

TB251

Frequency=225-400MHz

Pout=70W

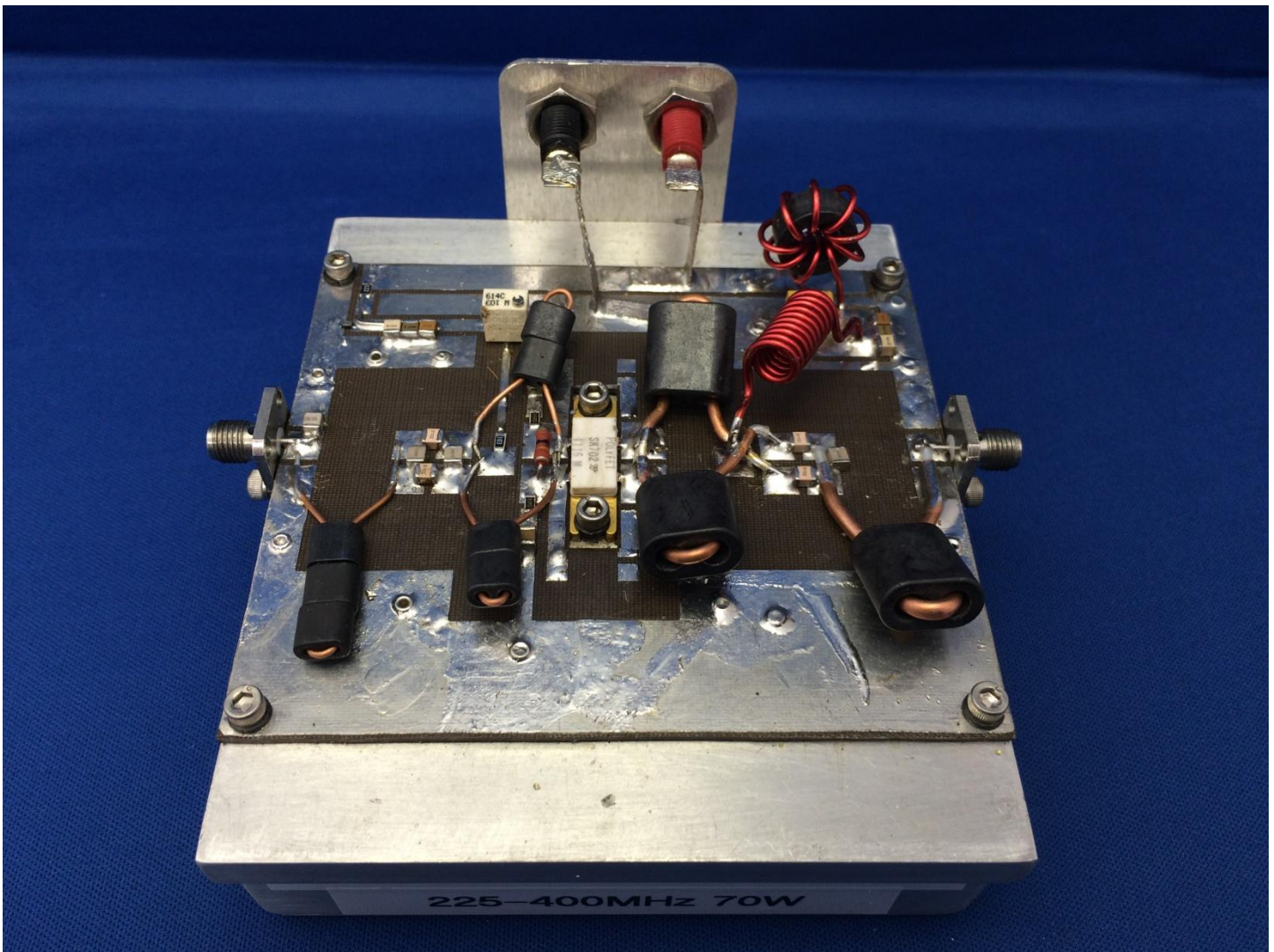
Gain=10dB

Vds=28Vdc

