

TB167D#7

Frequency=30-512MHz

Pout=100W

Gain=30dB

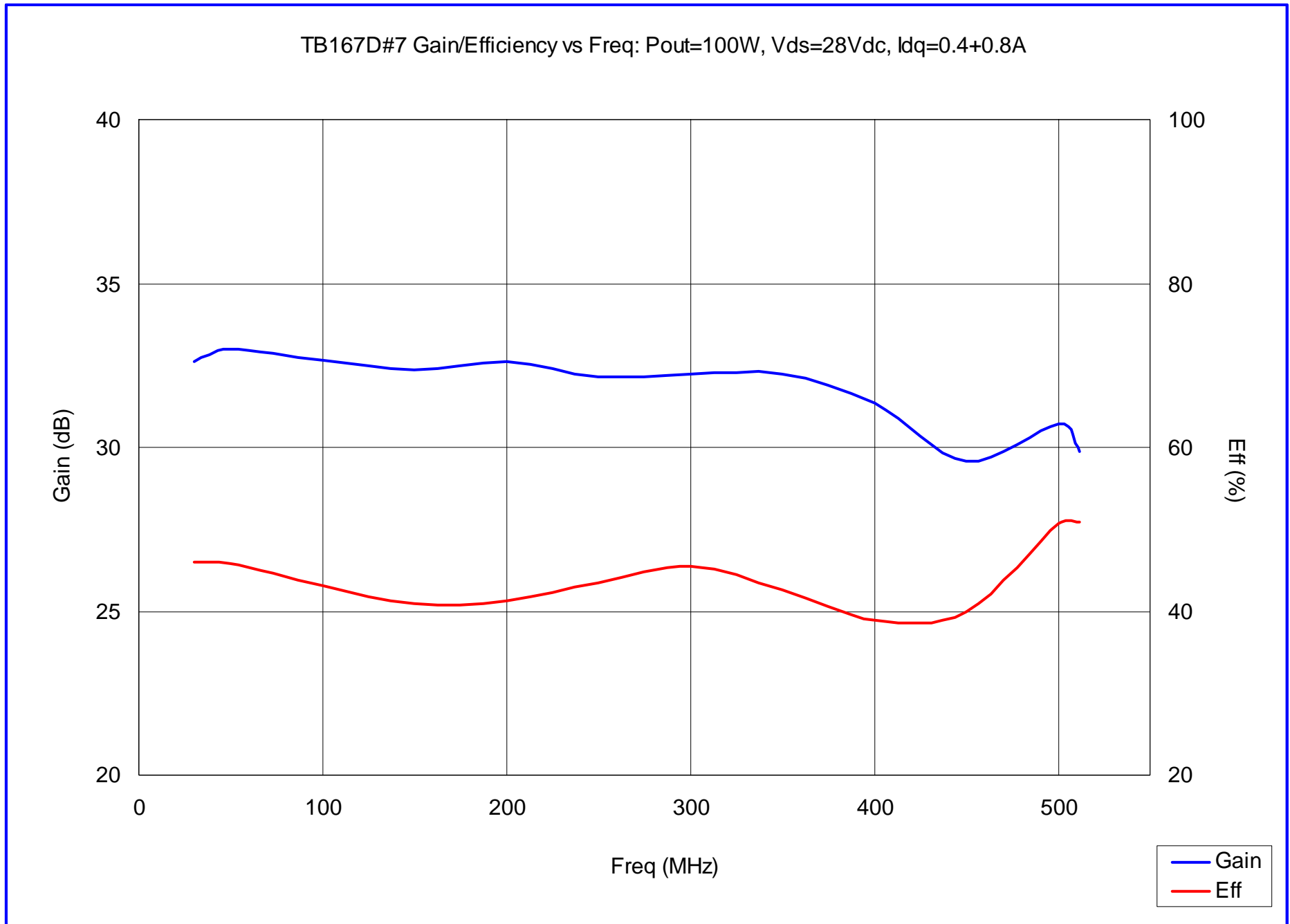
Vds=28Vdc

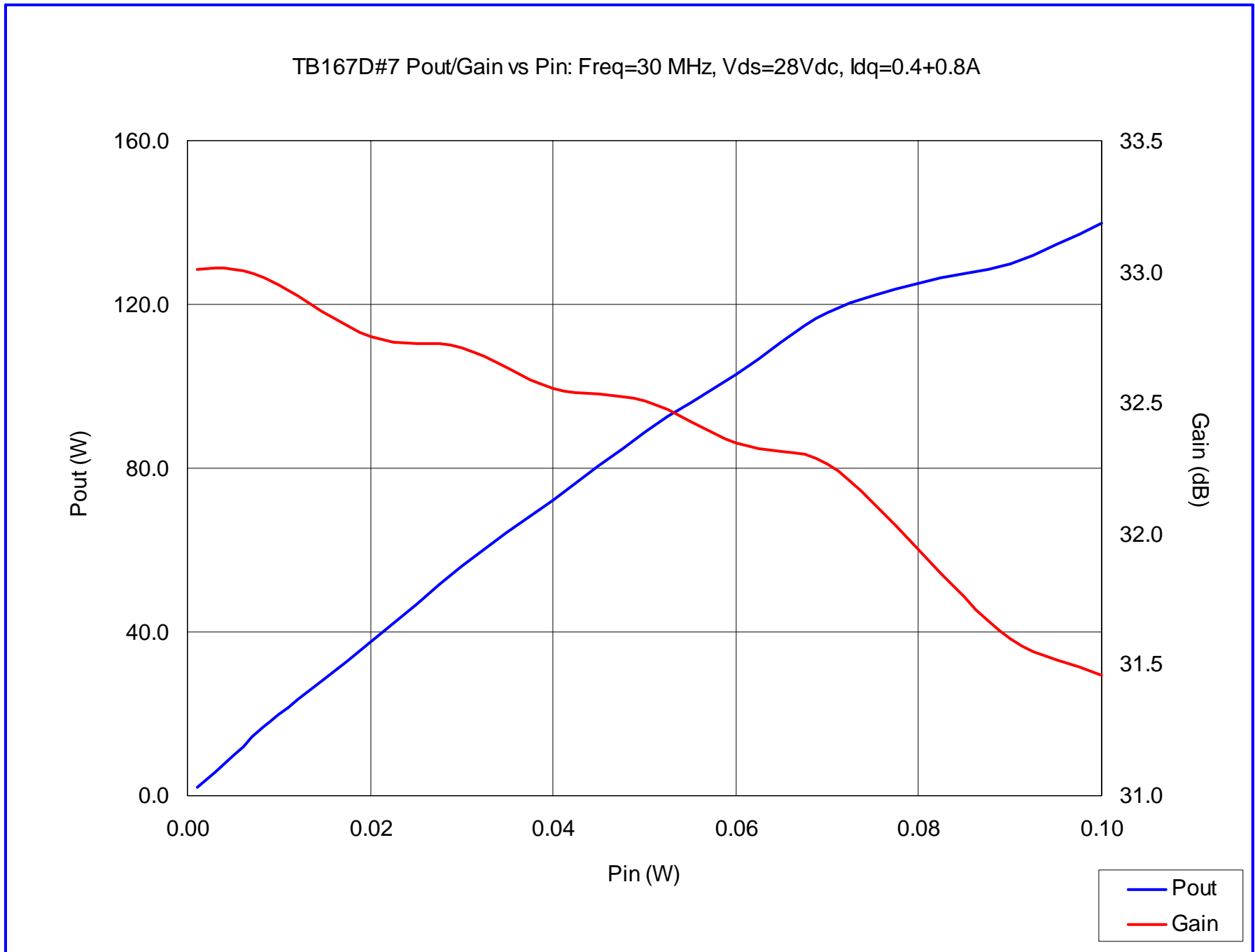
