

TF235

Frequency=30-512 MHz

Pout=100W

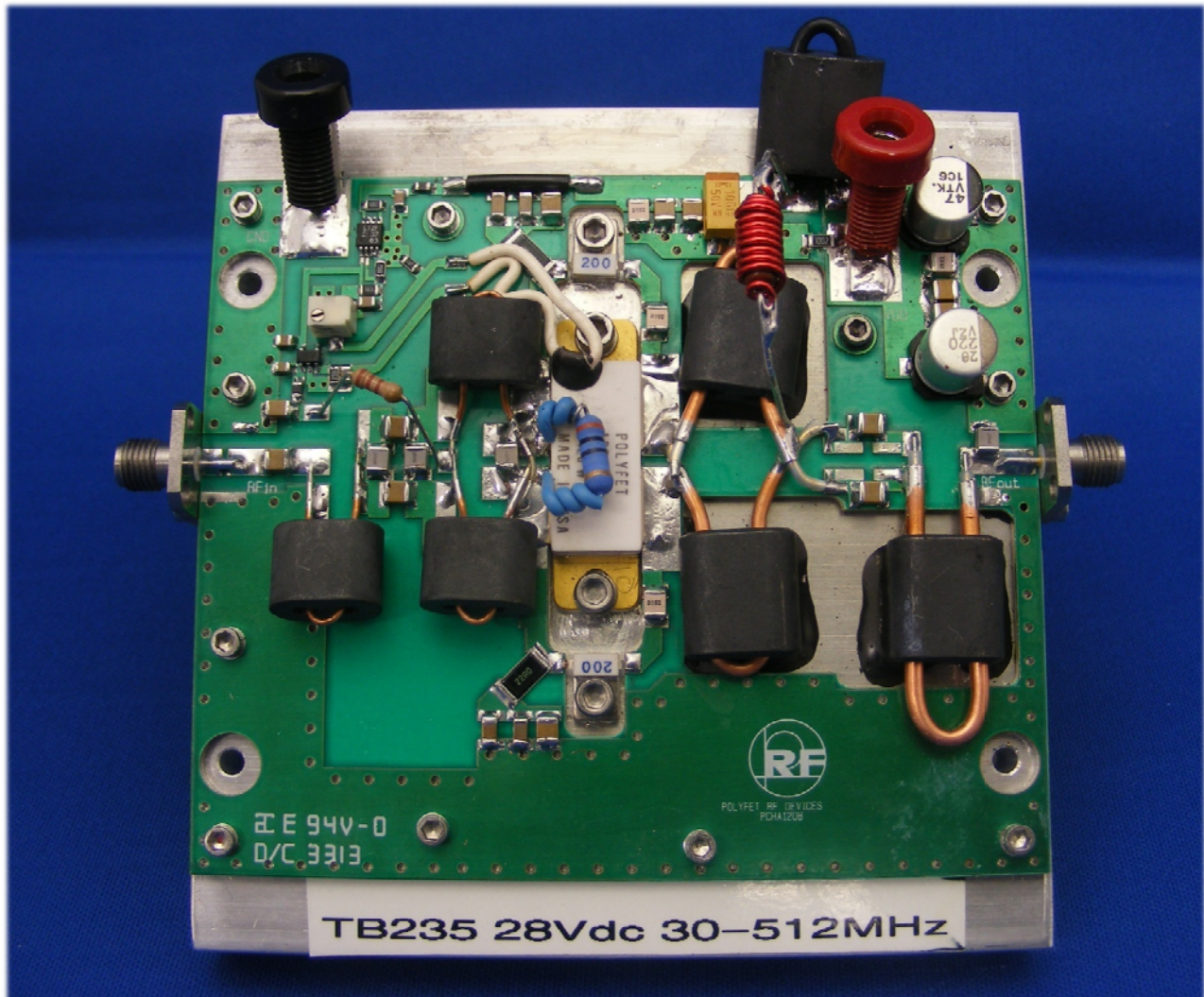
Gain= 19-21.5 dB

Vds=28Vdc

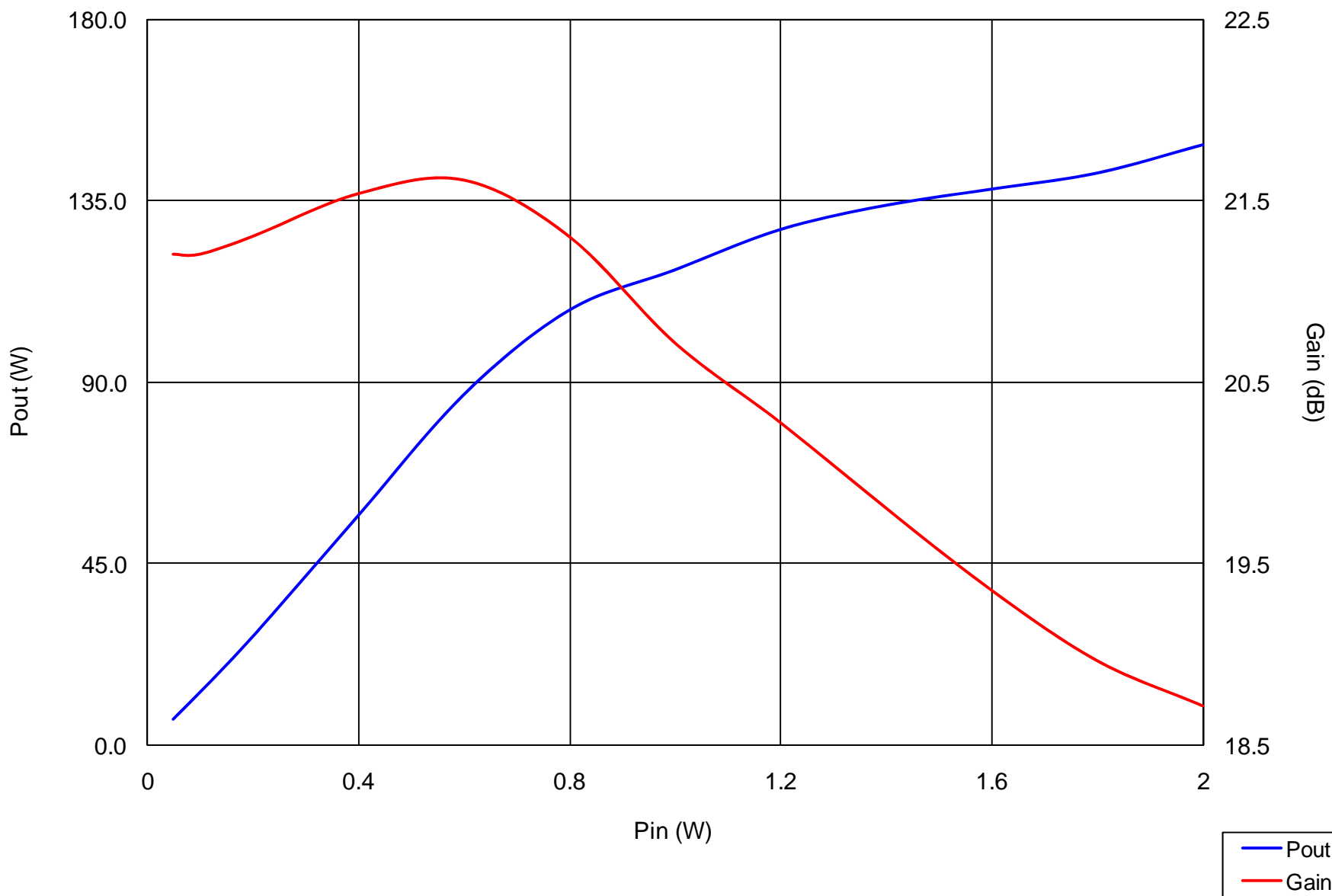