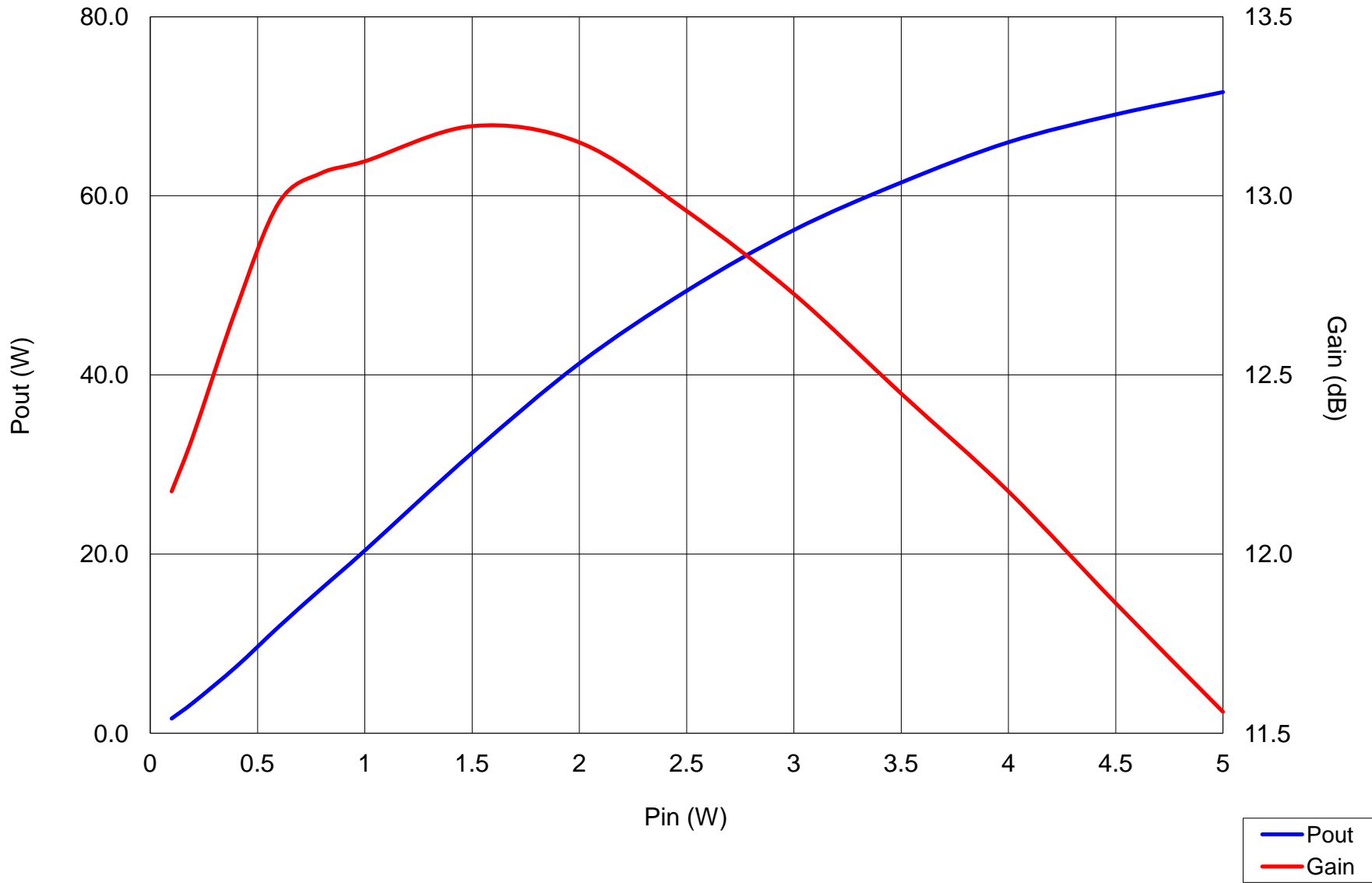
Idq=0.8A

Efficiency=33-47%

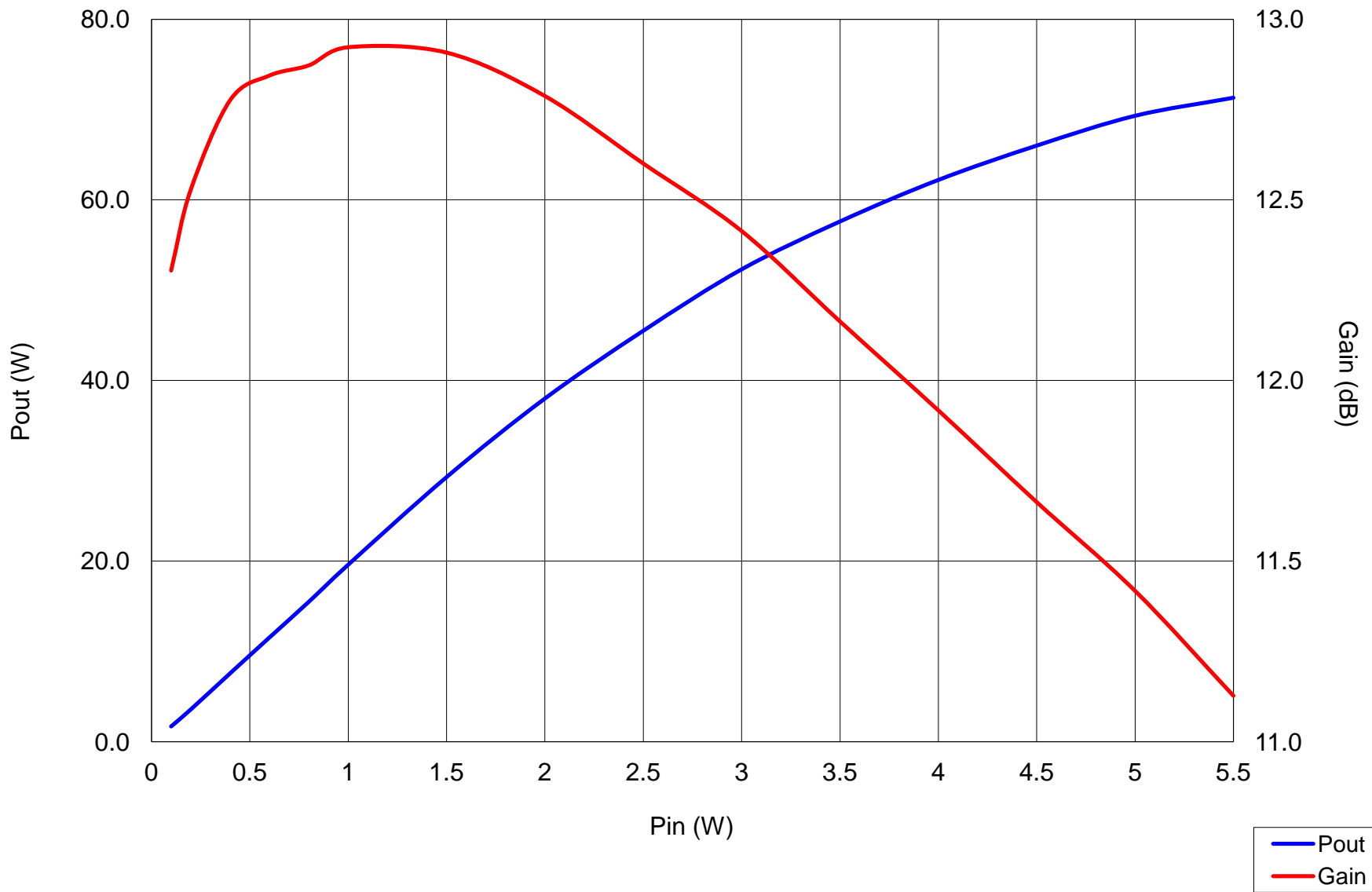
SK702