Idq=0.4+0.8A

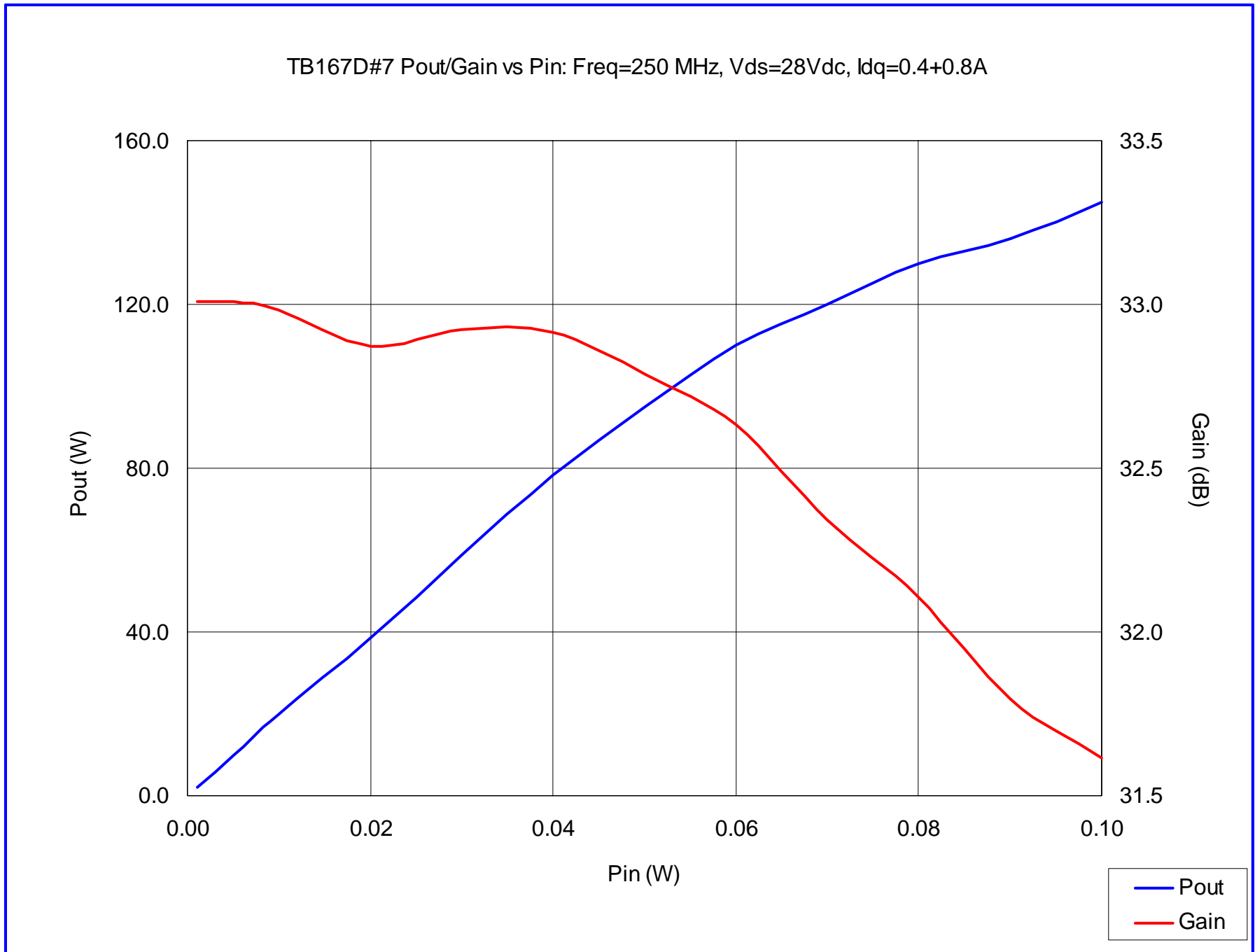
Efficiency=38 to 50%

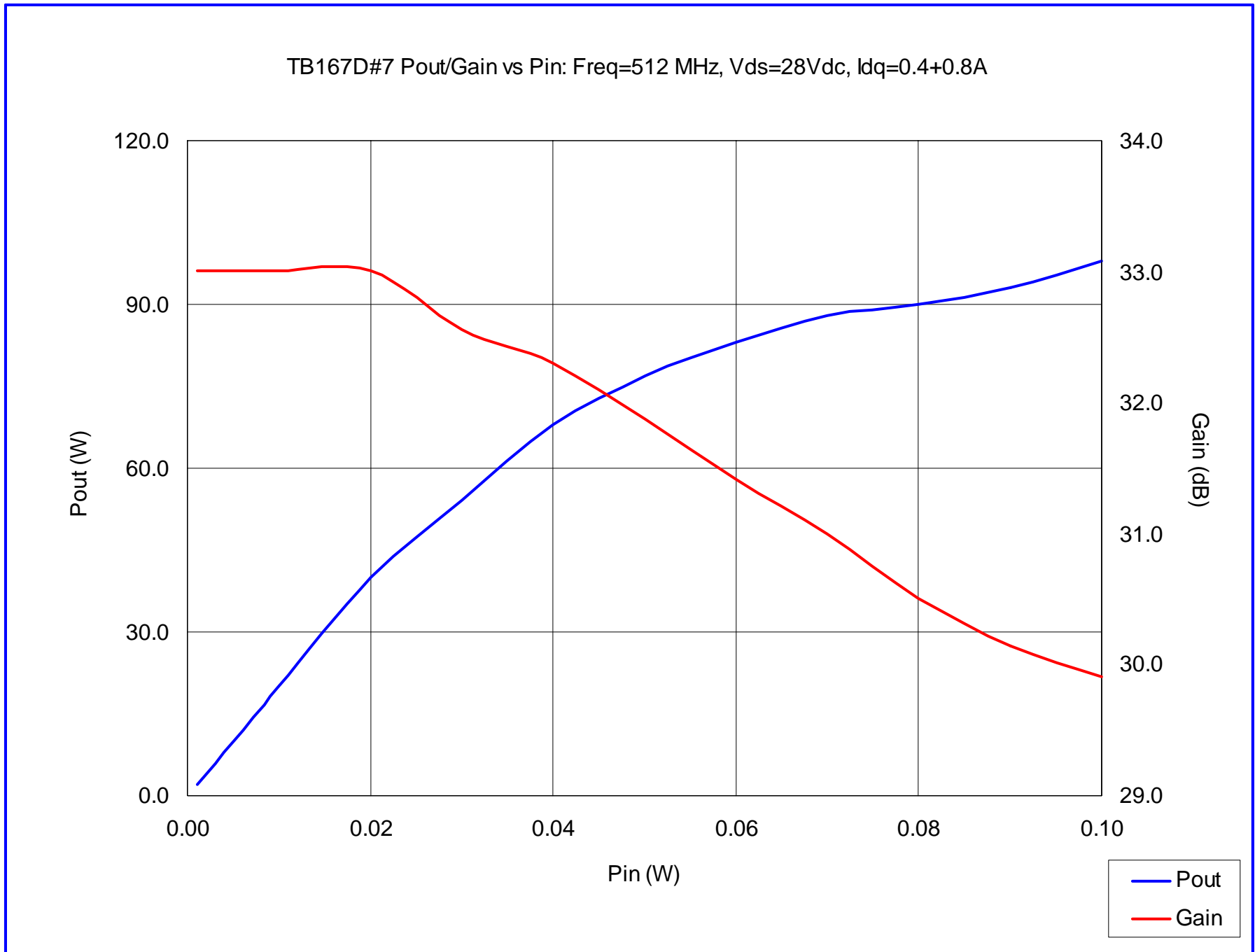
