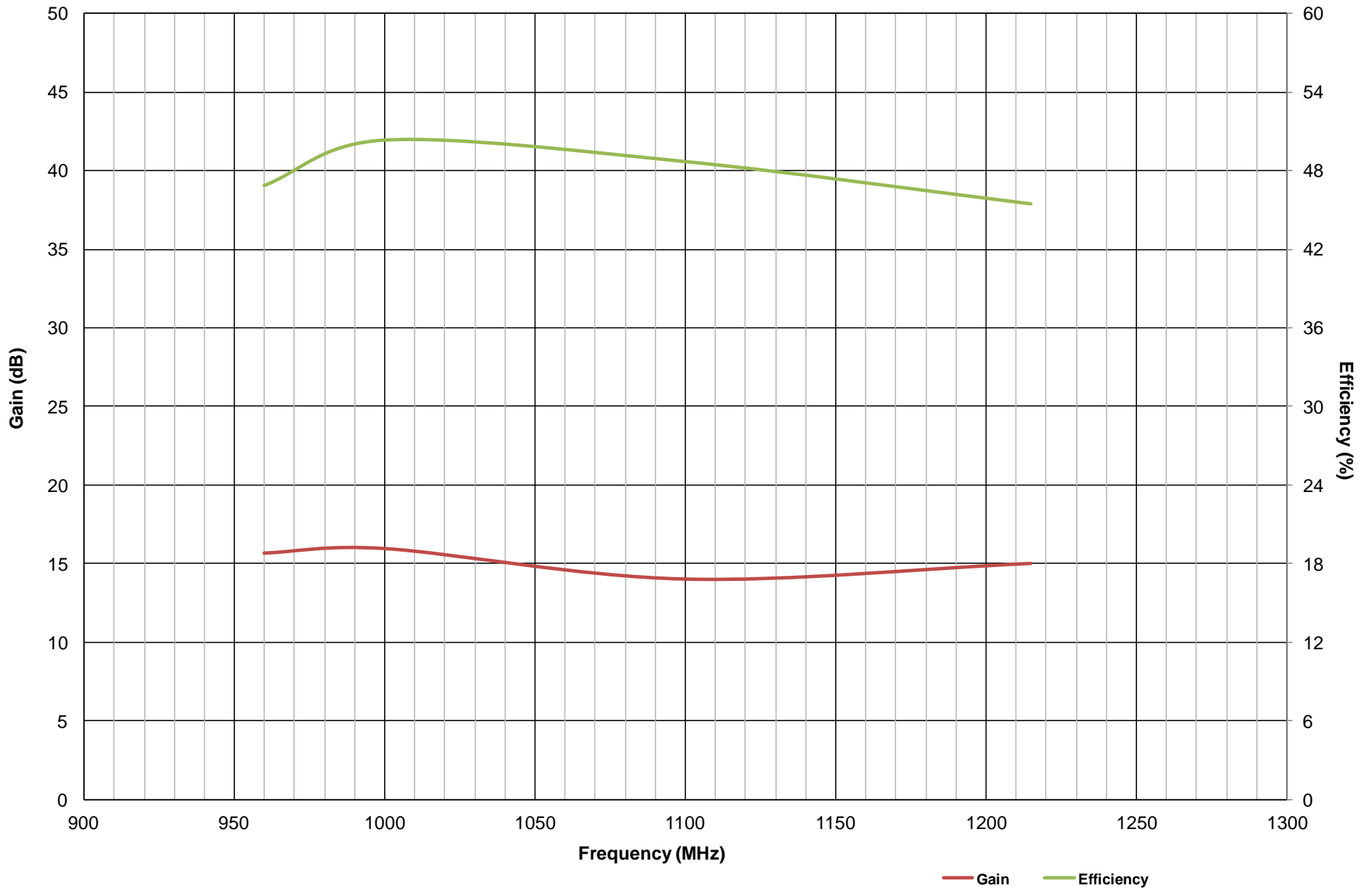
LY2542LB



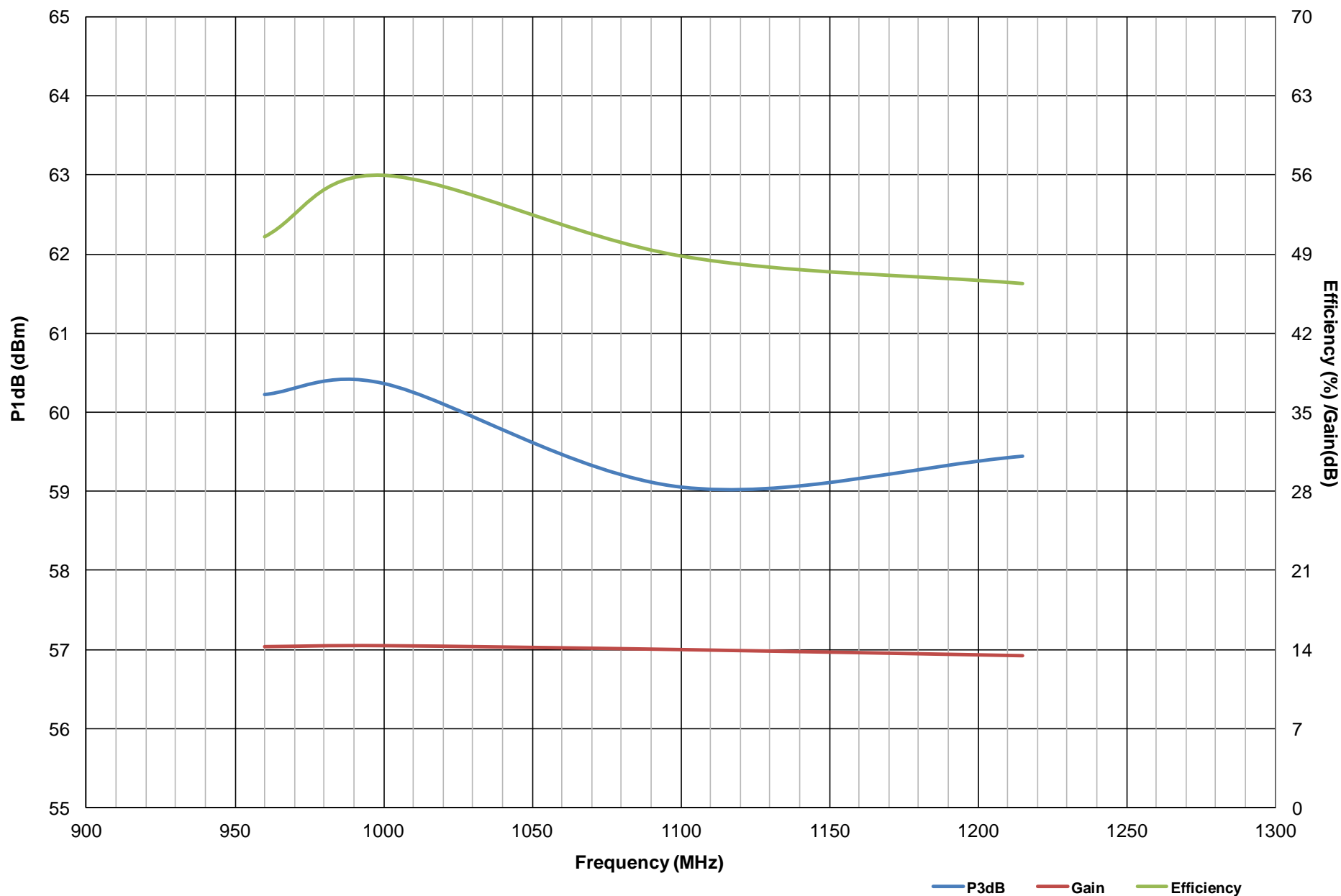
Order of Operations:

1. Review amplifier's performance curves in the data package to learn its RF power limitations.
2. Terminate the RF In/Out connectors to 50 ohm source and load impedance.
3. Connect Ground and Vds banana jacks to DC power supply.
4. Apply 50VDC to Vds voltage banana jack.