Idq=1.2A

Efficiency= 48-51%

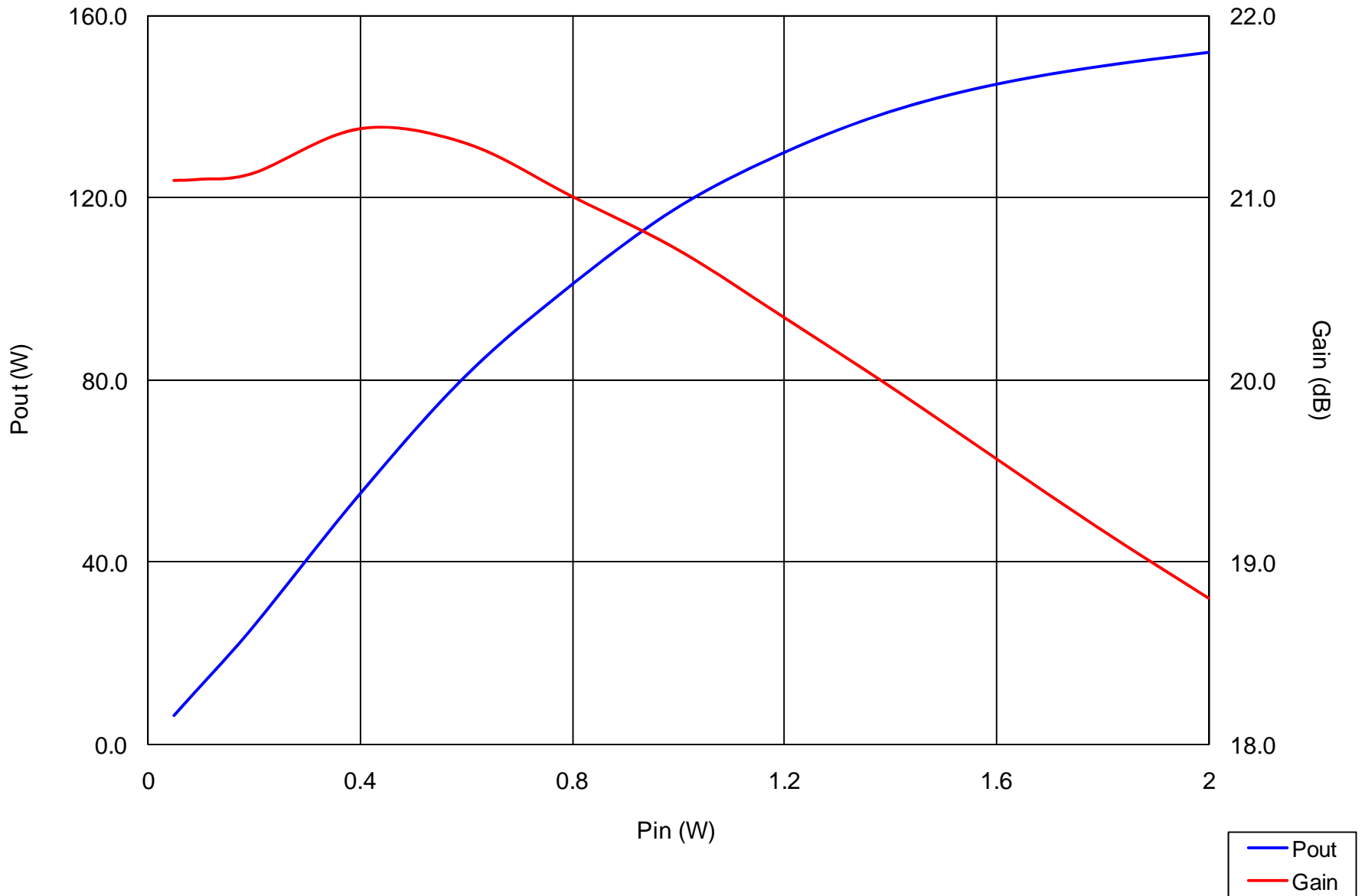
LR2401



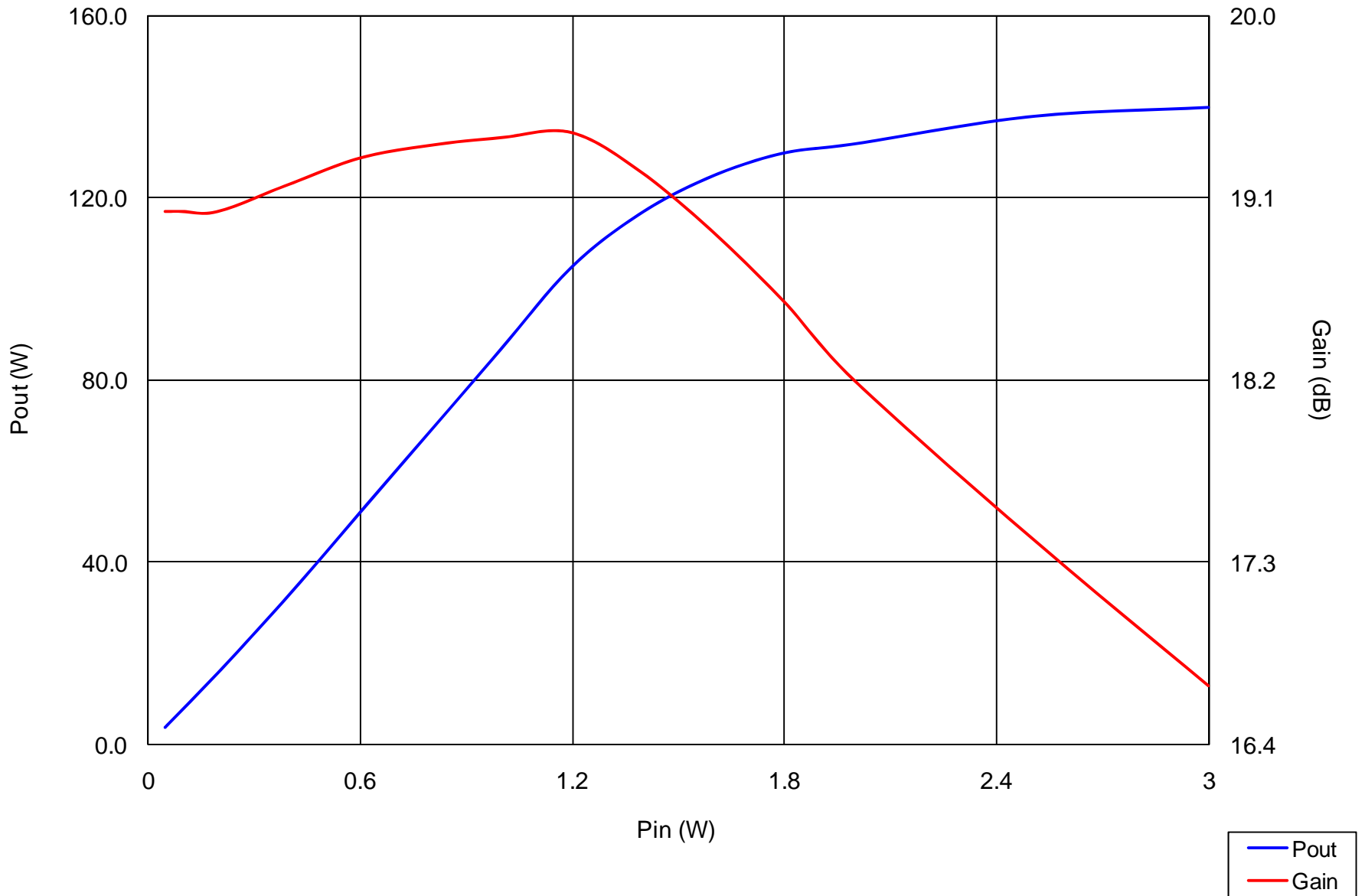
TB235 Pout/Gain vs Pin: