

TB264

LS2541HF

Frequency = 1-30MHz

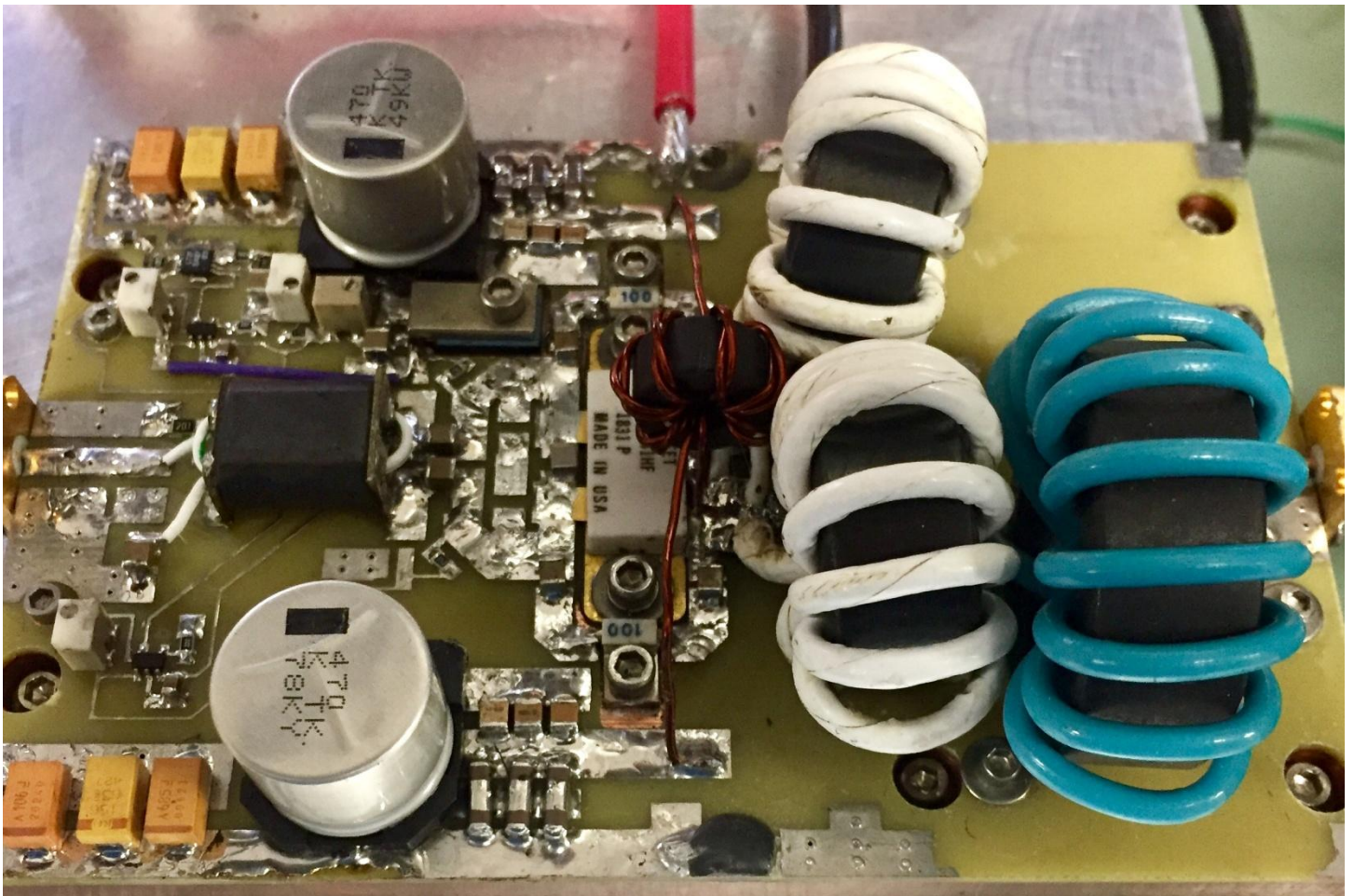
Pout = 53dBm

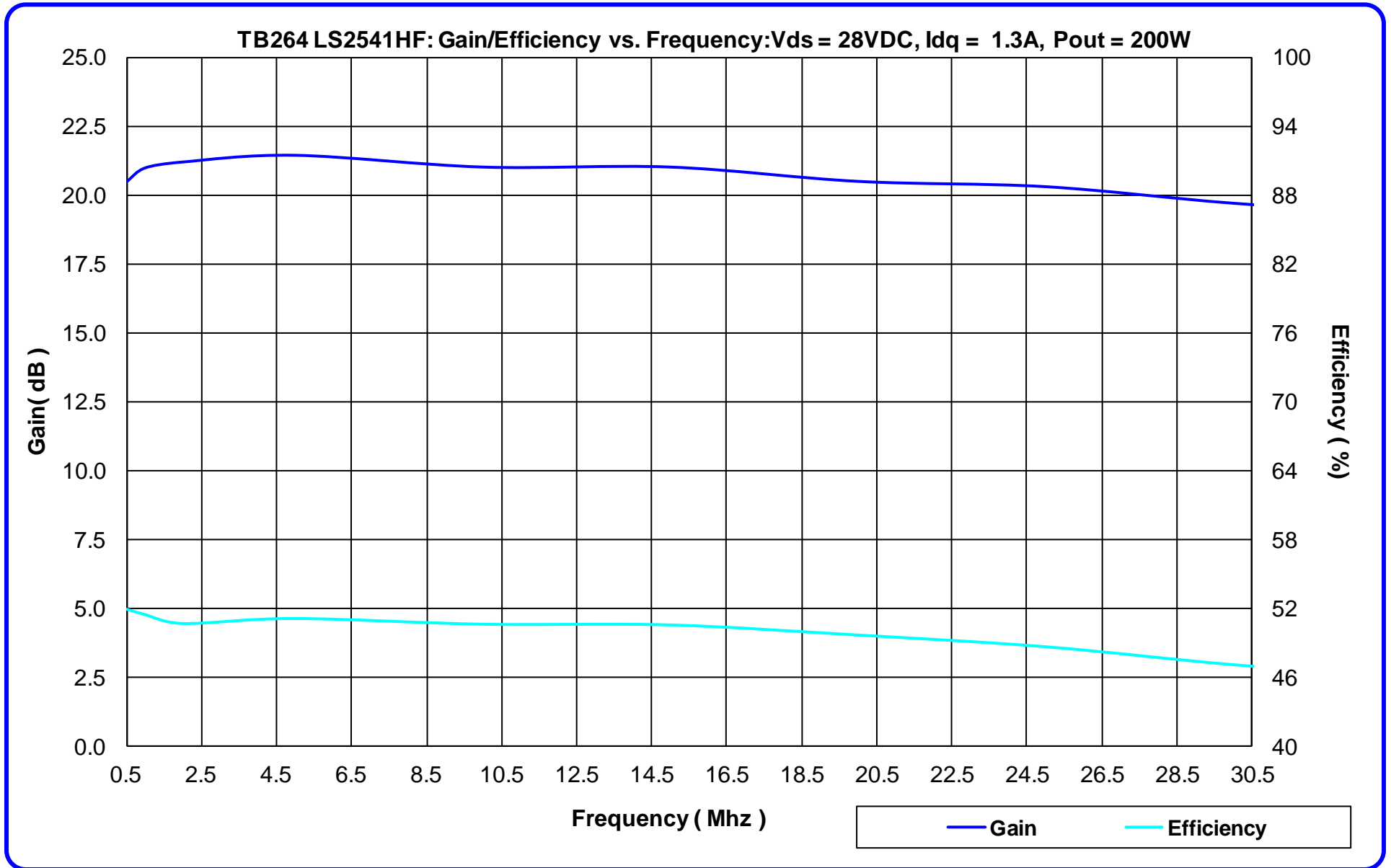
Gain (avg) = 20.7dB +/- 0.85dB

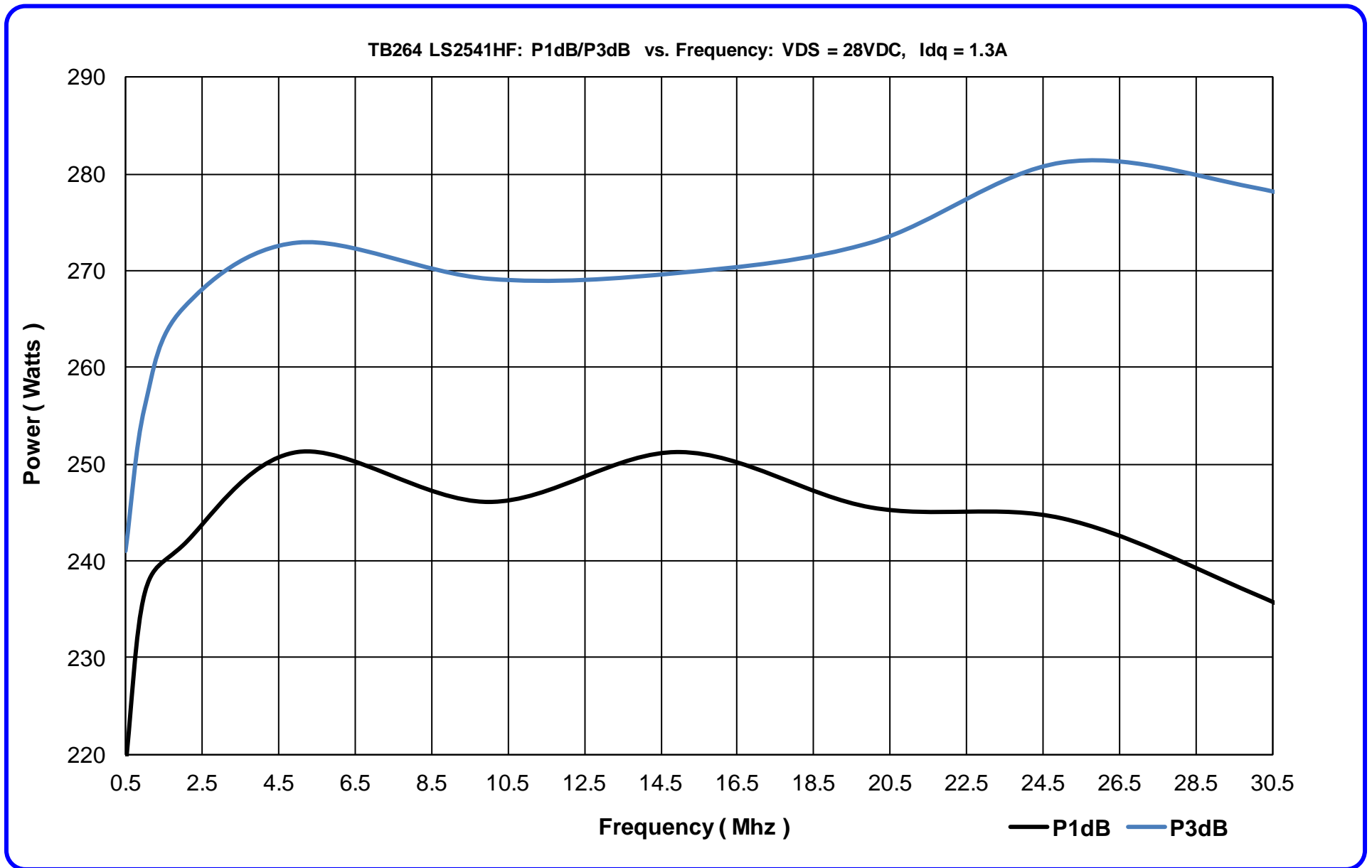
Vds = 28VDC

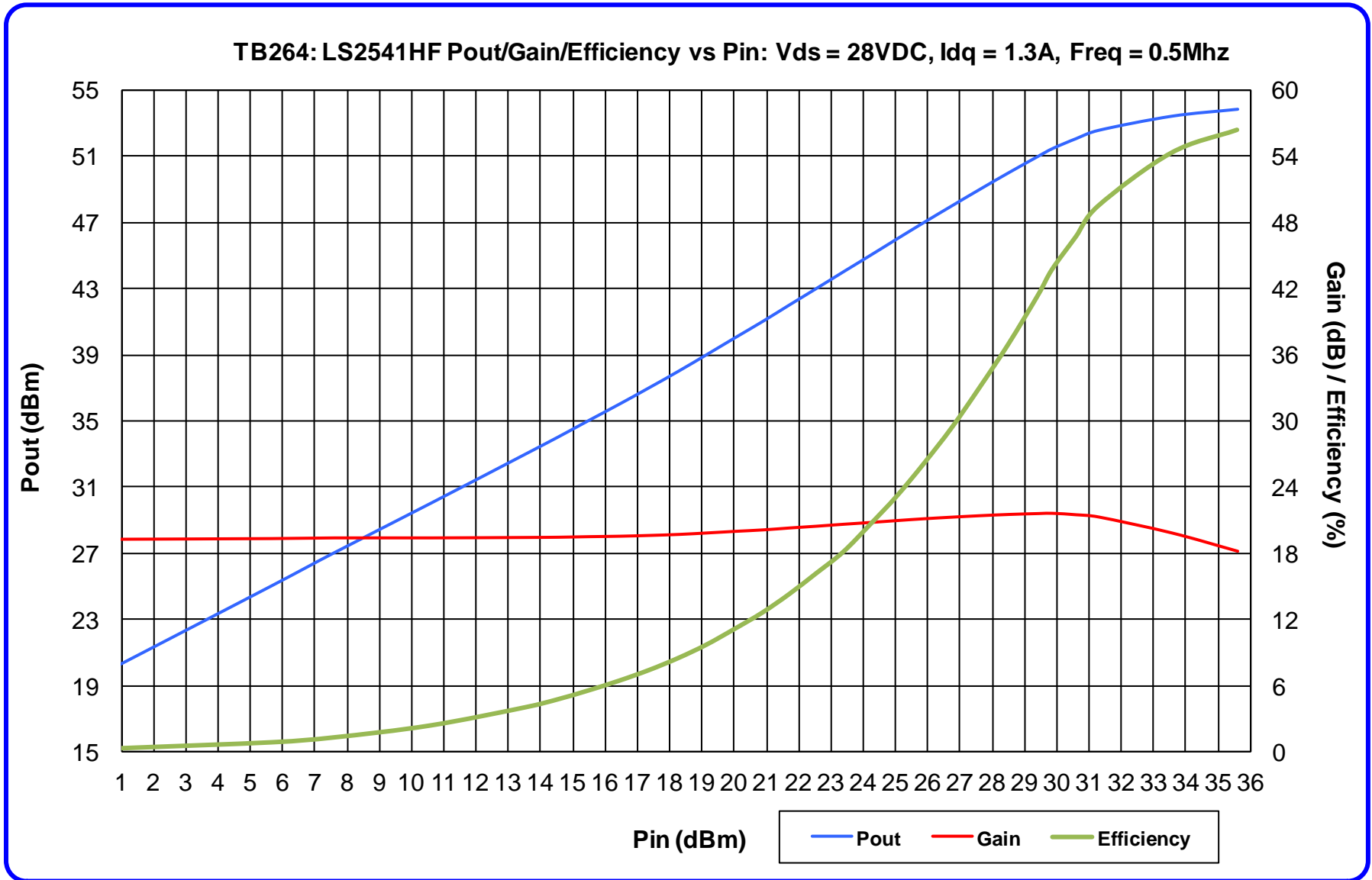
Idq = 1.3A

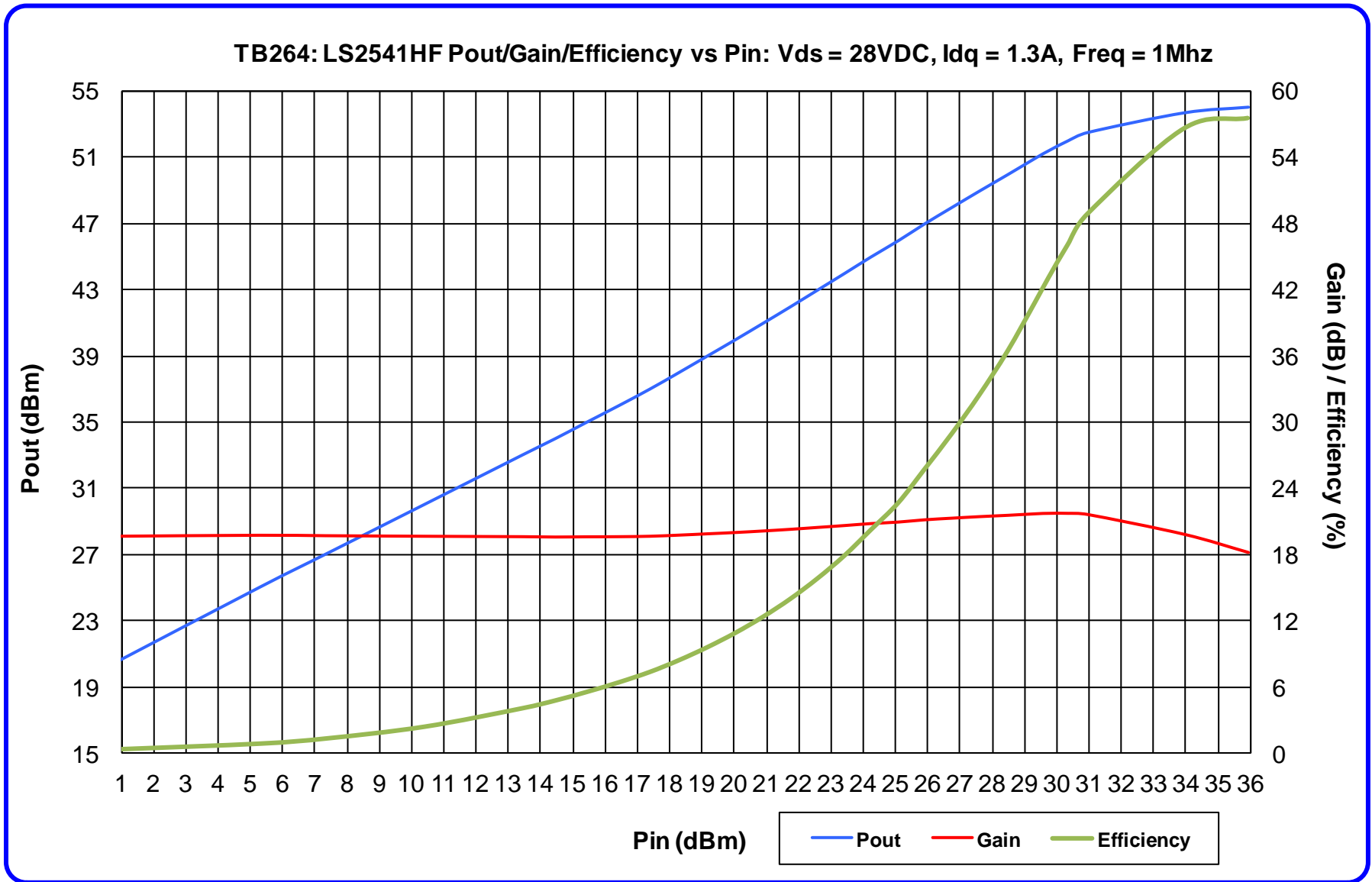
Efficiency (avg) = 50% +/- 2.0%

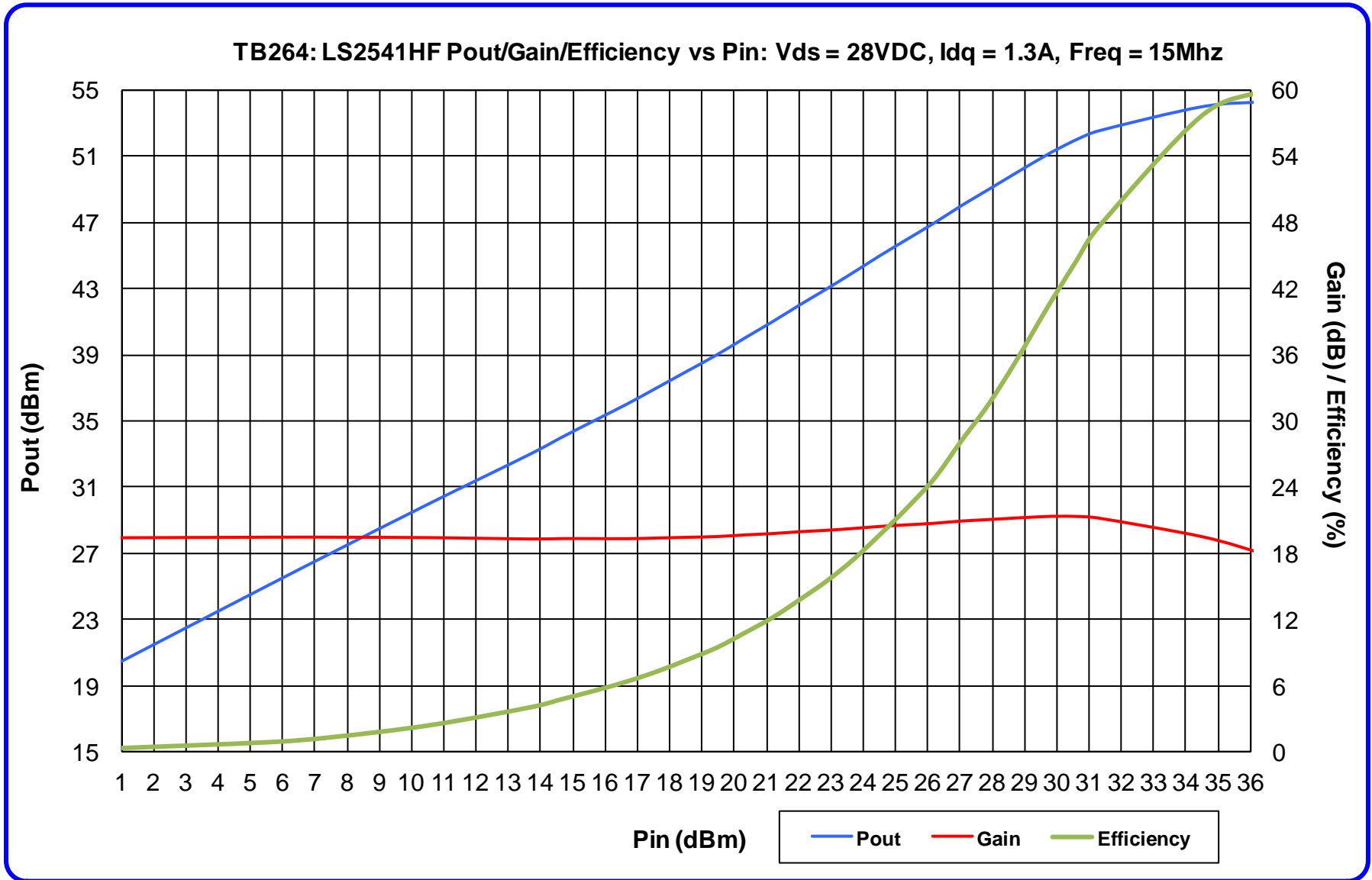


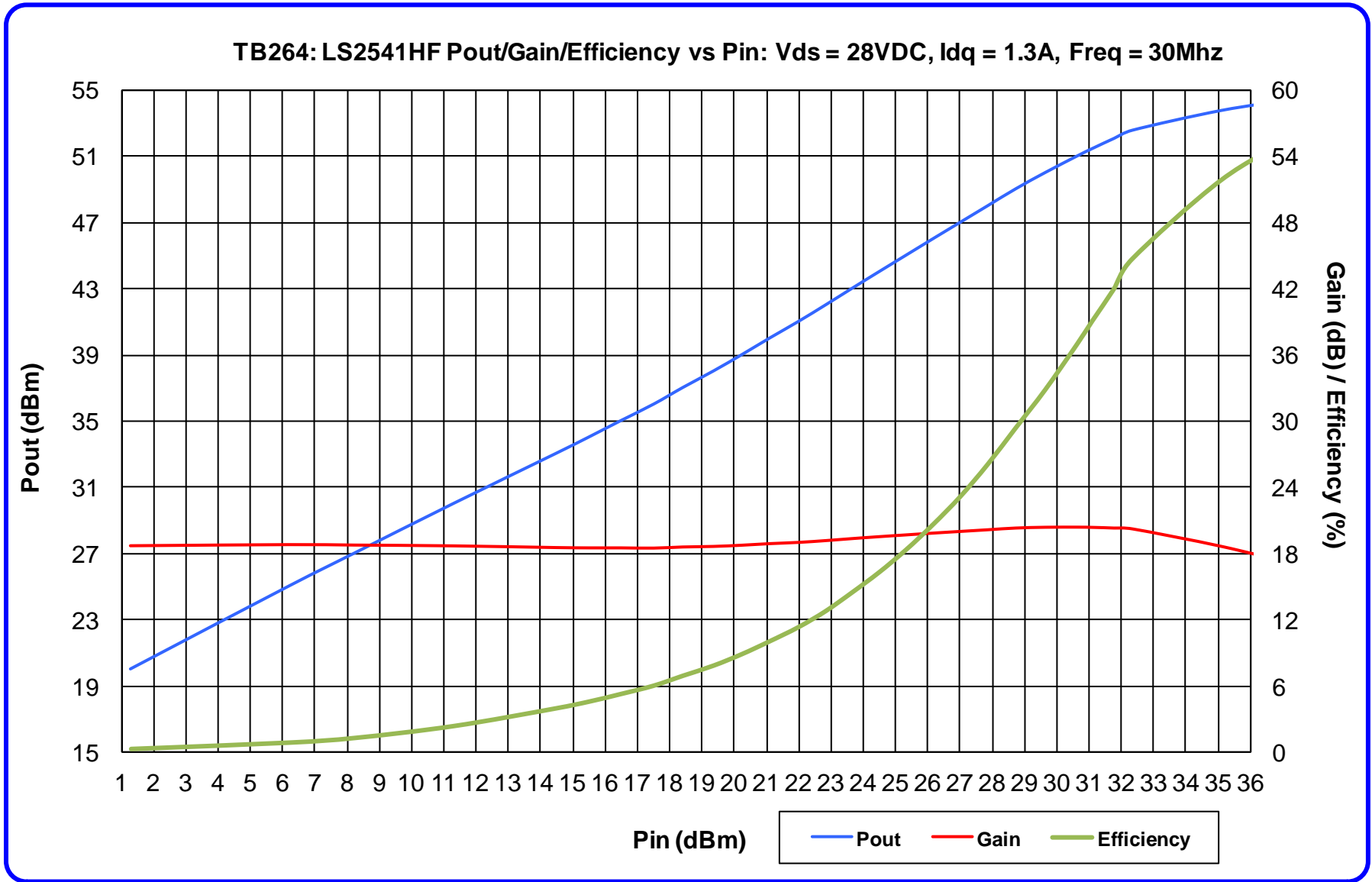


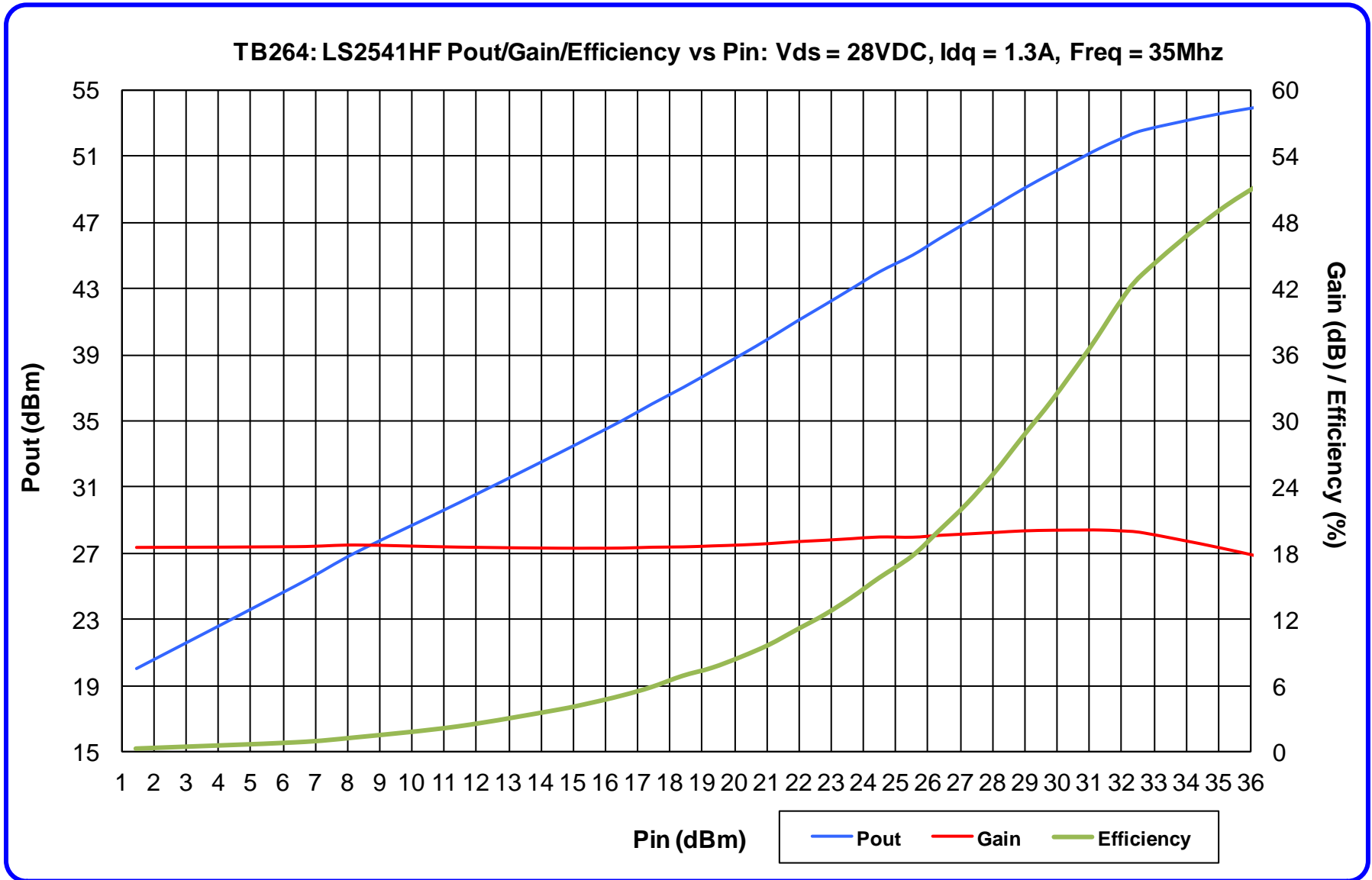