5. Verify Idq= 100mA (amps)
6. Apply Pulse RF drive signal PW=128us, T=1.28ms (refer to curves in data package to avoid overdrive).
7. Avoid allowing the base plate to reach 85 deg C by using proper cooling techniques.

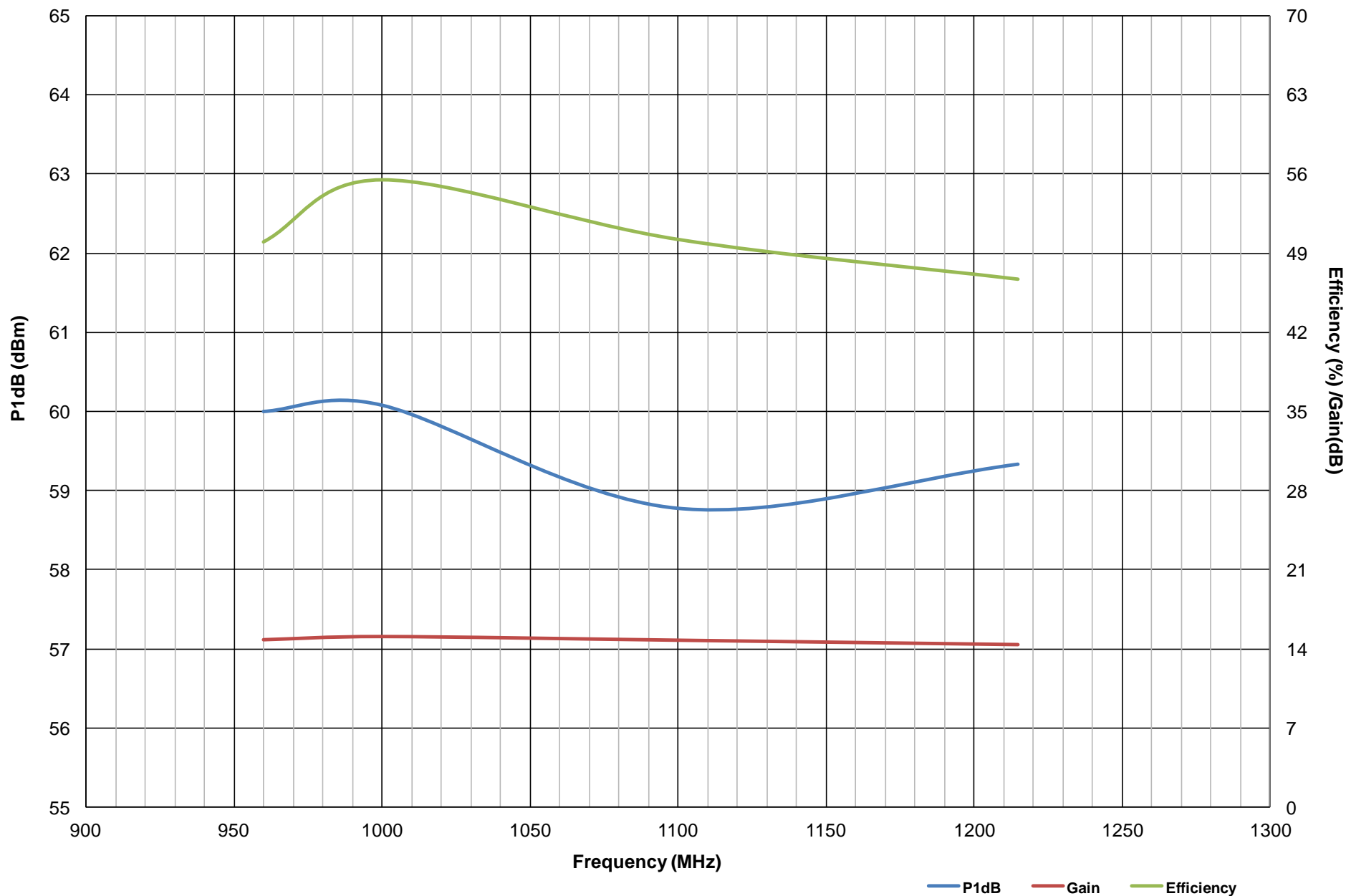
TB271 LY2542LB Gain/Efficiency vs. Frequency: Vds = 50VDC, Idq = 100mA, Pout = 800 Watt, D.C. = 10%, Pulse Width = 128us