Freq = 30 MHz, Vds = 28Vdc, Idq = 1.2A



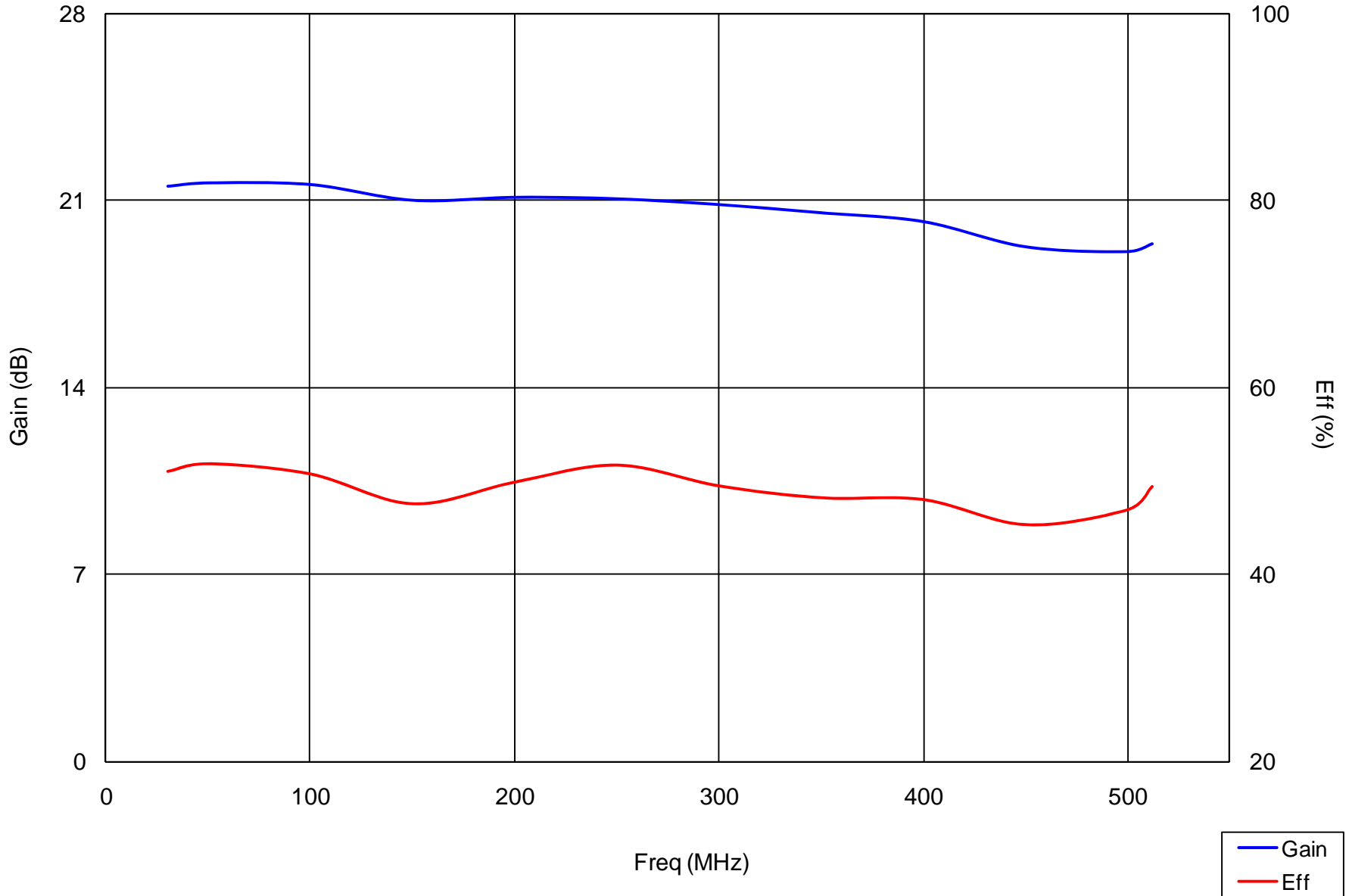
TB235 Pout/Gain vs Pin: Freq = 250 MHz, Vds = 28Vdc, Idq = 1.2A