LQ801>LB501A

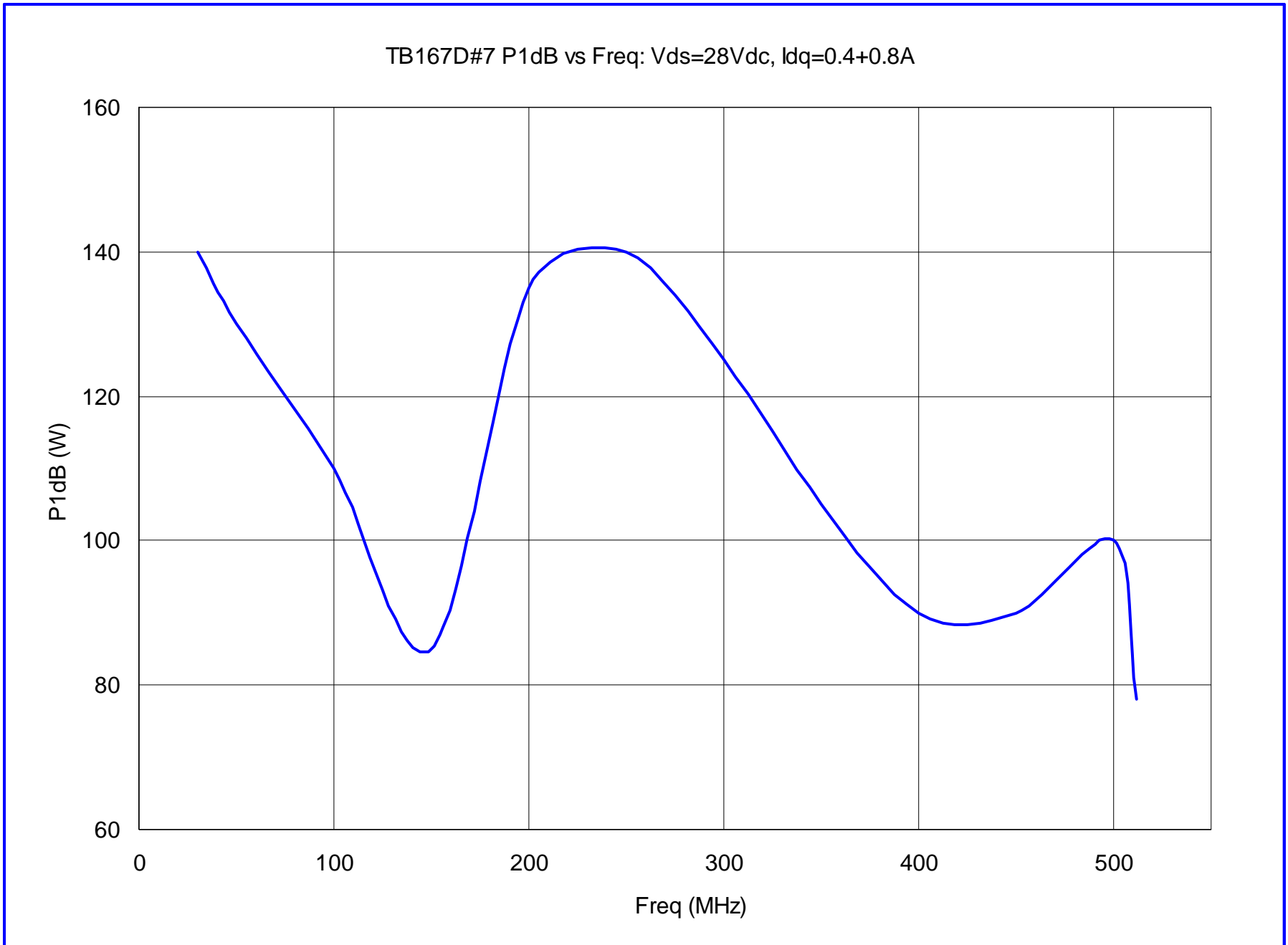




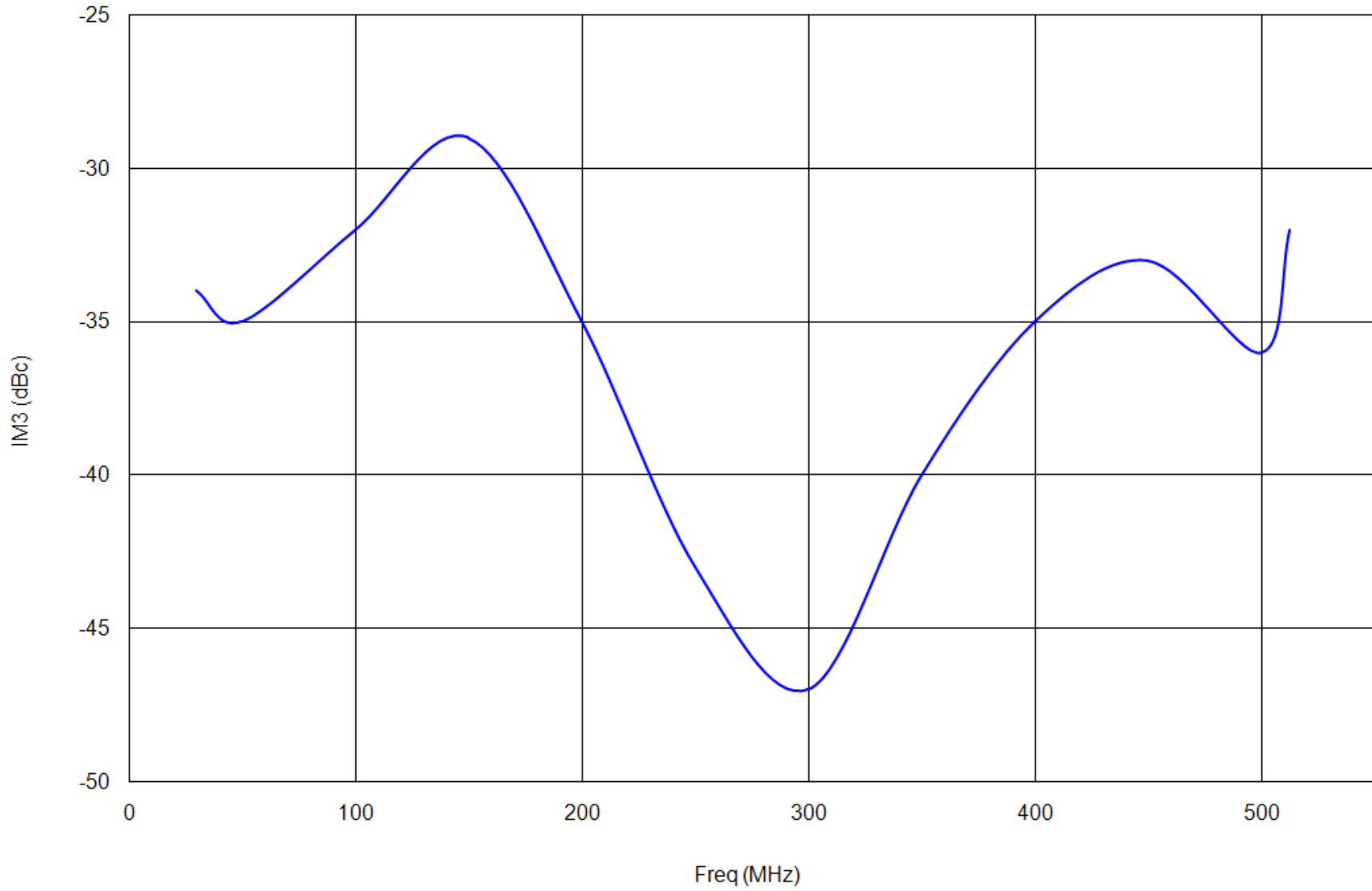


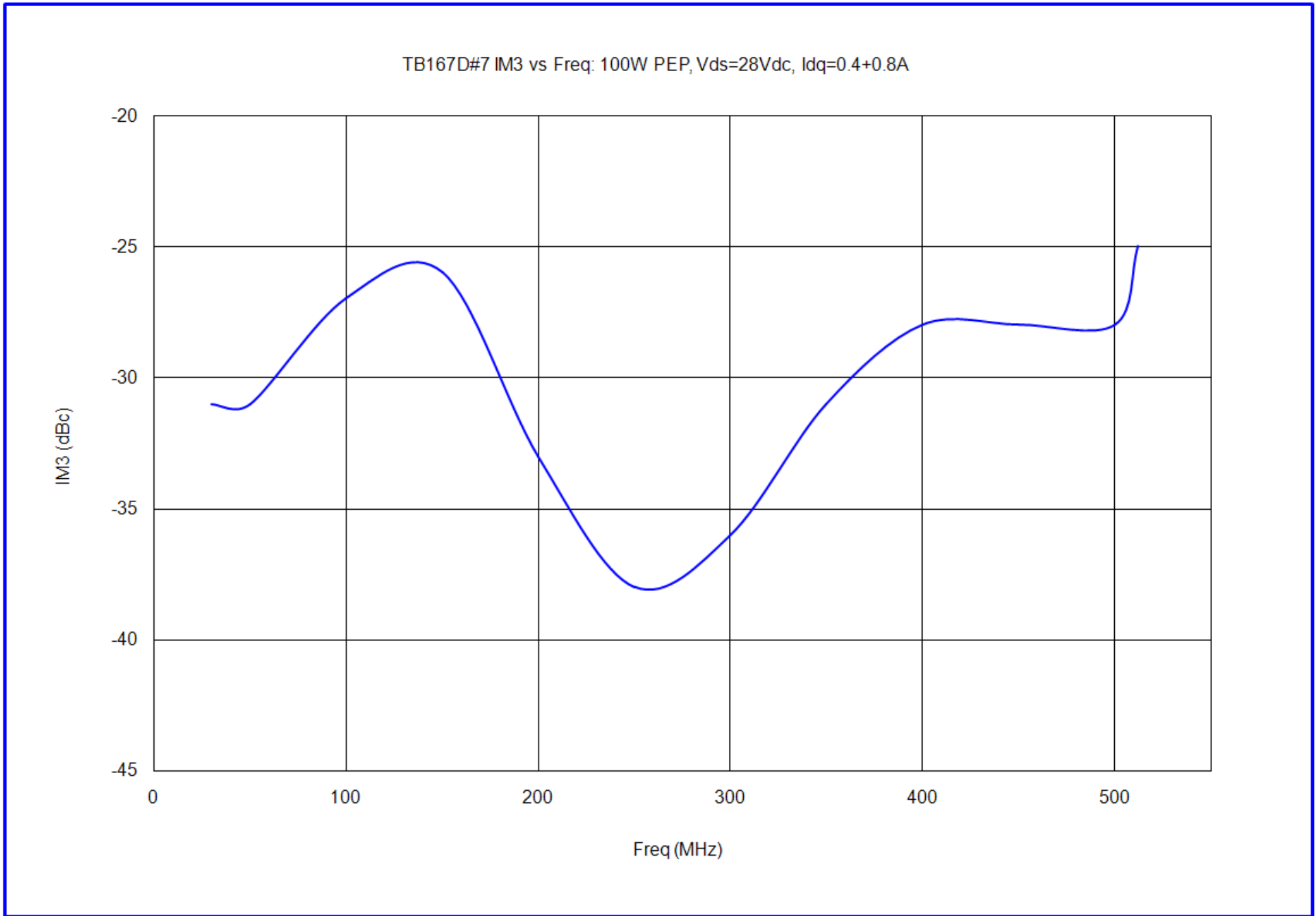