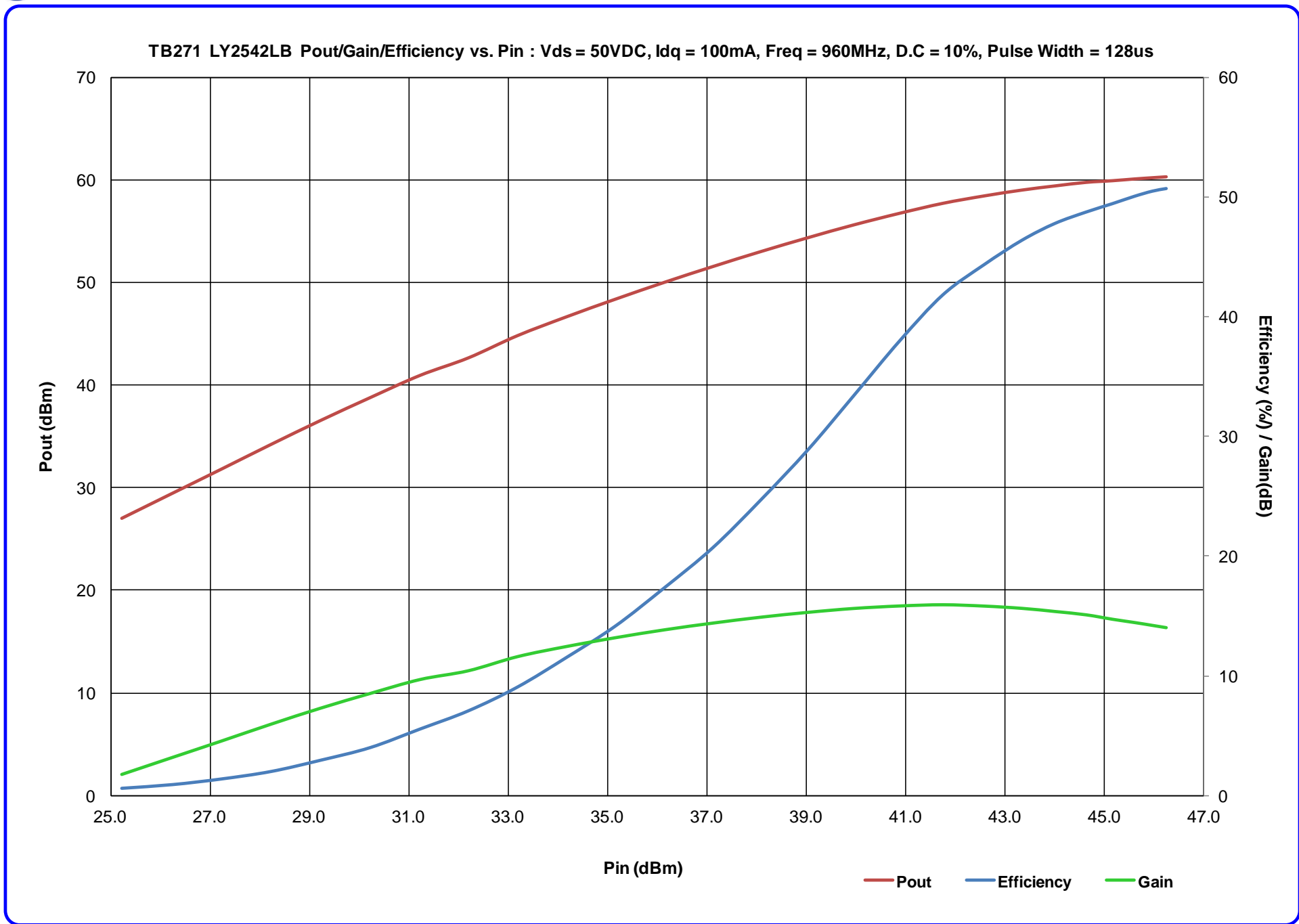


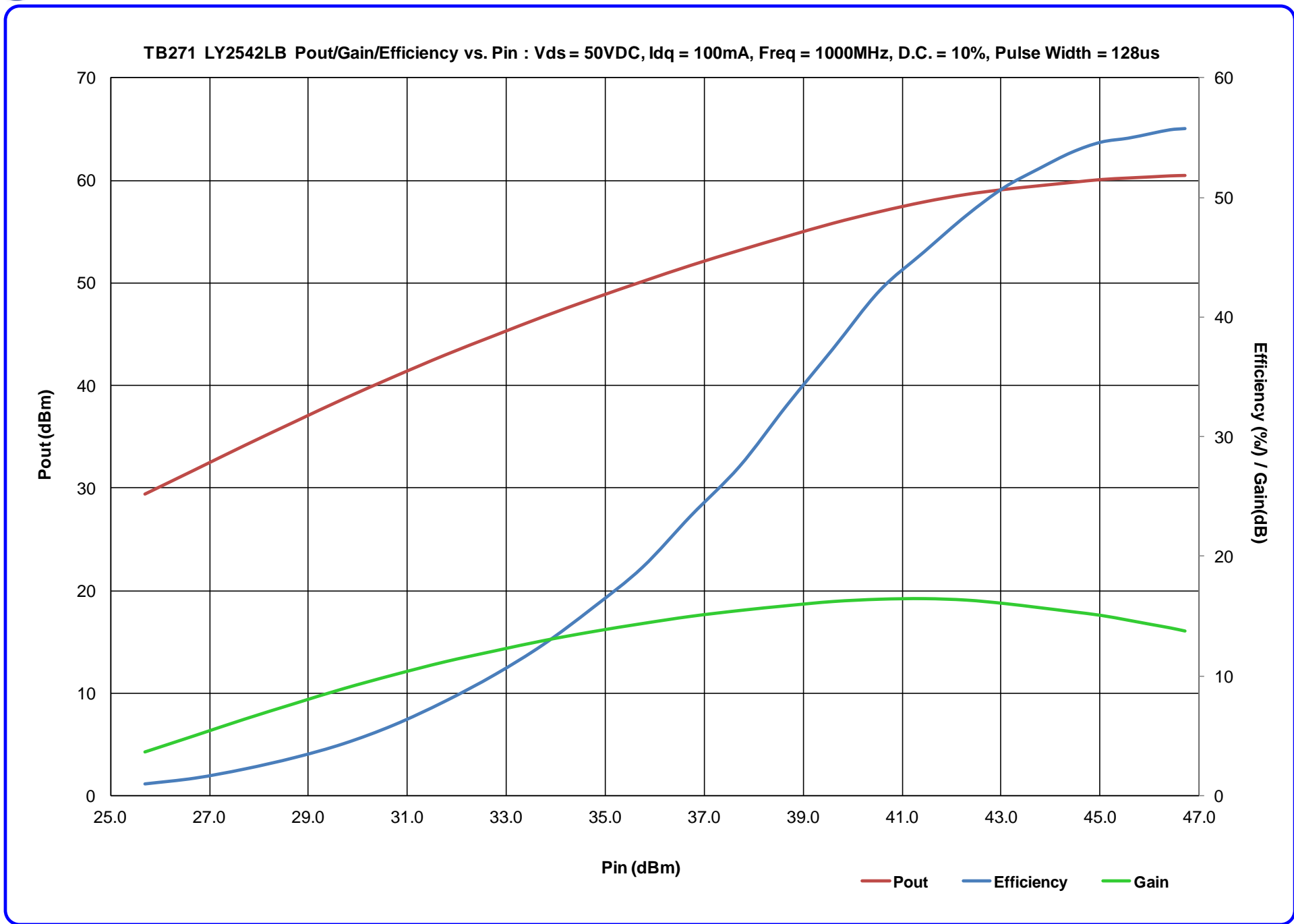
TB271 LY2542LB P3dB/Gain/Efficiency vs. Frequency: Vds = 50Vdc, Idq = 100mA, , D.C. = 10%, Pulse Width = 128us

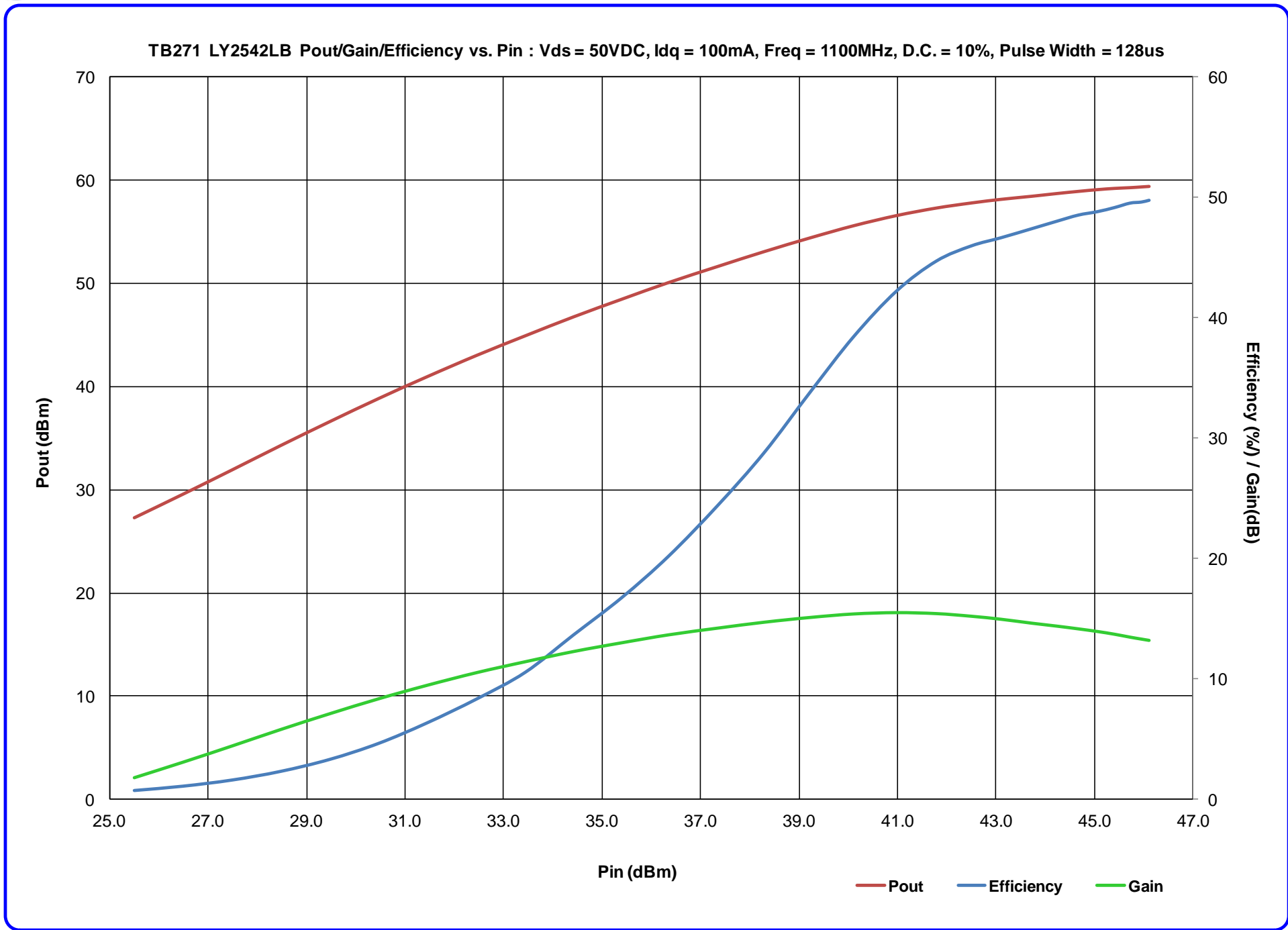


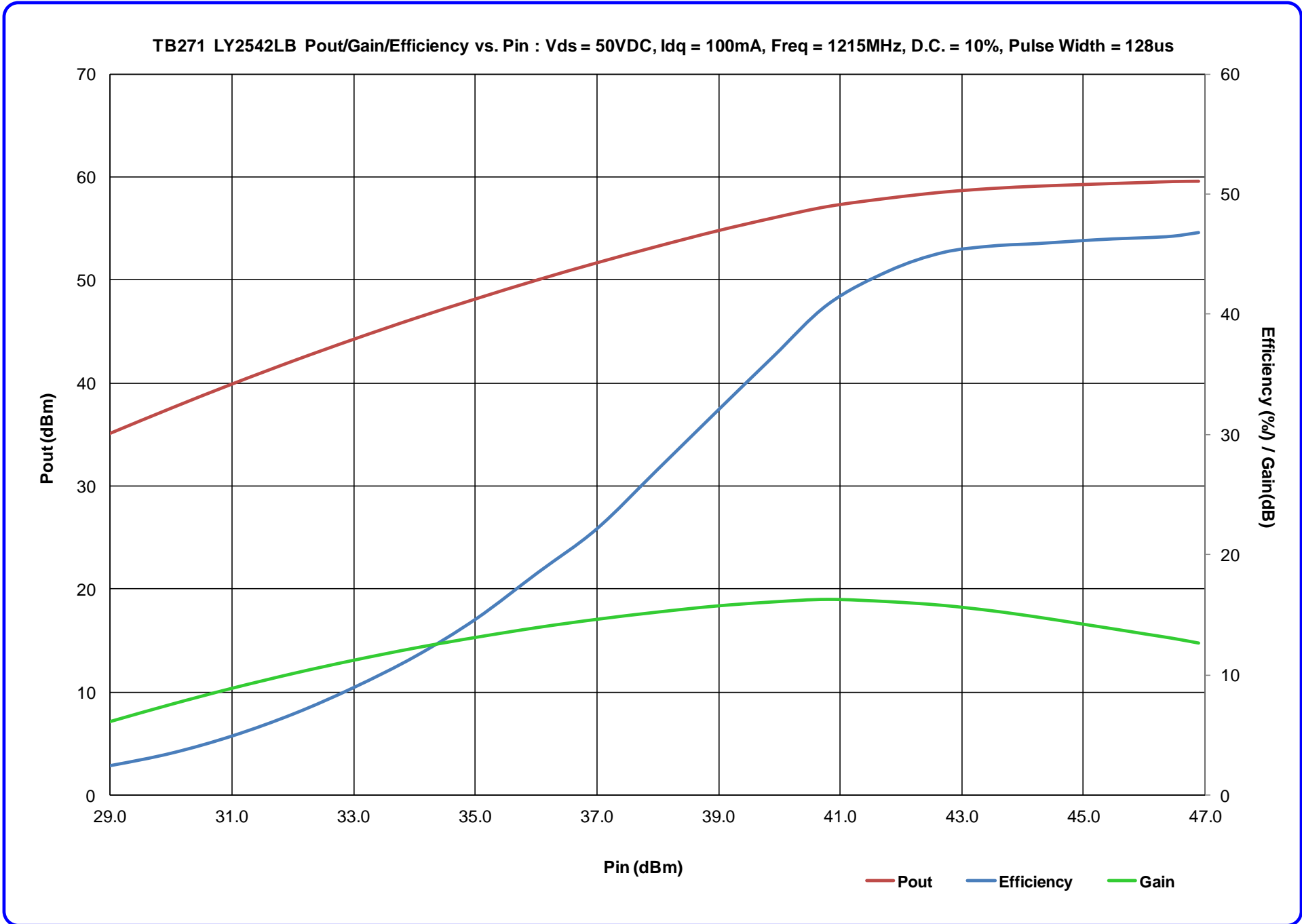
TB271 LY2542LB P1dB /Gain/Efficiency vs. Frequency: Vds = 50VDC, Idq = 100mA, , D.C. = 10%, Pulse Width = 128us