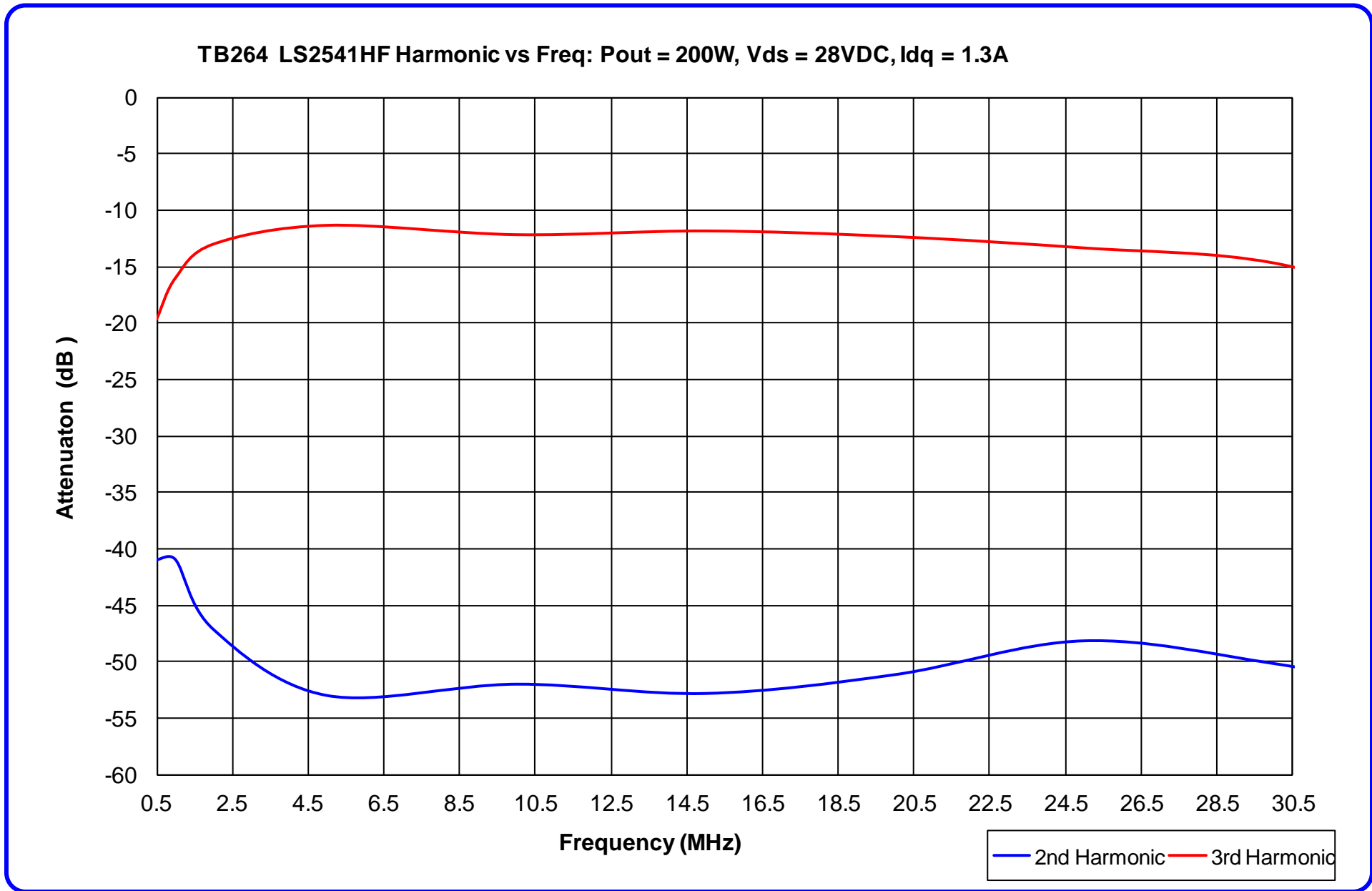


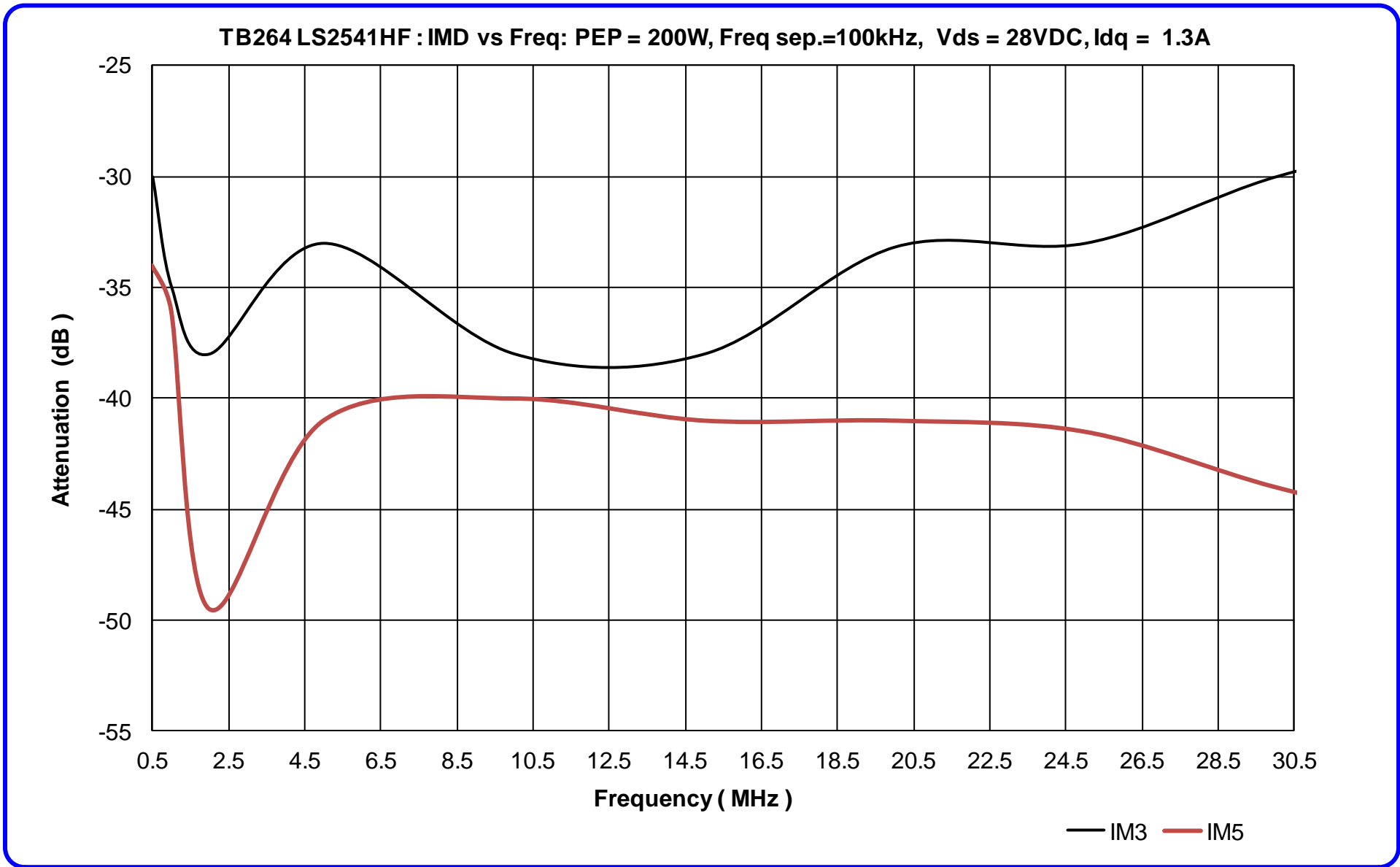


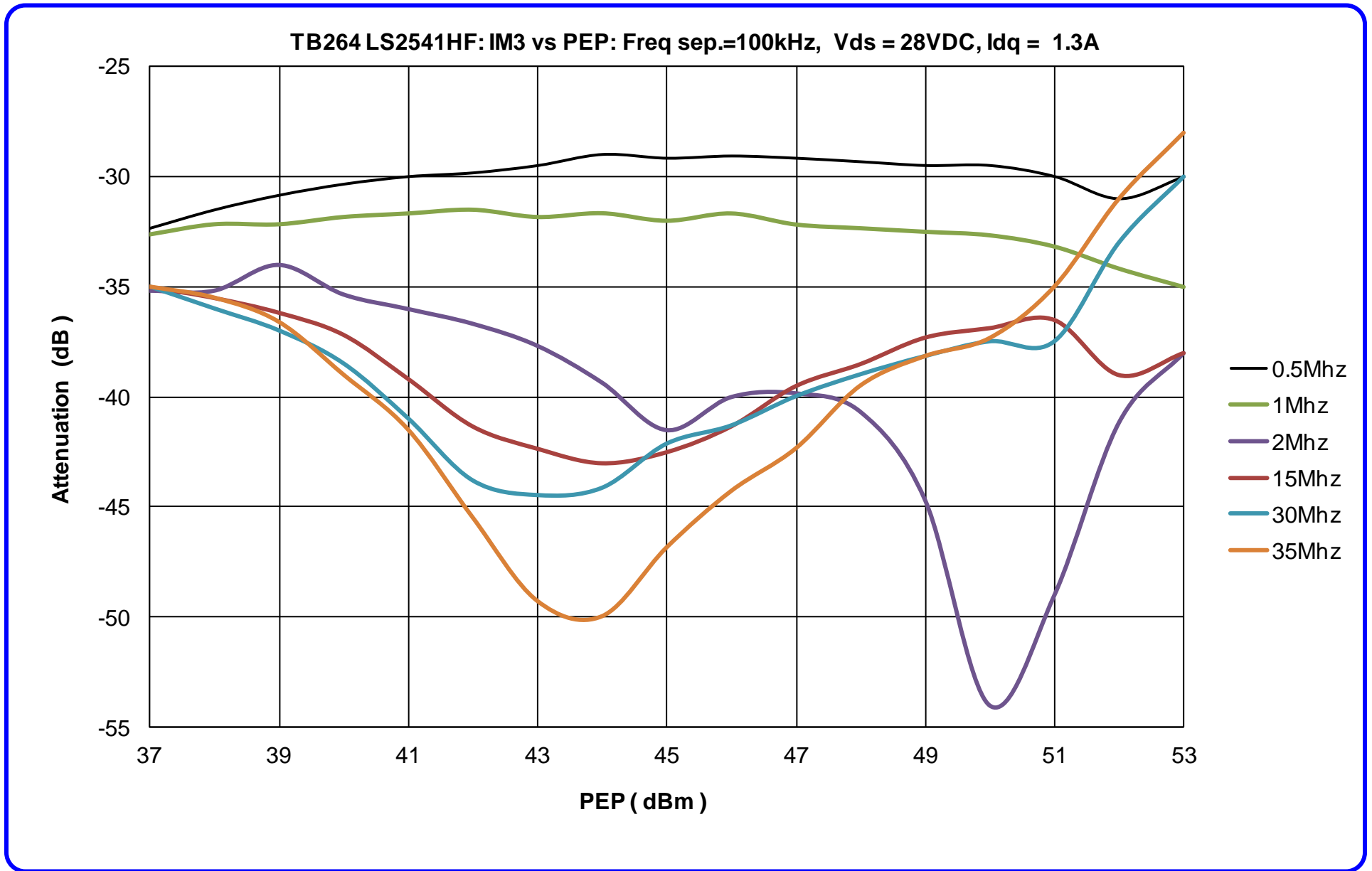


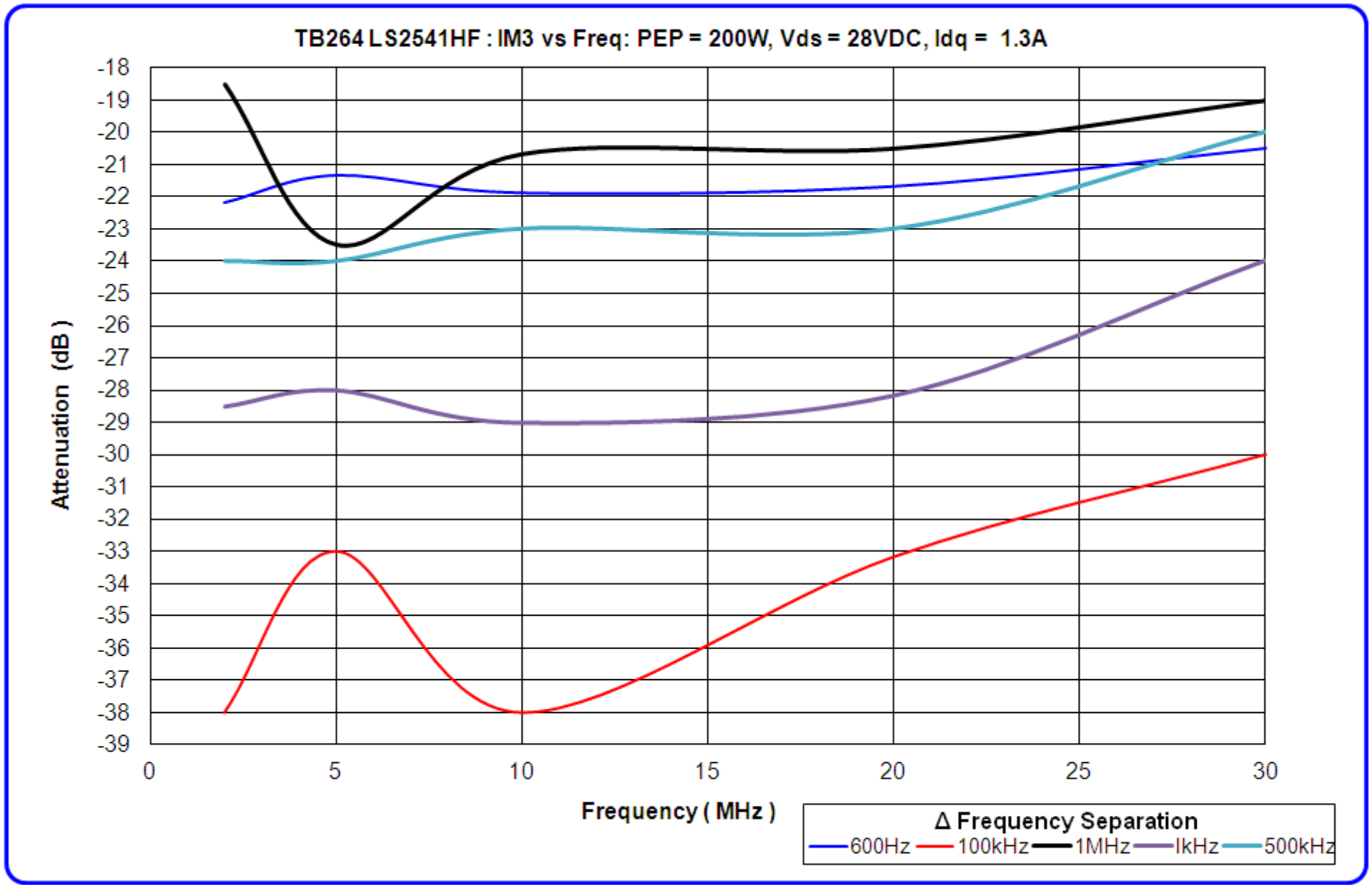


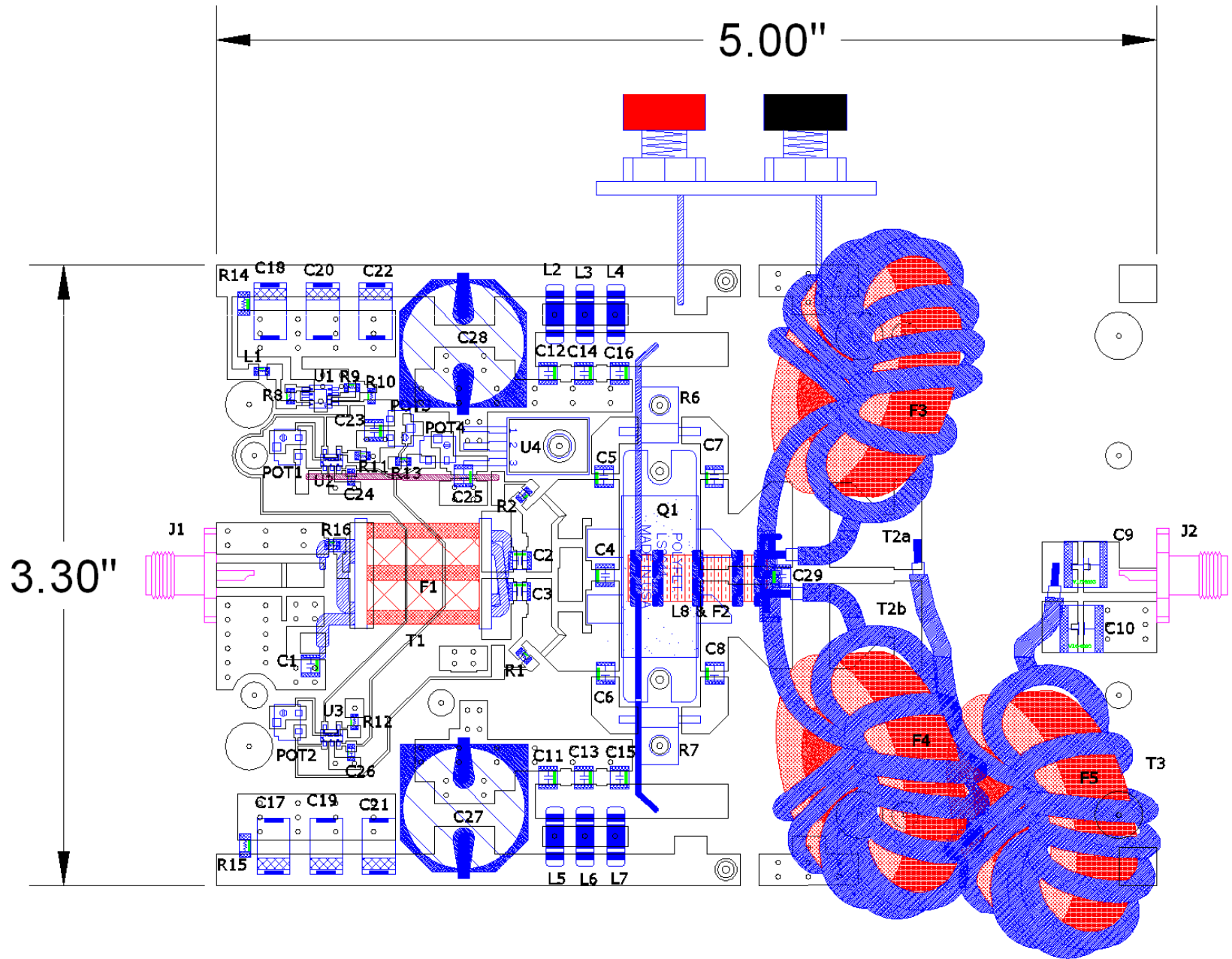




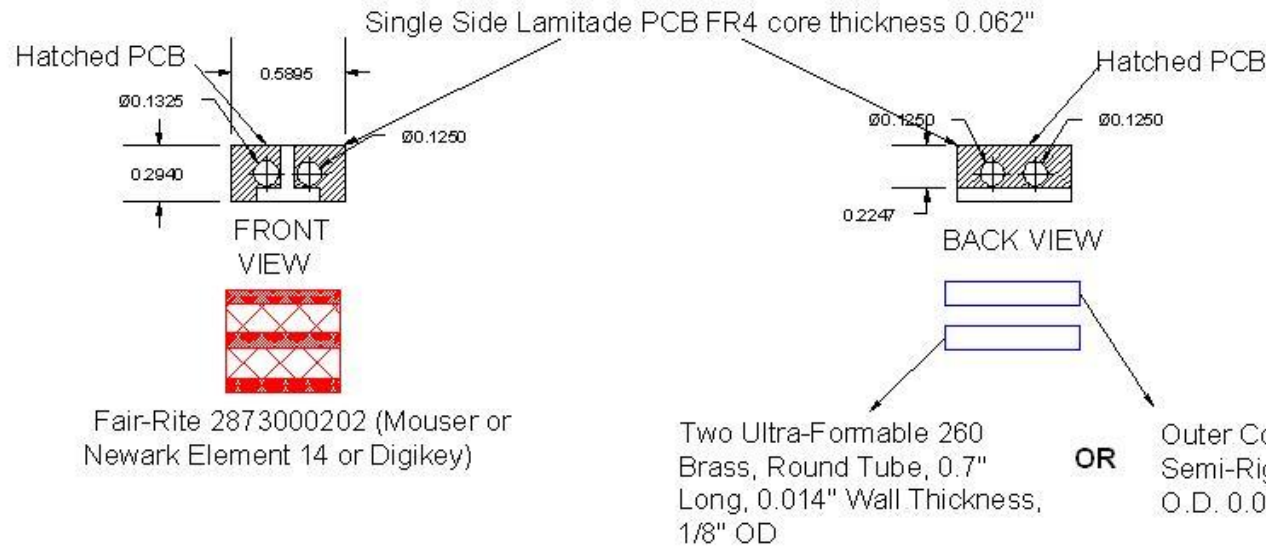








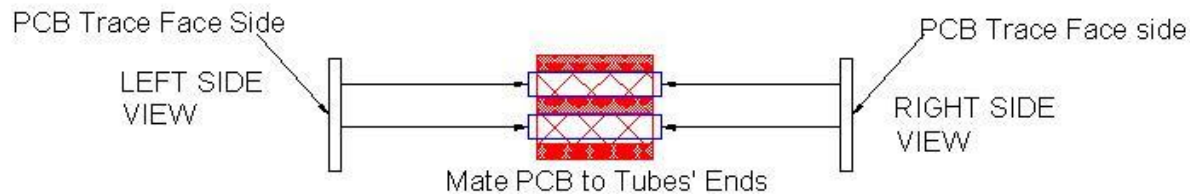
T1 Materials



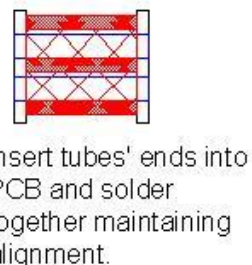
STEP 1



STEP 2

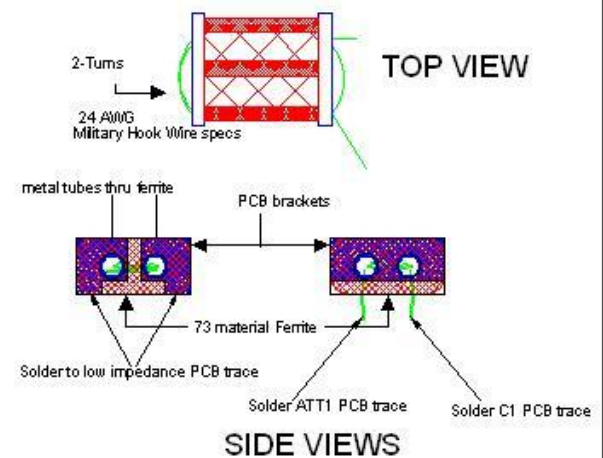


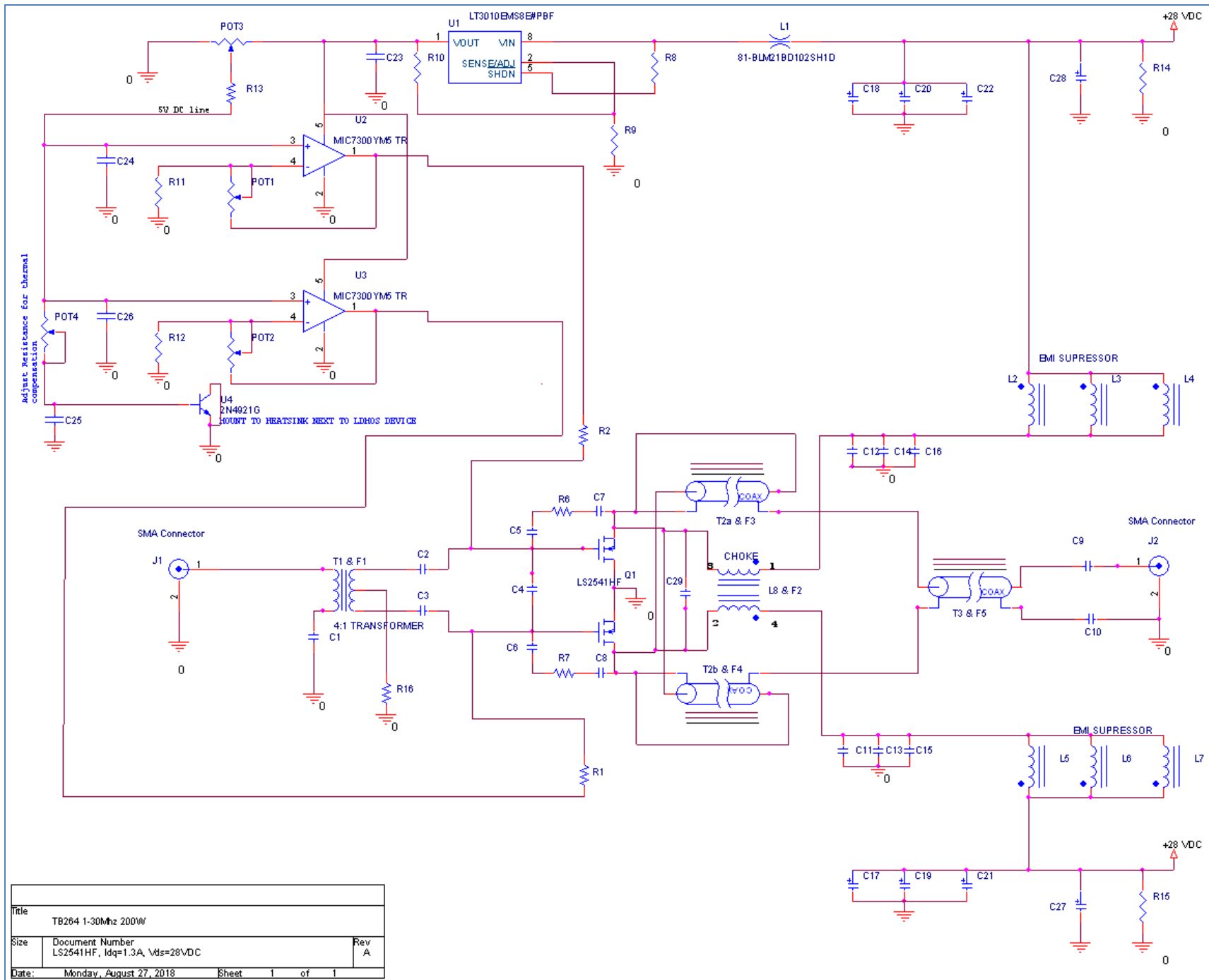
STEP 3



IMPORTANT:
Keep tubes' ends flush with PCB brackets.