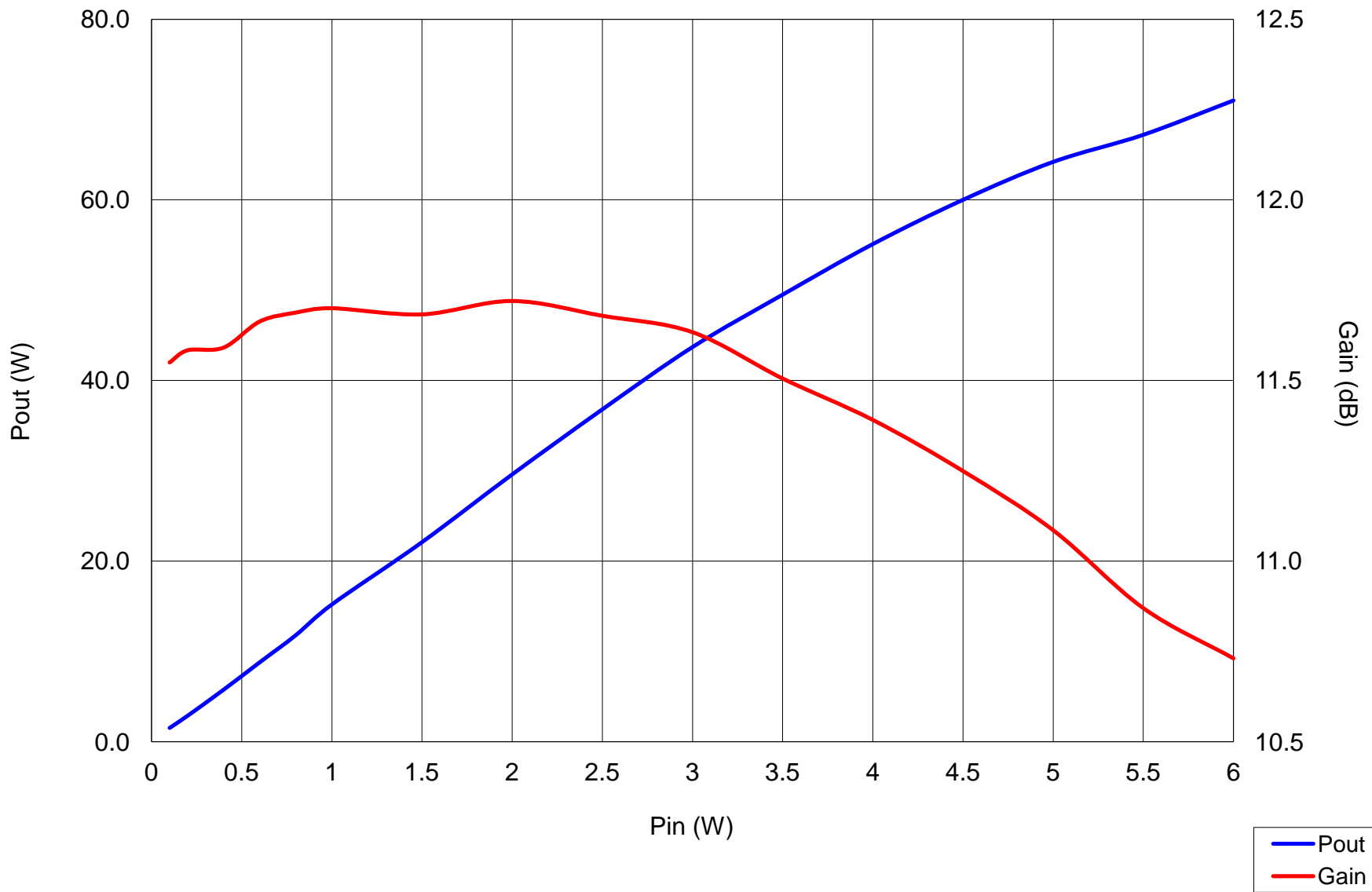
TB251 Pout/Gain vs Pin: Freq = 225MHz, Vds = 28Vdc, Idq = 0.8A