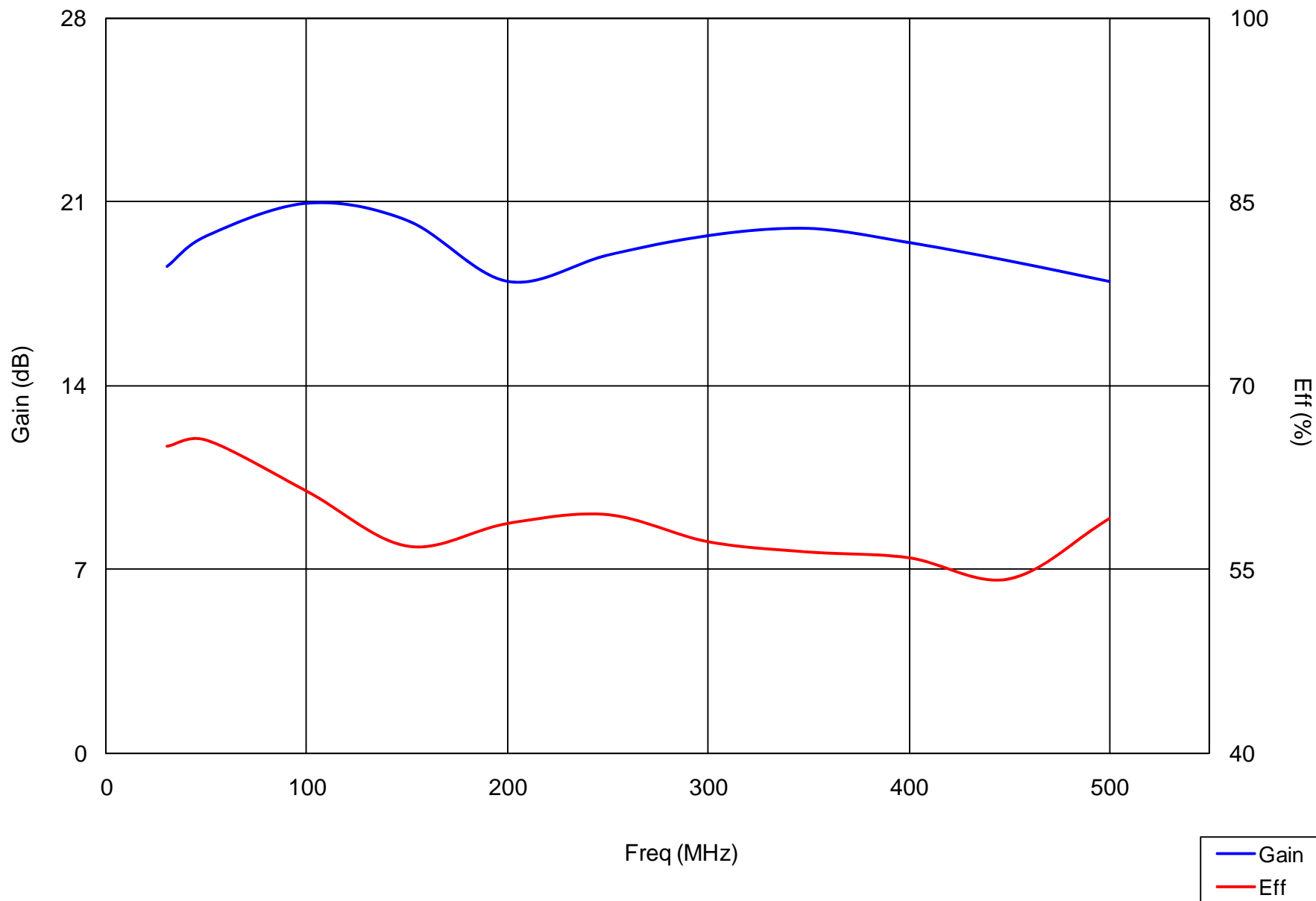
TB235 Pout/Gain vs Pin: Freq = 512 MHz, Vds = 28Vdc, Idq = 1.2A



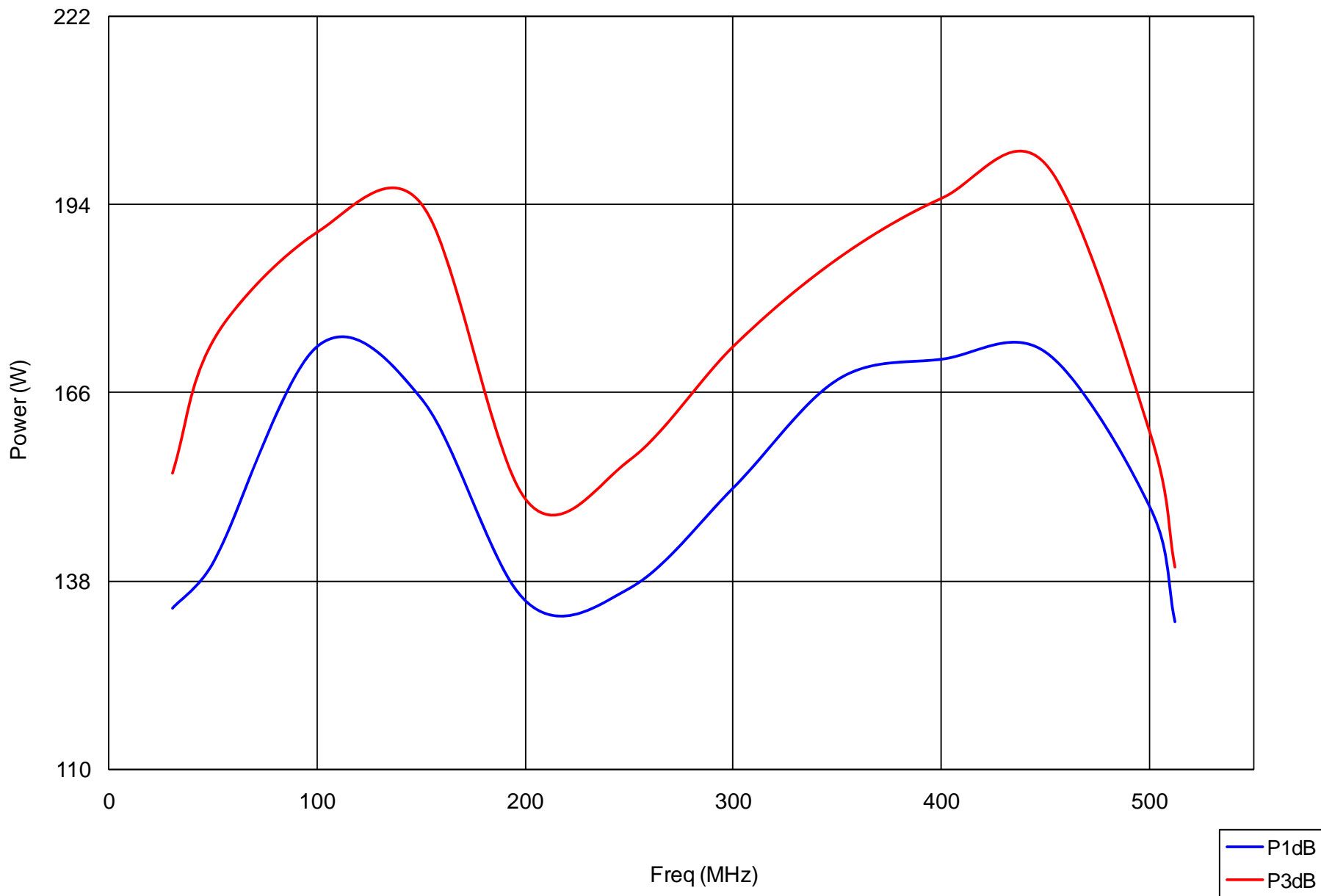
TB235 Gain/Efficiency vs Freq: Pout= 100W, Vds = 28Vdc, Idq = 1.2A