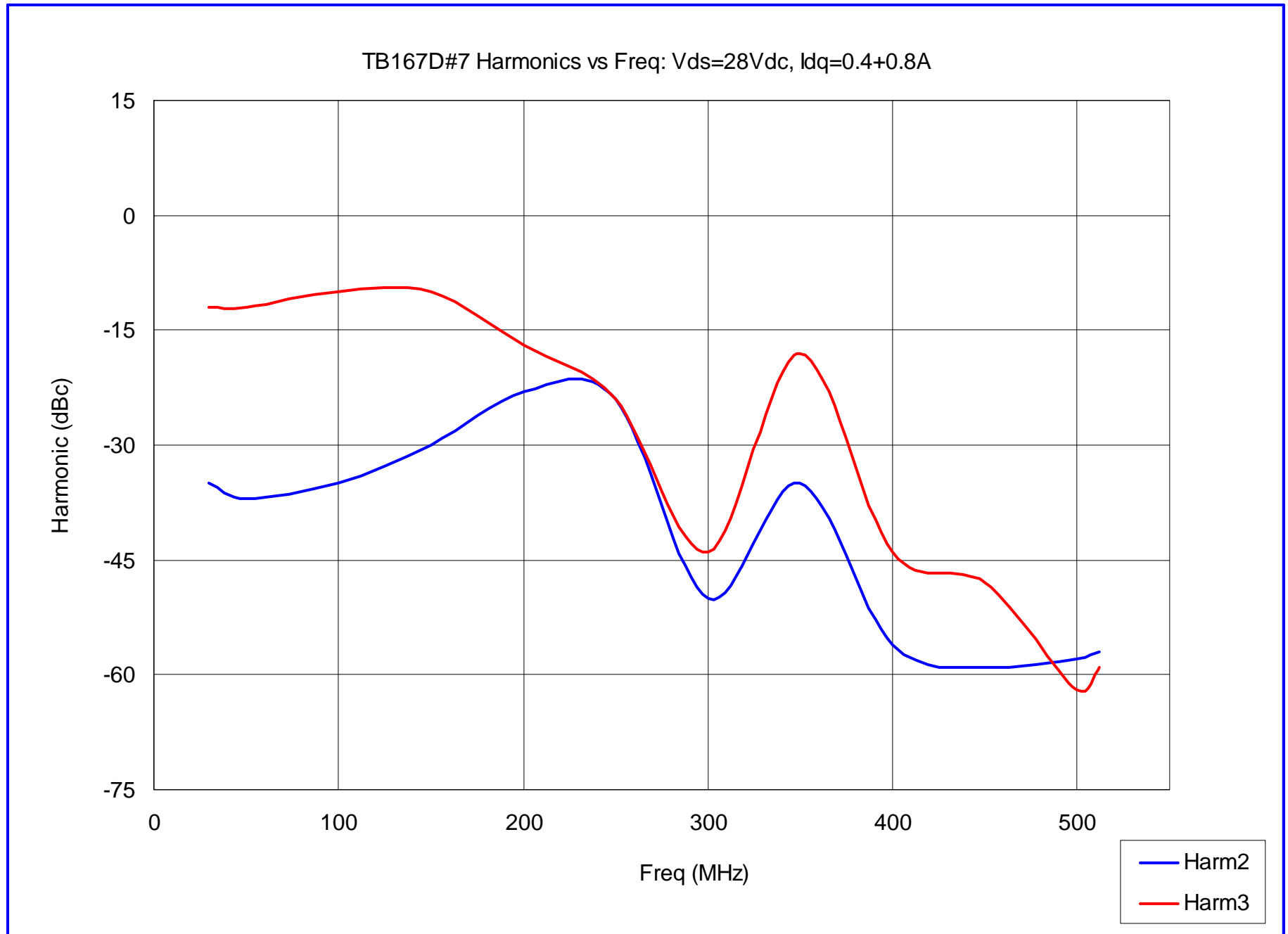


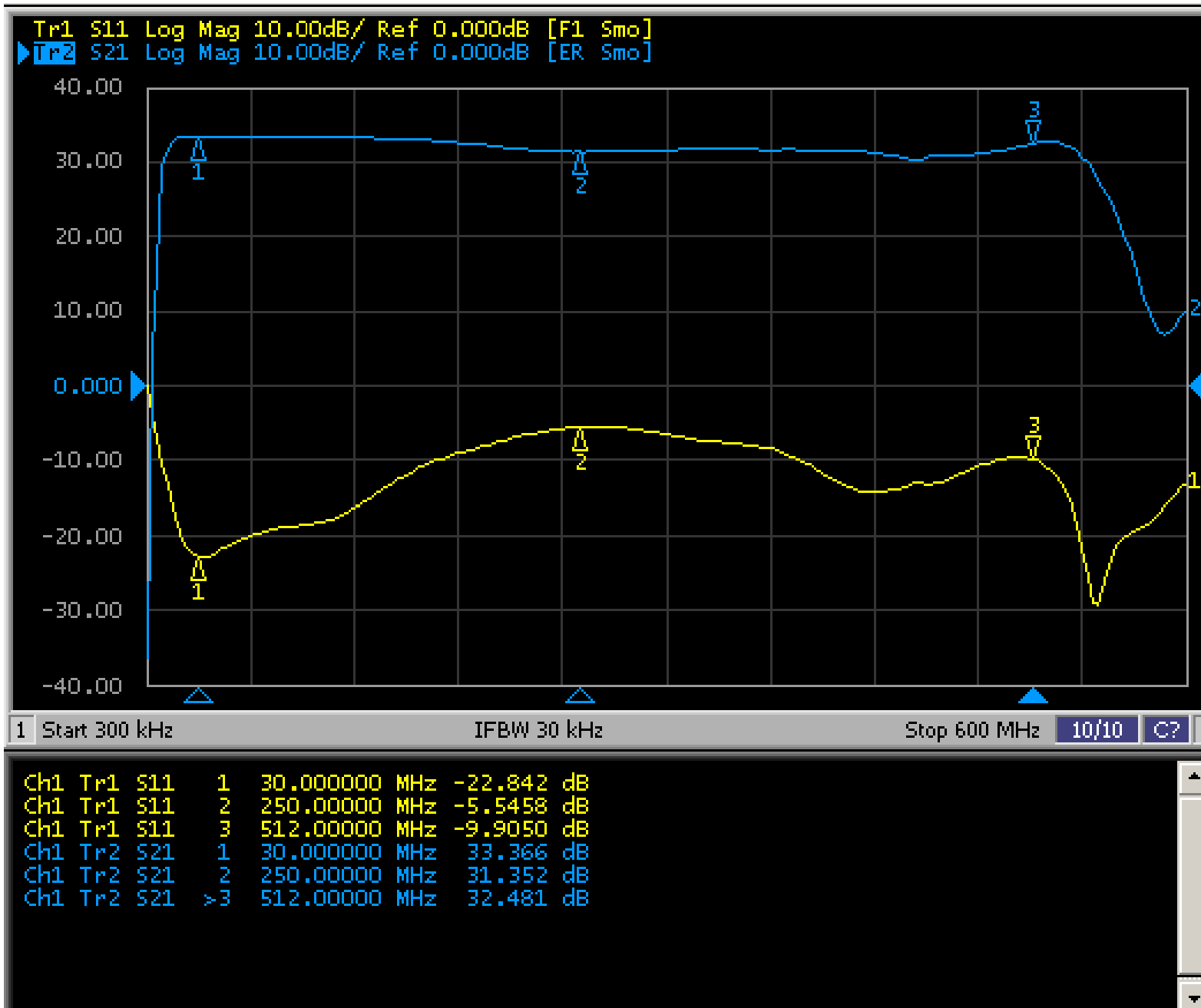


TB167D#7 IM3 vs Freq: 50W PEP, Vds=28Vdc, Idq=0.4+0.8A