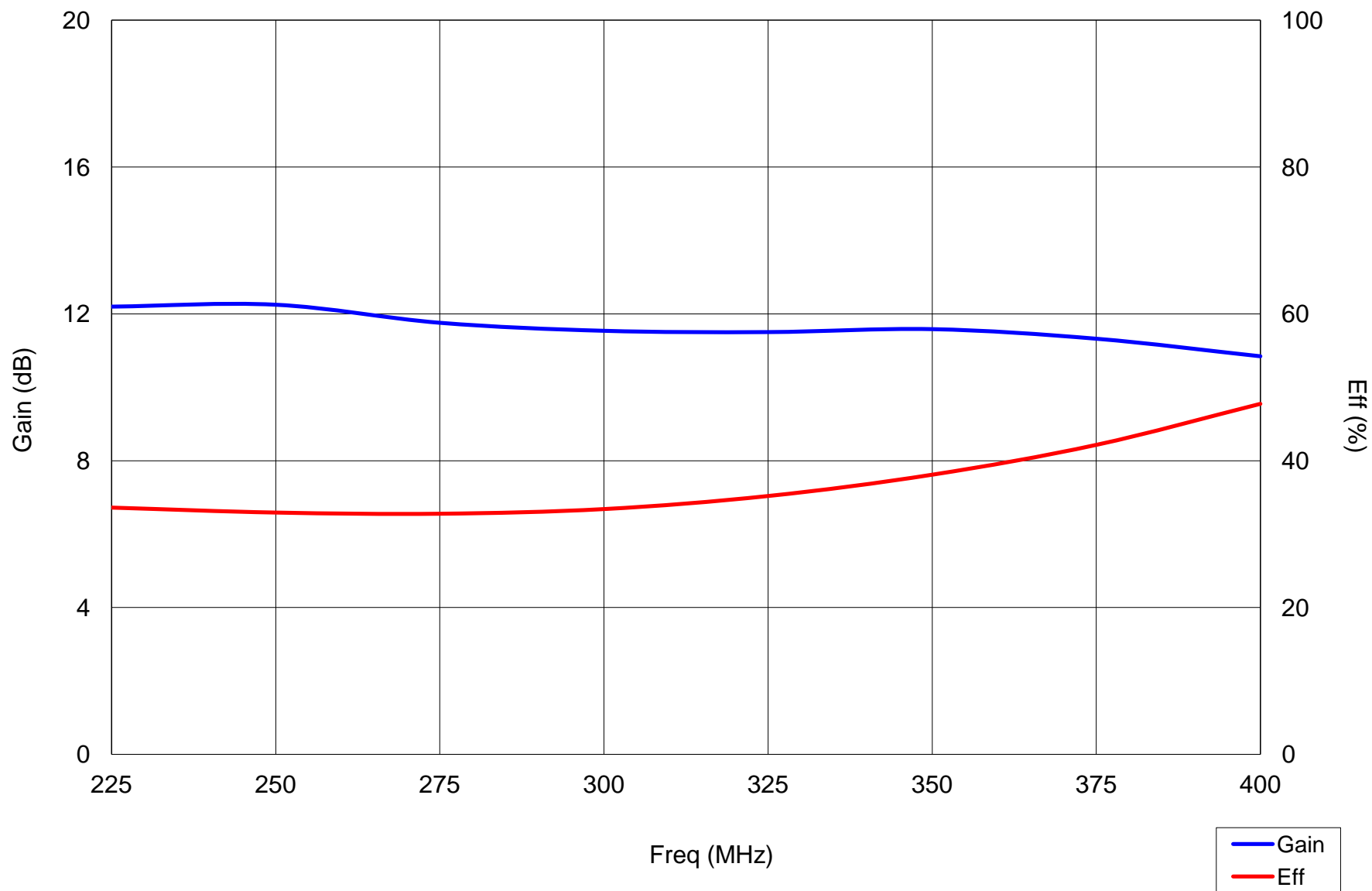
TB251 Pout/Gain vs Pin: Freq = 300MHz, Vds = 28Vdc, Idq = 0.8A