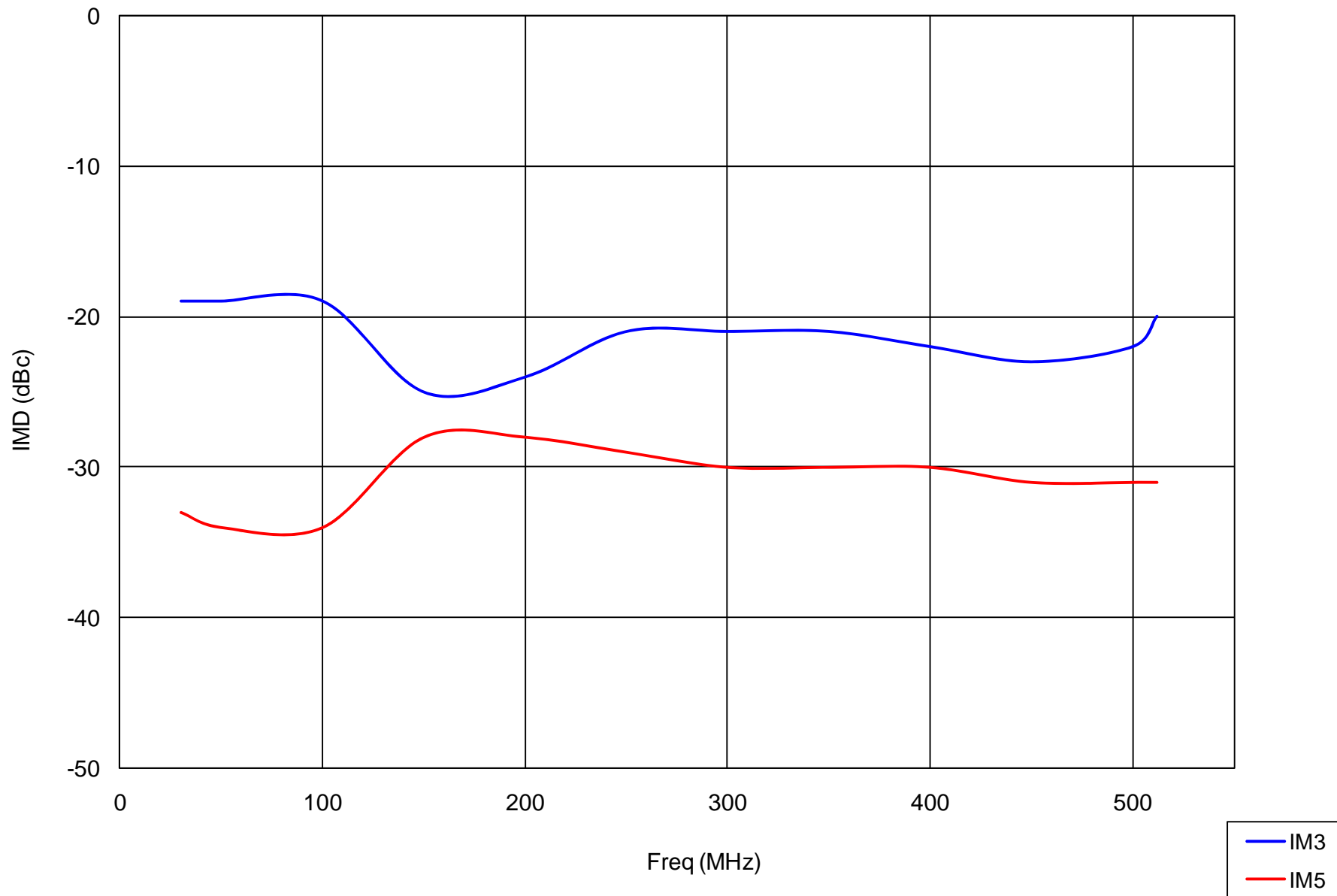
TB235 Gain/Efficiency vs Freq: Pout = 150W, Vds = 28Vdc, Idq = 1.2A