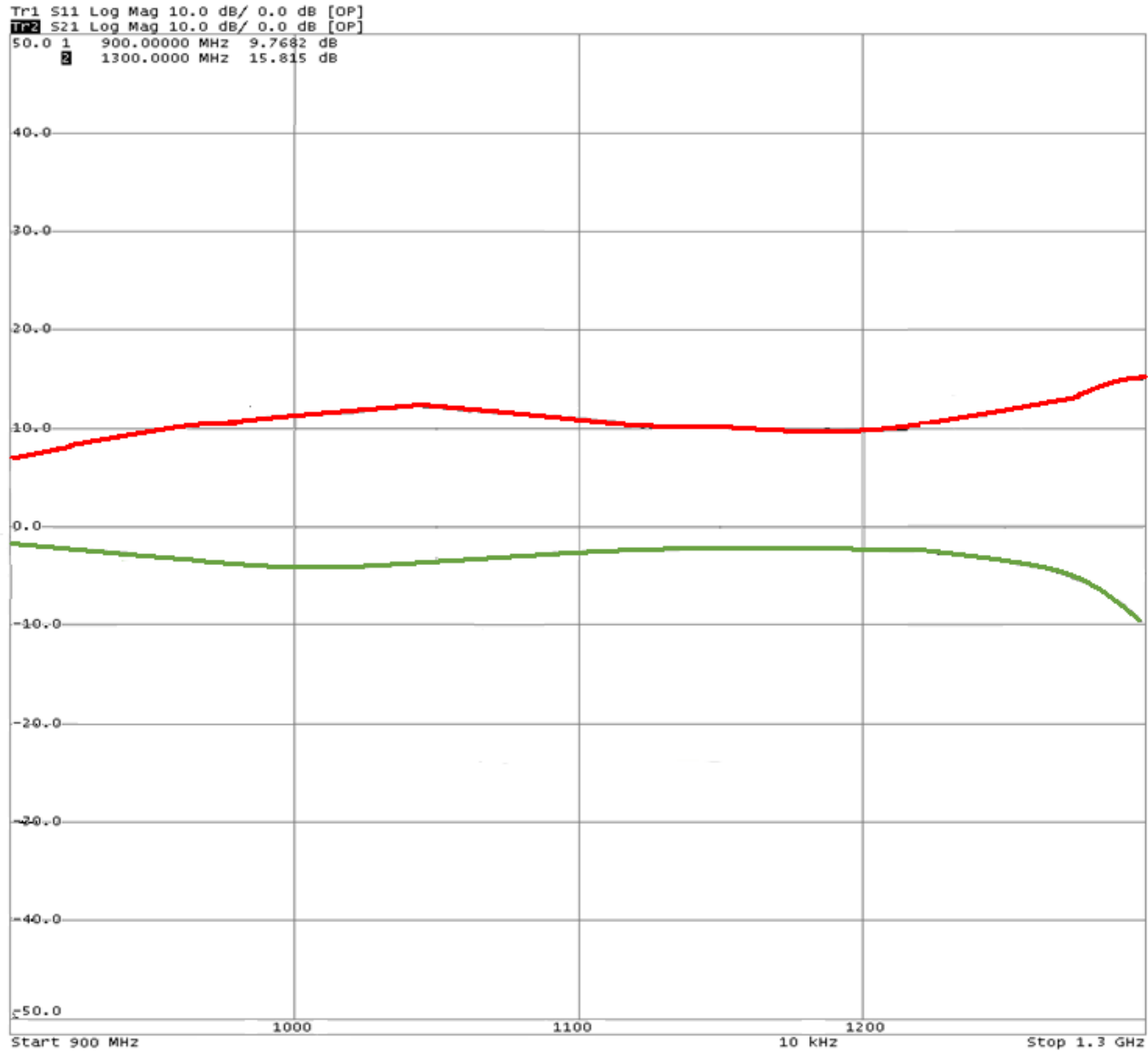


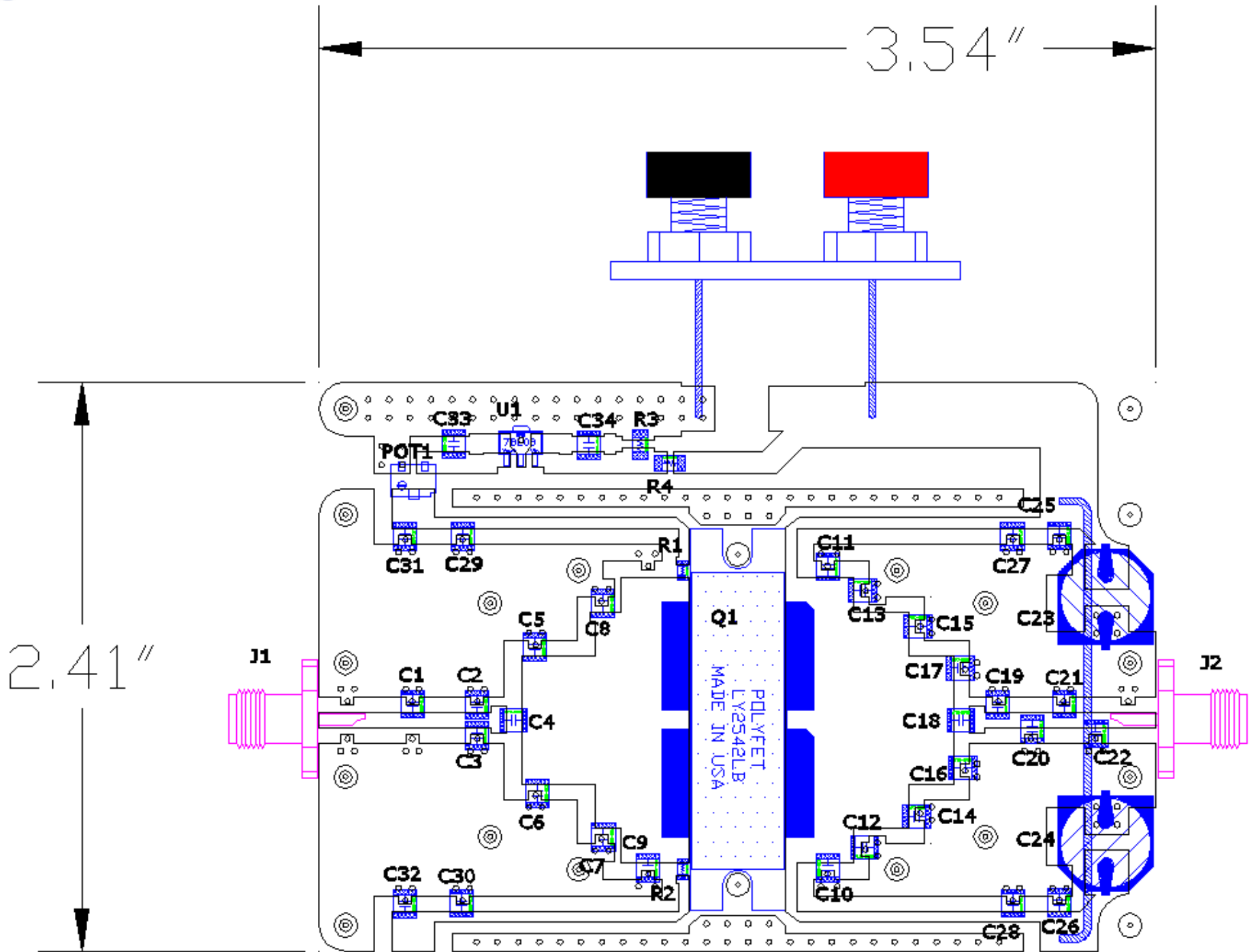




TB271 LY2542LB Freq: 900-1300MHz

VDS = 50VDC, Pin = 0dBm, Idq = 1000mA





TB271			
NOMENCLATURE	DESCRIPTION	VENDER	VENDER PART #
C1,C20	2.0pF +/-2% Ultra-low ESR, Microwave Cap., 1111N	Passive Plus, Inc	1111N2R0BW501
C2	3.0pF +/-2% Ultra-low ESR, Microwave Cap., 1111N	Passive Plus, Inc	1111N3R0BW501