STEP 4





Title		
TB264 1-30MHz 200W		
Size	Document Number	Rev
	LS2541HF, Idq=1.3A, Vds=28VDC	A
Date:	Monday, August 27, 2018	Sheet 1 of 1

TB264			
NOMENCLATURE	DESCRIPTION	VENDER	VENDER PART #
C1,C2,C3,C5,C6,C7,C8 C15, C16, C23,C25	100,000pF +/-10% RF By-Pass Capacitors,1111X	Passive Plus, Inc	111X104KW500
C4	33pF +/-2% Ultra-low ESR, Microwave Cap., 1111N	Passive Plus, Inc	1111N330GW500
C9,C10	470000pF +/-20% High Q, 150V	Passive Plus, Inc	2225X474MW151X
C11,C13	1000pF +/-2% Ultra-low ESR, Microwave Cap., 1111N	Passive Plus, Inc	1111N102GW500
C12,C14	10,000pF +/-10% RF By-Pass Capacitors,1111X	Passive Plus, Inc	111X103KW500
C17,C18	6.8uF 63V 20% ERS=100Ohms Tantalum Capacitors SMD	AVX	TCJE685M063R0100
C19,C20	10uF 63V 20% ERS=100Ohms Tantalum Capacitors SMD	AVX	TCJE106M063R0100
C21,C22	15uF 63V 20% ERS=150Ohms Tantalum Capacitors SMD	Kemet	T521X156M063ATE150
C24,C26	10uF 10%TAMCERAM HIGH CAP. SMD 805	Johanson Dielectrics	100r15x106kv4e