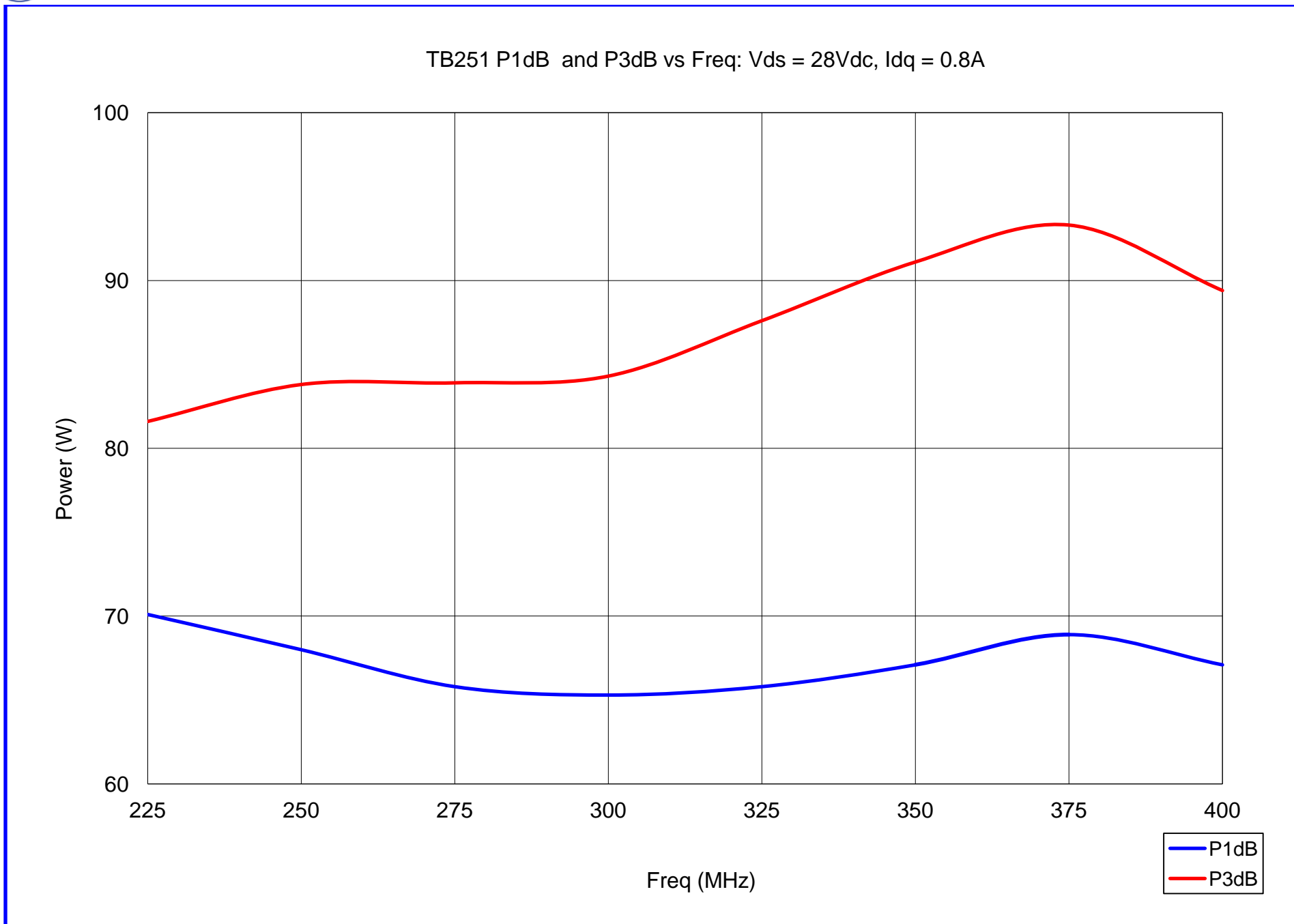


TB251 Pout/Gain vs Pin: Freq = 400MHz, Vds = 28Vdc, Idq = 0.8A

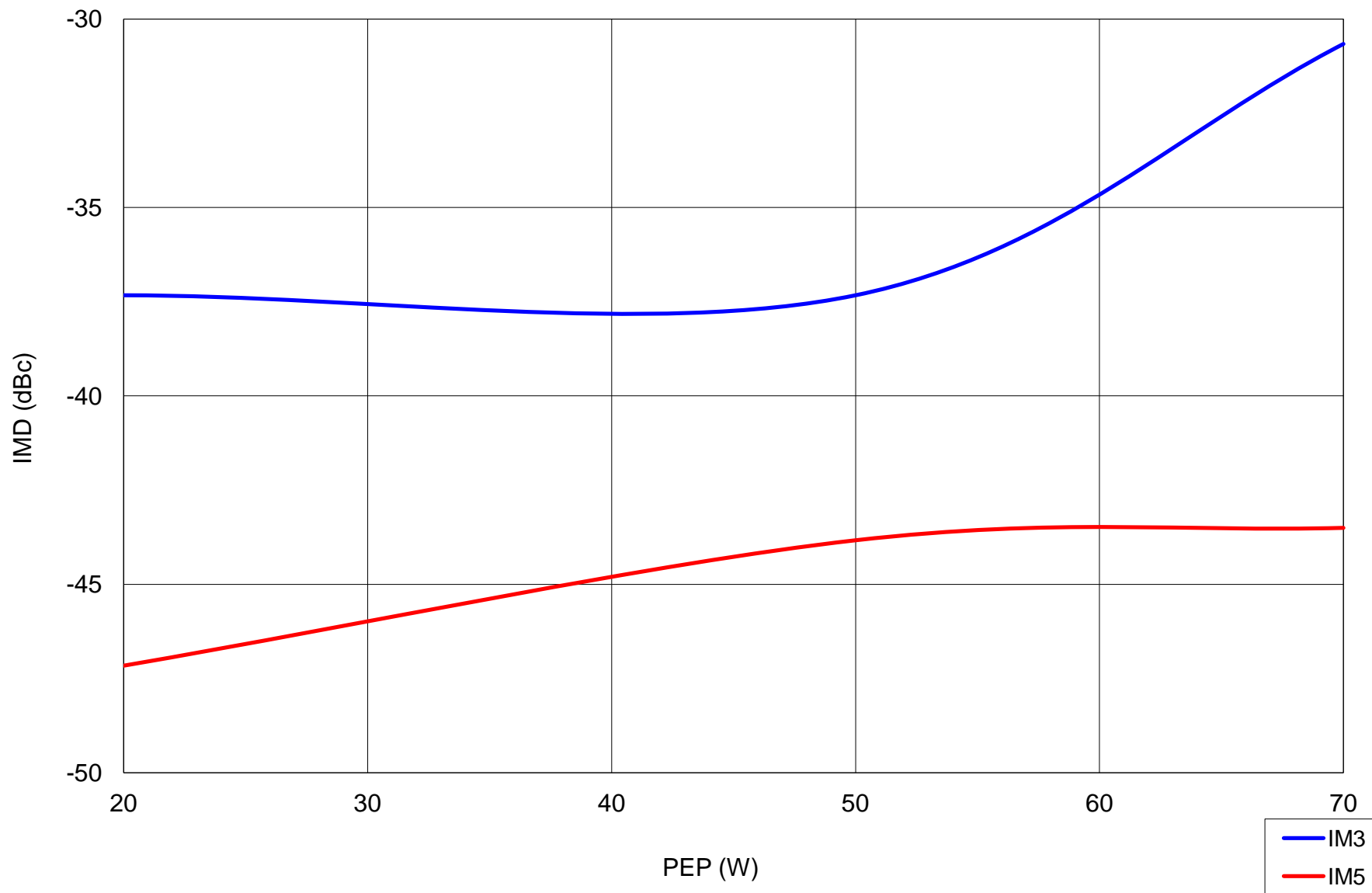