C3,C7,C8	2.2pF +/-2% Ultra-low ESR, Microwave Cap., 1111N	Passive Plus, Inc	1111N2R2BW501
C4,27,C28,C29,C30	30pF +/-2% Ultra-low ESR, Microwave Cap., 1111N	Passive Plus, Inc	1111N300BW501
C18	39pF +/-2% Ultra-low ESR, Microwave Cap., 1111N	Passive Plus, Inc	1111N390BW501
C5,C6,C15,C14	3.3pF +/-2% Ultra-low ESR, Microwave Cap., 1111N	Passive Plus, Inc	1111N3R3BW501
C9,C11,C10	5.6pF +/-2% Ultra-low ESR, Microwave Cap., 1111N	Passive Plus, Inc	1111N5R6BW501
C12,C13	5.1pF +/-2% Ultra-low ESR, Microwave Cap., 1111N	Passive Plus, Inc	1111N5R1BW501
C16,C17	2.1pF +/-2% Ultra-low ESR, Microwave Cap., 1111N	Passive Plus, Inc	1111N2R1BW501
C21	1.8pF +/-2% Ultra-low ESR, Microwave Cap., 1111N	Passive Plus, Inc	1111N1R8BW501
C22,C19	1.5pF +/-2% Ultra-low ESR, Microwave Cap., 1111N	Passive Plus, Inc	1111N1R5BW501