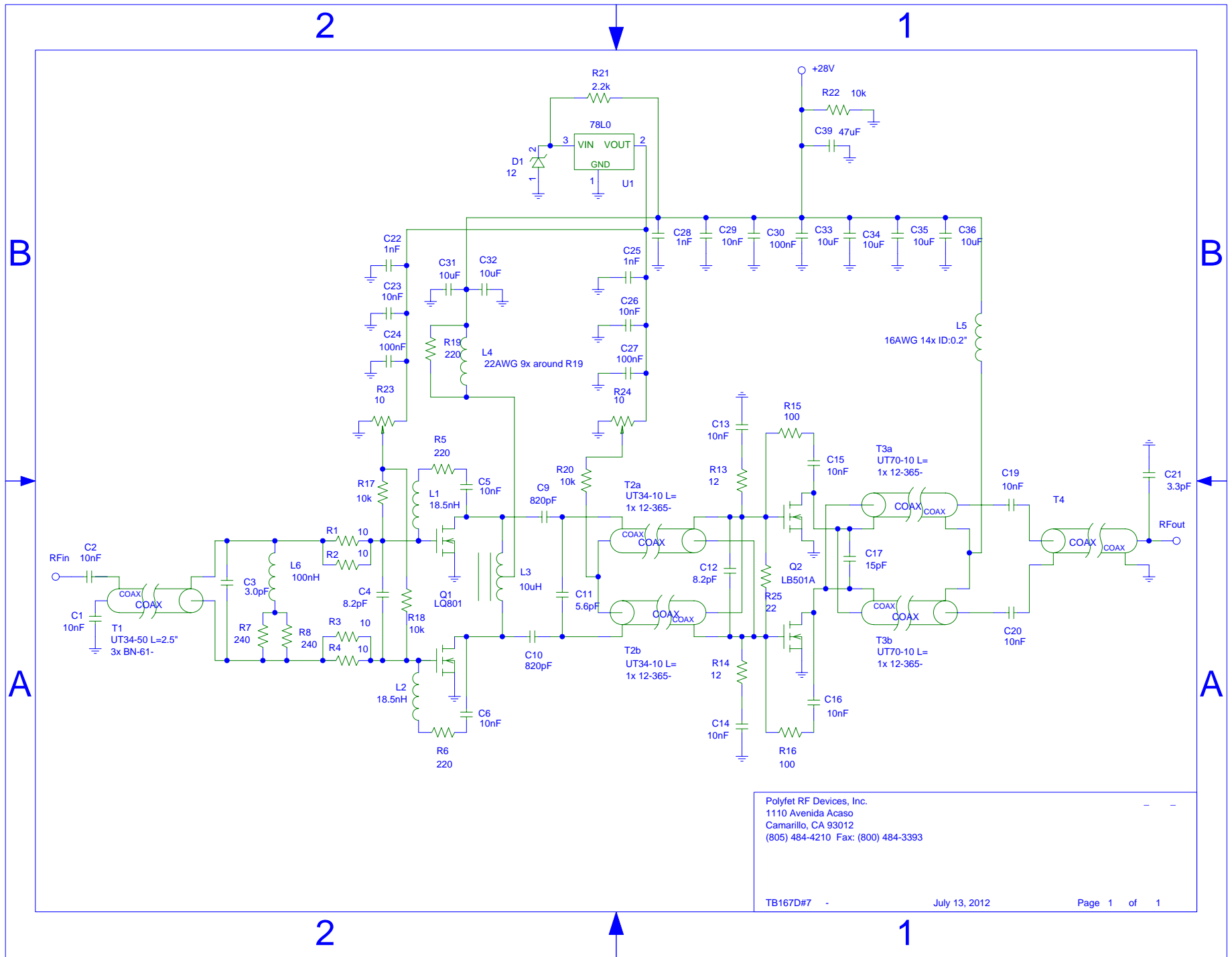




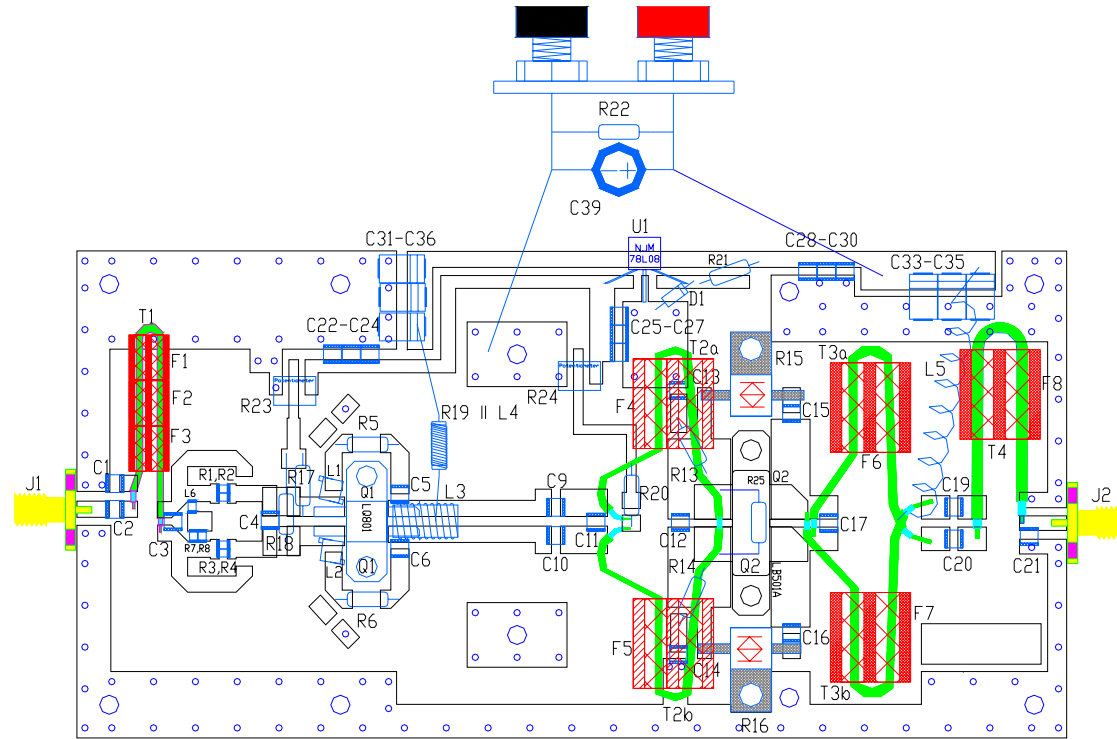




TB167D#7: Pin = 0dB, 28Vdc, 0.4A+0.8A



Polyfet RF Devices, Inc.
 1110 Avenida Acaso
 Camarillo, CA 93012
 (805) 484-4210 Fax: (800) 484-3393



PCB Material : Double side FR4, H=0.064in, 2oz
 Holes are cut in PCB material for F6-F8. The ferrites are thermally epoxied to the spreader for heat dissipation.