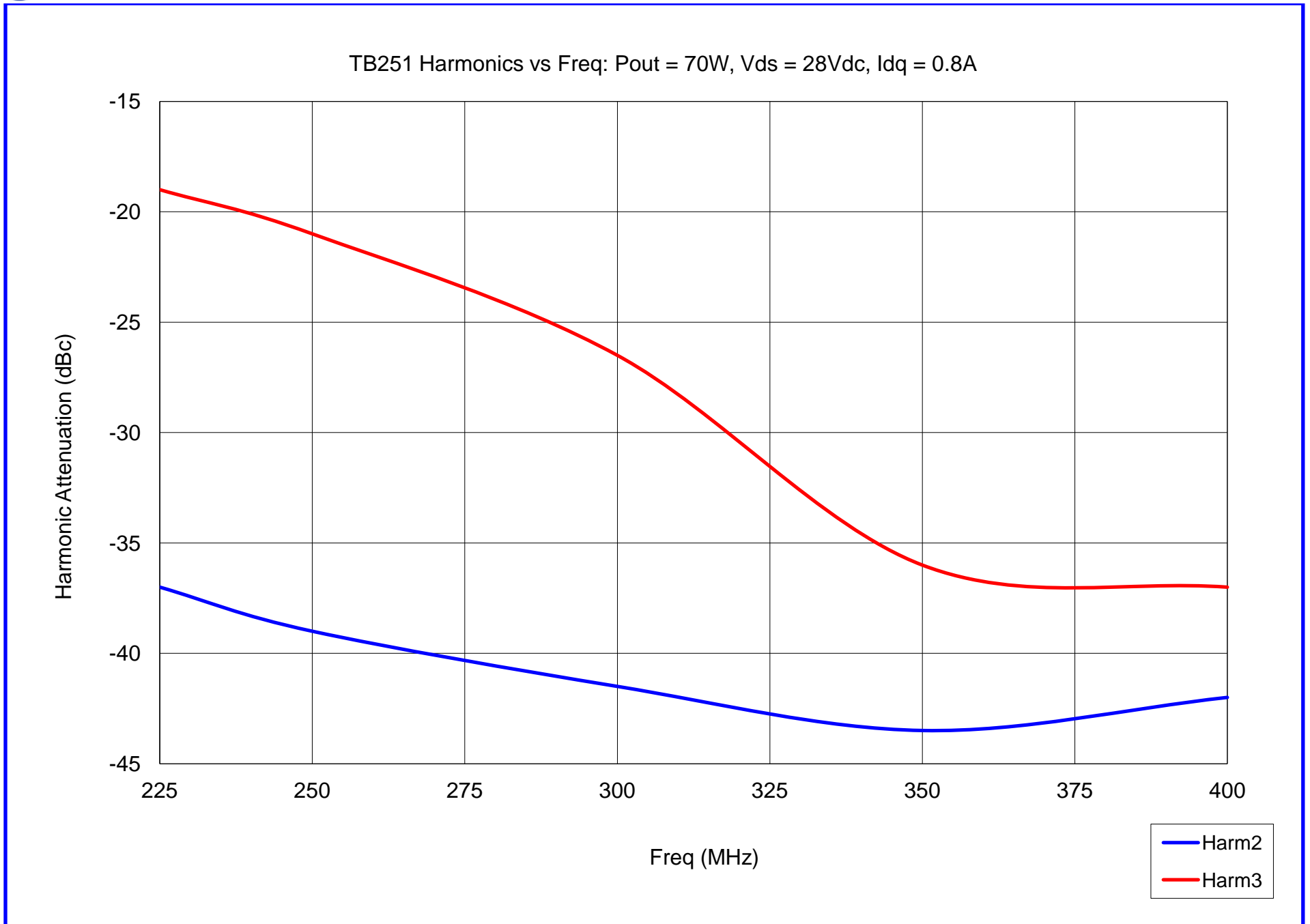
TB251 Gain/Efficiency vs Freq: Pout = 70W, Vds = 28Vdc, Idq = 0.8A