C33	100,000pF +/-10% RF By-Pass Capacitors,1111X	Passive Plus, Inc	1111X104KW500
C23,C24	Aluminum Electrolytic Capacitors - SMD 330UF 50V SMD 20% Tol. AEC-Q200	United Chemi-Con	EMZR500ADA331MJA0G
C25,C26,C31,C32,C34	10uF 50V 10% Chip Multilayer Ceramic Capacitors, SMD case:1210	Murata Electronics	GCM32EL8EH106KA07L
R1,R2	Thick Film Resistors - SMD 0805 10ohms 0.5W 1% AEC-Q200	Panasonic	ERJ-P06F10R0V
R3,R4	RES 10K OHM 1/4W 5% 1206 SMD	Rohm Semiconductor	MCR18EZPJ103
POT1	Trimmer Resistors - 10K OHM 0.25W SMD	Murata Electronics North America	PVG5A103C03R00
U1	IC 8V 100 mA POSITIVE REGULATOR SOT-89	NJR	NJM78L08UA-TE2
Q1	LDMOS	Polyfet RF Devices	LY2542LB
J1,J2	PE4000-SF SMA Female; 4 Hole Panel Mount	Pasternack	PE4000-SF
PCB	0.762mm [0.030"] Thick, er=3.48, 1oz,Cu	Rogers Corp.	RO4350B