C27,C28	470uF 80V Panasonic Aluminum Electrolytic Cap. SMD	Panasonic Electronic Components	EEE-TK1K471AM
C29	470pF +/-2% Ultra-low ESR, Microwave Cap., 1111N	Passive Plus, Inc	1111N471GW500
R1,R2,R8,R9	10K 1/8W 0805 SMD	Rohm Semiconductor	MCR10EZHJ103
R6,R7	100 Ohm 30W Flange resistor	Innovative Power Products	IPP-RB201-100
R10	56K 1/8W 0805 SMD	Rohm Semiconductor	MCR10EZPJ563
R11,R12	2.2K 1/8W 0805 SMD	Rohm Semiconductor	MCR10EZPJ222
R13	390 1/8W 0805 SMD	Rohm Semiconductor	MCR10EZPJ391
R14,R15	RES 10K OHM 1/4W 5% 1206 SMD	Rohm Semiconductor	MCR18EZPJ103
R16	RES 200 OHM 1/4W 5% 1206 SMD	Rohm Semiconductor	MCR18EZPJ201
POT1,POT2,POT3	Trimmer Resistors - 10K OHM 0.25W SMD	Murata Electronics North America	PVG5A103C03R00
POT4	Trimmer Resistors - 100 OHM 0.25W SMD	Murata Electronics North America	PVG5A101C03R00
L1	0805 1kohms HiSpeed EMI Filter Beads,Chokes & Arrays	Murata Electronics North America	81-BLM21BD102SH1D
L2,L3,L4,L5,L6,.L7	EMI/RFI Suppressors & Ferrites 1000pF 100Volts@125C	Tusonix	4700-005LF