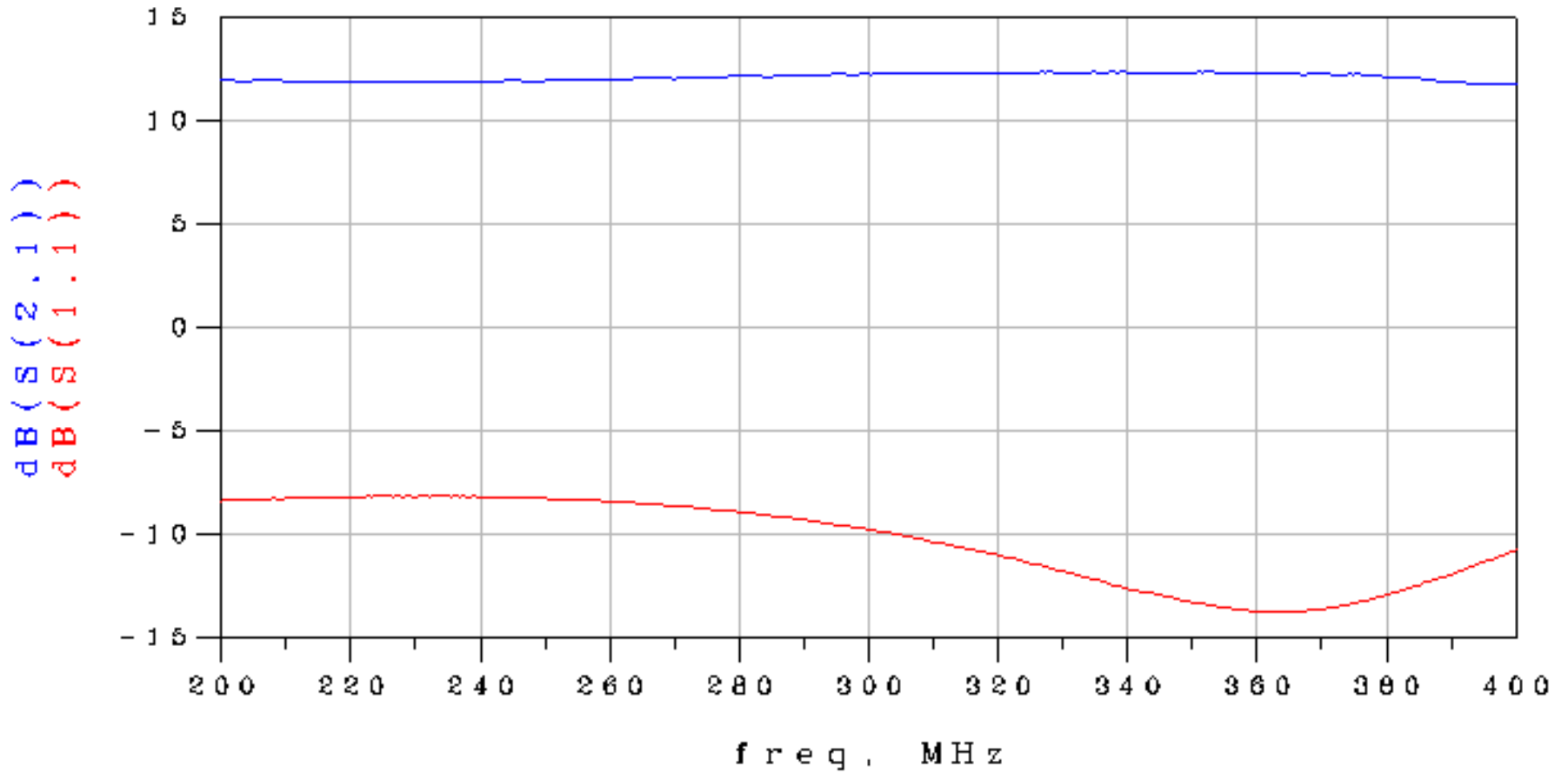


TB251 IMD vs PEP at 300 MHz Sep = 