DRN BY: M. Cervantes	2/17/11	POLYFET RF DEVICES	
CHKD : J.Anloague	7/13/12		
ELECT : J.Anloague	7/13/12	TB167D#7, 30-512MHz, 100W, 30dB	
MECH : M. Cervantes	2/17/11		
MOD:		SIZE	FSCM NO
QUAL :		LQ801-->LB501A	REV
PGMS :		Vds=28V Idq=1.2A	6
		SCALE : 1 : 1	SHEET 1 OF 1

(Polyfet TB167D#7)			
NOMENCLATURE	DESCRIPTION	VENDER	VENDER PART #
C01, C23, C26, C30	10nF Porcelain Superchip Multilayer Capacitor	ATC	200B103MW 50X
C02, C05, C6, C15, C16, C19, C20, C24, C25, C28	1nF Porcelain Superchip Multilayer Capacitor	ATC	100B102KW50X
C03	3.0pF Porcelain Superchip Multilayer Capacitor	ATC	100B3R0KW50X
C04	8.2pF Hi-Q/Low ESR Capacitor	Passive Plus, Inc.	1111N8R2BW501
C09, C10	750pF Procelain Superchip Multilayer Capacitor	ATC	100B751MW50X
C11, C21	5.6pF Porcelain Superchip Multilayer Capacitor	ATC	100B5R6KW50X
C12	8.2pF Porcelain Superchip Multilayer Capacitor	ATC	100B8R2KW50X
C17	15pF Porcelain Superchip Multilayer Capacitor	ATC	100B150KW50X
C13, C14, C22, C27, C29	100nF Porcelain Superchip Multilayer Capacitor	ATC	200B104MW 50X
C19, C20	pF Porcelain Superchip Multilayer Capacitor	ATC	100B5R6KW50X
C31 - C36	33uF 35V 10% 2312 Kemet Tantalum Chip Cap.	Digi-Key	T521D336M035AHE065
C39	47uF Aluminum Electrolytic Cap, 100V	Digi-Key	PCE37100CT-ND
R01 - R04	RES 10.0 ohm 1/4W 5% 1206 SMD	Digi-Key	RHM10ECT-ND
R05, R06	RES 220 ohm 1W 5% Metal Film	Digi-Key	5073NW220R0J12AFX
R07, R08	RES 10.0 ohm 1/4W 5% 0805 SMD	Digi-Key	RR12Q10DCT-ND
R13, R14	RES 12 ohm 1/4W 5% Carbon Film	Digi-Key	12QBk-ND
R15, R16	RES 100 ohm 20W Flange Mount	Florida RF	100 C8D, Flange Resis
R17, R18, R22	RES 11.5k ohm 1/4W 5% Carbon Film	Digi-Key	311-11.5KFRCT-ND
R19 (parallel with L4)	RES 220 ohm 2W 5% Metal Film	Digi-Key	220H-ND
R20	RES 10k ohm 1/4W 5% 1206 SMD	Digi-Key	311-10.0KFRCT-ND
R21	RES 2.2k ohm 1/4W 5% Carbon Film	Digi-Key	PPC2.2kW-1CT-ND
R23, R24	Trimmer Resistors – 10kOhm 0.25W SMD	Mouser Electronics	490-2661-1-ND
R25	RES 22 ohm 1W 5% Metal Film	Digi-Key	5073NW22R0J12AFX
L1, L2	18.5nH Mini Spring Surface Mount Inductor	Coilcraft	A05TGL
L3	22AWG Mag Wire, 17-turns around 850ui toroid ferrite	www.electromechanicsonline.com Amidon	MW220SPNRD FT-50-43
L4 (parallel with R19)	22AWG Mag Wire, 9-turns around R19	www.electromechanicsonline.com	MW220SPNRD
L5	16AWG Mag Wire, 14-turn Air Coil, ID: 0.2"	www.electromechanicsonline.com	MW160SPNRD
L6	100nH Surface Mount Inductor	Johanson Technology	L-15WR10JV4S
F1-F3	125ui, Binocular Ferrite	Amidon	BN-61-202
F4-F8	125ui, Binocular Ferrite	Amidon	BN-61-2402
T1	2.5" 50 ohm Coaxial Balun	Amawave	UT35-50
T2a, T2b	2.5" 10 ohm Coaxial 4:1 Transformer	Amawave	UT34-10
T3a, T3b	2.5" 10 ohm Coaxial 4:1 Transformer	Amawave	UT70-10
T4	2.5" 50 ohm Coaxial Balun	Amawave	UT85-50

D1	12V Zener Diode	Digi-Key	1N5242BDICT-ND
U1	IC 8V Positive Regulator SOT89	Digi-Key	78L09UA-ND
J1, J2	SMA Female; 4 Hole Panel Mount	Pasternack	PE4000-SF
PCB	Low-Loss Ceramic Filled PTFE FR4, 0.064", 2oz.	Taconic	TRF-45-064-C2/C2
Q1	LDMOS	Polyfet RF Devices	LQ801
Q2	LDMOS	Polyfet RF Devices	LB501A