L8	Magnetic Wire"W2",Twisted, 6-turns around "F2"	-----	-----
W1	Military Hook-Wire specs 24awg 19 strand	Allied Wire & Cable, INC	M16878/4BEE9
W2	Magnetic Wire,20AWG	www.electromechanicsonline.com	MW200SPNRD
U1	IC REG LDO ADJ 50mA 8-MSOP	Linear Technology	LT3010EMS8E#PBF
U2,U3	Operational Amplifiers - Op Amps SGL RRIO OP AMP	Texas Instruments	LM7321MF/NOPB
U4	Transistors Bipolar - BJT 3A 40V 30W NPN	ON Semiconductor	2N4921G
F1	Binocular Ferrite 73	Mouser Electronics	2873000202
F2	Toroid Ferrite 61 Material	Mouser Electronics	5961001101
F3,F4	Toroid Ferrite 43 Material	Amidon	FT100B-43
F5	Toroid Ferrite 61 Material	Amidon	FT150A-K
T1	wire "W1" 2 turns around "F1"	-----	-----
T2a,T2b	21 ohm coaxial cable, 9 turns around each ferrite F3 and F4	Belden	83307E-009 - MIL-W-16878/4 (Type E)
T3	50 ohm coaxial cable, 9 turns around F5	Amawave	UT-085C-FORM-F
Q1	LDMOS	Polyfet RF Devices	LS2541HF
J1,J2	PE4000-SF SMA Female; 4 Hole Panel Mount	Pasternack	PE4000-SF
PCB	185HR 0.059", 1oz/1oz er+4.01	Isola	185HR