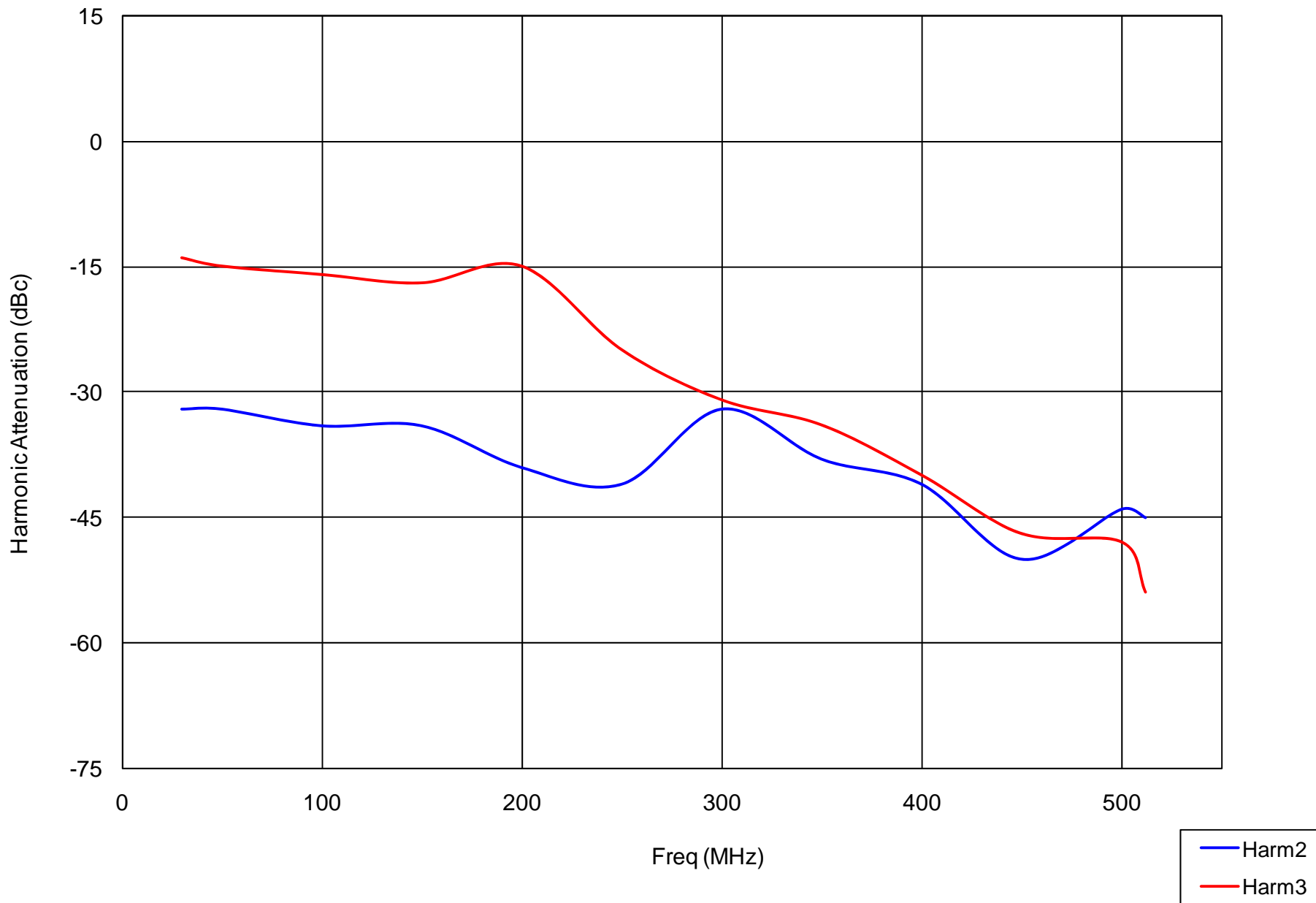
TB235 P1dB/P3dB vs Freq: Vds = 28Vdc, Idq = 1.2A

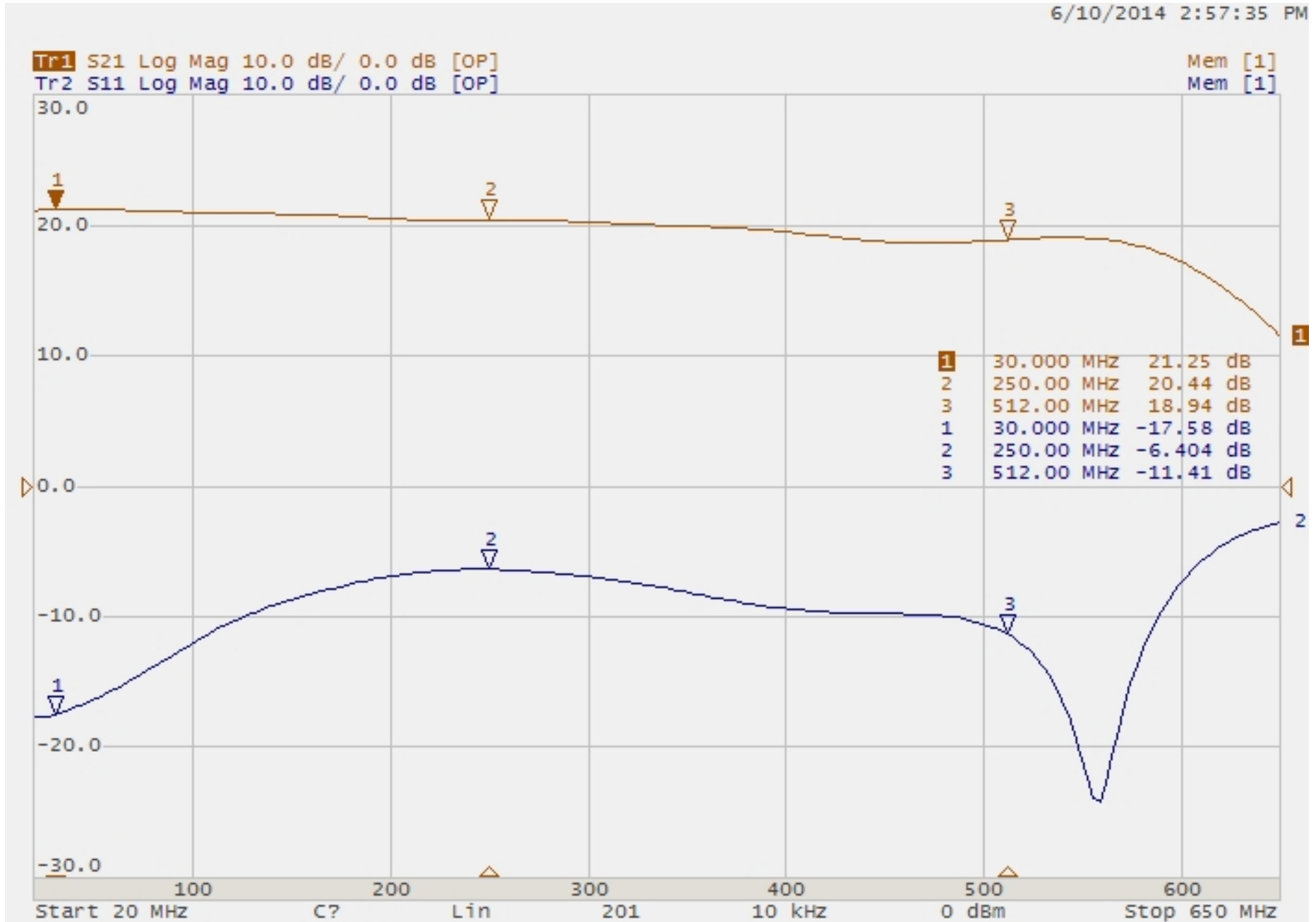


TB235 IMD vs Freq: PEP = 100W, Sep = 100kHz, Vds = 28Vdc, Idq = 1.2A

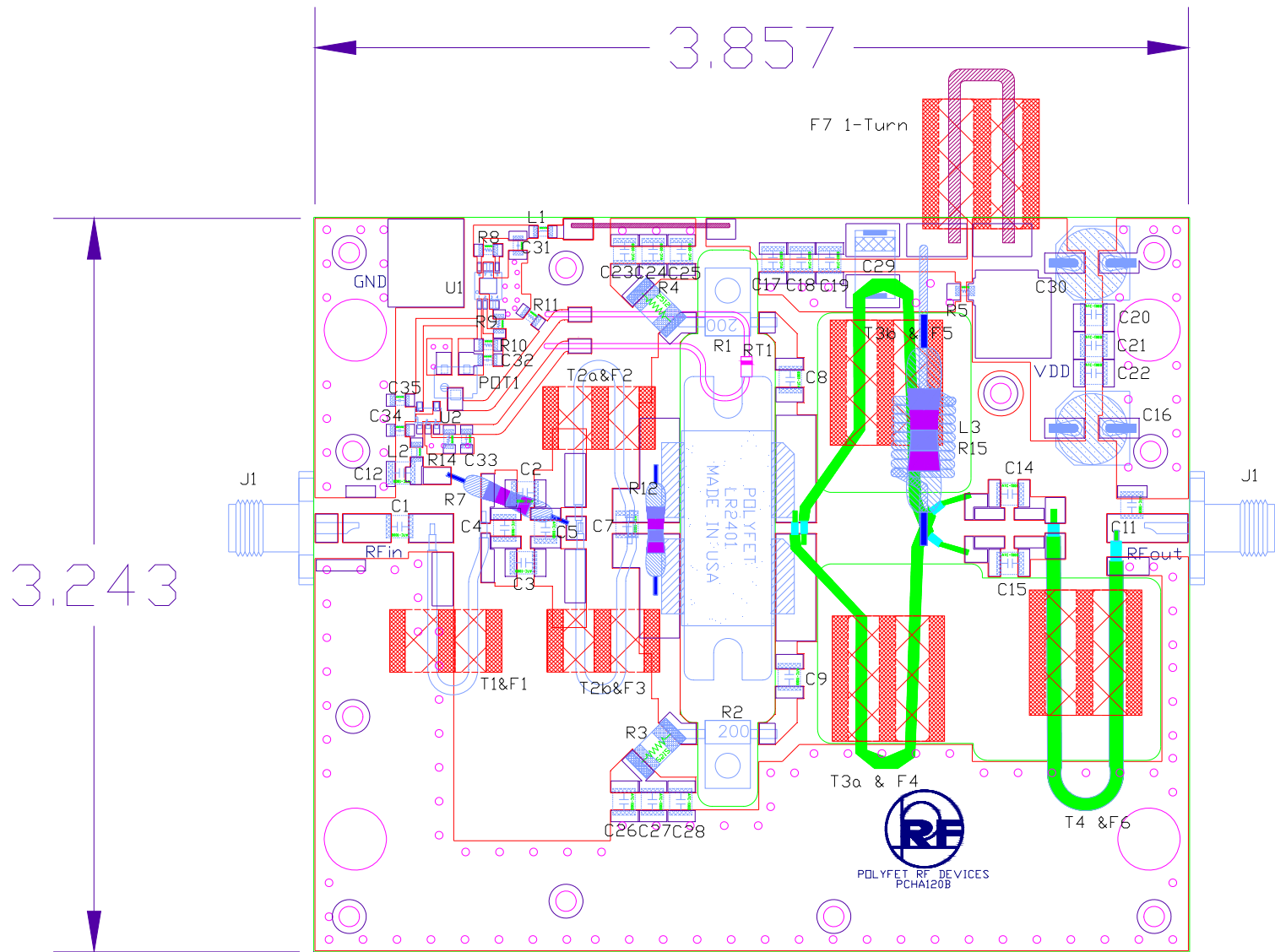


TB235 Harmonics vs Freq: Pout = 100W, Vds = 28Vdc, Idq = 1.2A

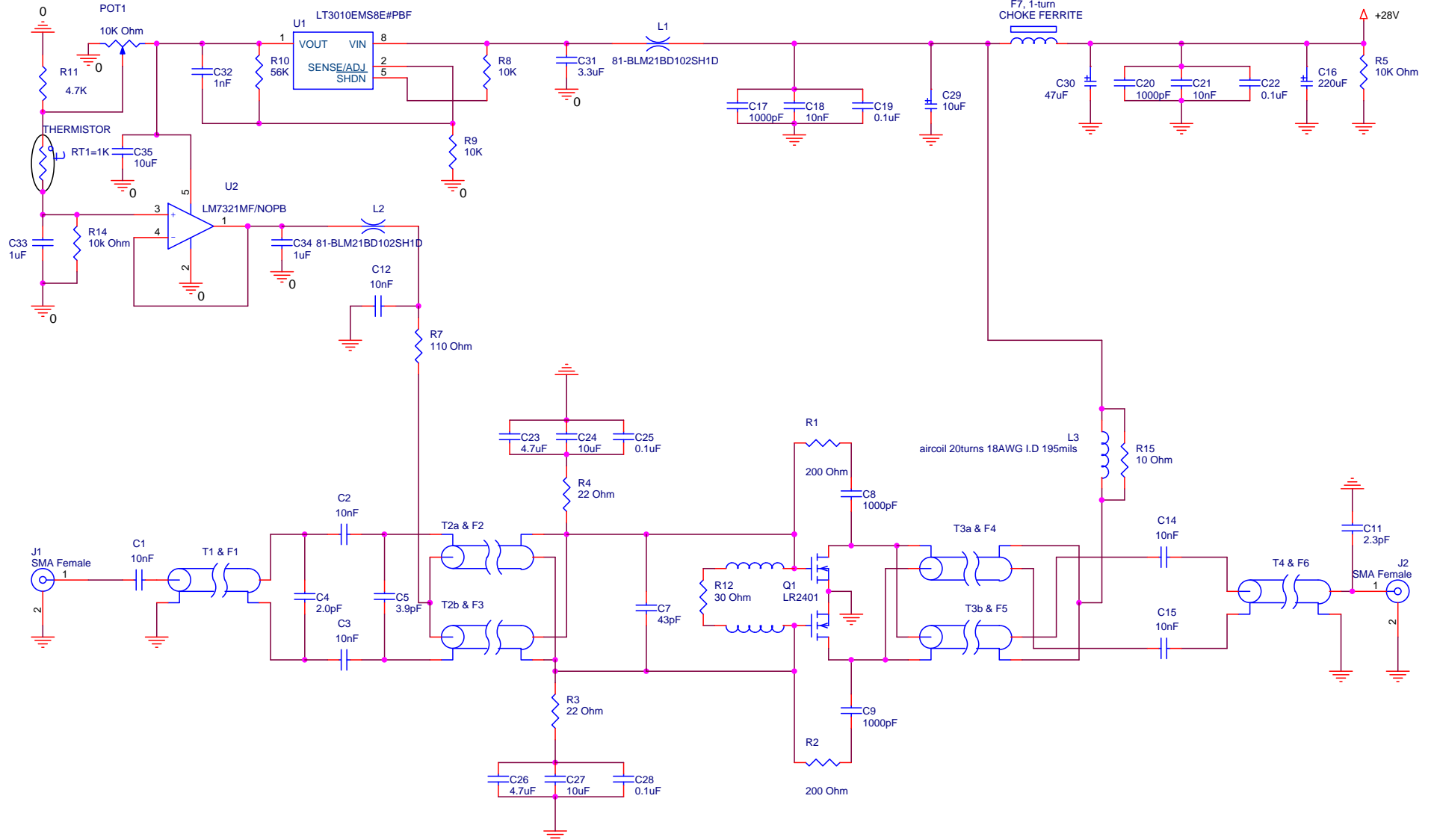




TB235: Vds=28Vdc, Idq=1.2A, Pin=0dBm



Units in Inches



Title		
TB235, 30-512 MHz, 100W		
Size	Document Number	Rev
	Vdc = 28Vdc, Idq = 1.2A	
Date:	Wednesday, June 11, 2014	Sheet 1 of 1

TB235			
NOMENCLATURE	DESCRIPTION	VENDER	VENDER PART #
C4	2.0pF +/-2% Ultra-low ESR, Microwave Cap., 1111N	Passive Plus, Inc	1111N2R0BW501
C5	3.9pF +/-2% Ultra-low ESR, Microwave Cap., 1111N	Passive Plus, Inc	1111N3R9BW501
C7	43pF +/-2% Ultra-low ESR, Microwave Cap., 1111N	Passive Plus, Inc	1111N430BW501
C11	2.3pF +/-2% Ultra-low ESR, Microwave Cap., 1111N	Passive Plus, Inc	1111N2R3BW501
C16	Aluminum Electrolytic Capacitors - SMD 35Volts 220uF 20%	United Chemi-Con	EMZJ350ADA221MHA0G
C19,C22,C25,C28	0.1uF +/-10% RF By-Pass Capacitors,1111X	Passive Plus, Inc	1111X104KW500
C24,C27	10uF TANCERAM HIGH CAP. SMD 1206	Passive Plus, Inc	PPI-GMC31X5R106K10
C23,C26	4.7uF TANCERAM HIGH CAP. SMD 1206	Passive Plus, Inc	PPI-GMC31X7R475K25NT
C8,C9,C17,C20	1000pF +/-2% Ultra-low ESR, Microwave Cap., 1111N	Passive Plus, Inc	1111N102GW500
C1,C2,C3,C12,C14,C15,C18,C21	10,000pF +/-10% RF By-Pass Capacitors,1111X	Passive Plus, Inc	1111X103KW500
C29	10uF 63V 20% AVX Tantalum Capacitors	AVX	TCJE106M063R0100
C30	Aluminum Electrolytic Capacitors - SMD 47UF 35V TK SMD	Panasonic	EE-TK1V470P
C31	3.3uF TANCERAM HIGH CAP. SMD 1206	Johanson Dielectrics	100r18x335KV4E
C32	1nF 10% Hi-Q/Low ESR	Passive Plus, Inc	0505x102KW500
C33,C34	1uF 10%TAMCERAM HIGH CAP. SMD 603	Johanson Dielectrics	250r14x105kv4t
C35	10uF 10%TAMCERAM HIGH CAP. SMD 805	Johanson Dielectrics	100r15x106kv4e
R1,R2	30W, 200OHM	Innovative Power Products-IPP	IPP-RB201-200
R3,R4	RES 22ohm 2W 1% 2512 SMD	Stackpole Electronics Inc	RHC2512FT22R0
R5	RES 10K OHM 1/4W 5% 1206 SMD	Rohm Semiconductor	MCR18EZPJ103
R7	RES 110 1/2W 5% CARBON FILM	Stackpole Electronics Inc	CF12JT1110
R8,R9,R14	10K 1/4W 0805 SMD	Rohm Semiconductor	MCR10EZHJ103
R10	56K 1/4W 0805 SMD	Rohm Semiconductor	MCR10EZPJ563
R11	4.7K 1/4W 0805 SMD	Rohm Semiconductor	MCR10EZPF4701
R12	RES 30 OHM 1W 5% METAL OXIDE	Xicon	281-30-RC
R15	RES 10 OHM 1W 5% METAL OXIDE	Xicon	281-10-RC
RT1	1000 OHM TEMP SENSOR AXIAL	NXP Semiconductors	KTY83/110,113
POT1	Trimmer Resistors - 10K OHM 0.25W SMD	Murata Electronics North America	PVG5A103C03R00
L1,L2	0805 1kohms HiSpeed EMI Filter Beads,Chokes & Arrays	Murata Electronics North America	81-BLM21BD102SH1D
L3	20turns 18AWG I.D 195mils	www.electromechaniconline.com	MW280SPNRD
WIRE	18 AWG Hook-up Wire UL	Belden	83029 0061000
U1	IC REG LDO ADJ 50mA 8-MSOP	Linear Technology	LT3010EMS8E#PBF
U2	IC OP AMP R-R I/O SOT23-5	National Semiconductor	LM7321MF/NOPB
T1	Semi-ridge Coax ,1.8 inch, 50ohm	MICROWAVE	UT-34-M17
T2a,T2b	Semi-ridge Coax ,1.8 inch, 25ohm	MICROWAVE	UT-34-25
T3a,T3b	Semi-ridge Coax ,2.5 inch, 10ohm	MICROWAVE	UT-70-10
T4	Semi-ridge Coax , 2.8 inch, 50ohm	MICROWAVE	UT-85-50
F1,F2,F3	950uF BINOCULAR FERRITE	Ceramic Magnetic, Inc	003212-02
F4,F5,F6	125uF BINOCULAR FERRITE	Ferronic	12-365-K
F7	Material 4B1 250ui,EMI Supressor	Ferroxcube	MHB2-14/8.5/14-4B1
J1,J2	PE4000-SF SMA Female; 4 Hole Panel Mount	Pasternack	PE4000-SF
PCB	material RO4350B 60mils(1.524mm) 2oz/2oz (70um/70um)	Rogers. Corp	RO4350B
Q1	LDMOS	Polyfet RF Devices	LR2401