100kHz, Vds = 28Vdc, Idq = 0.8A

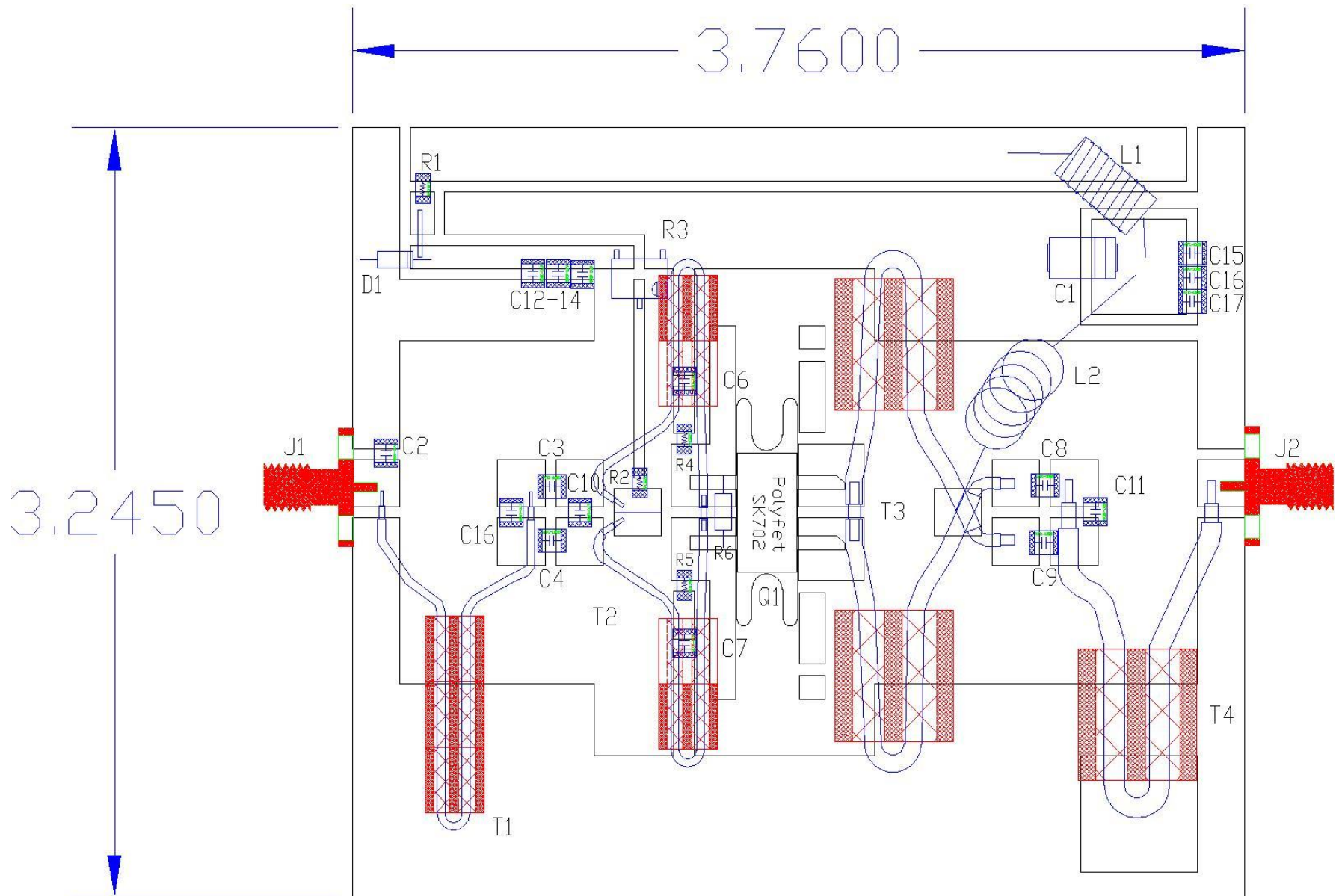




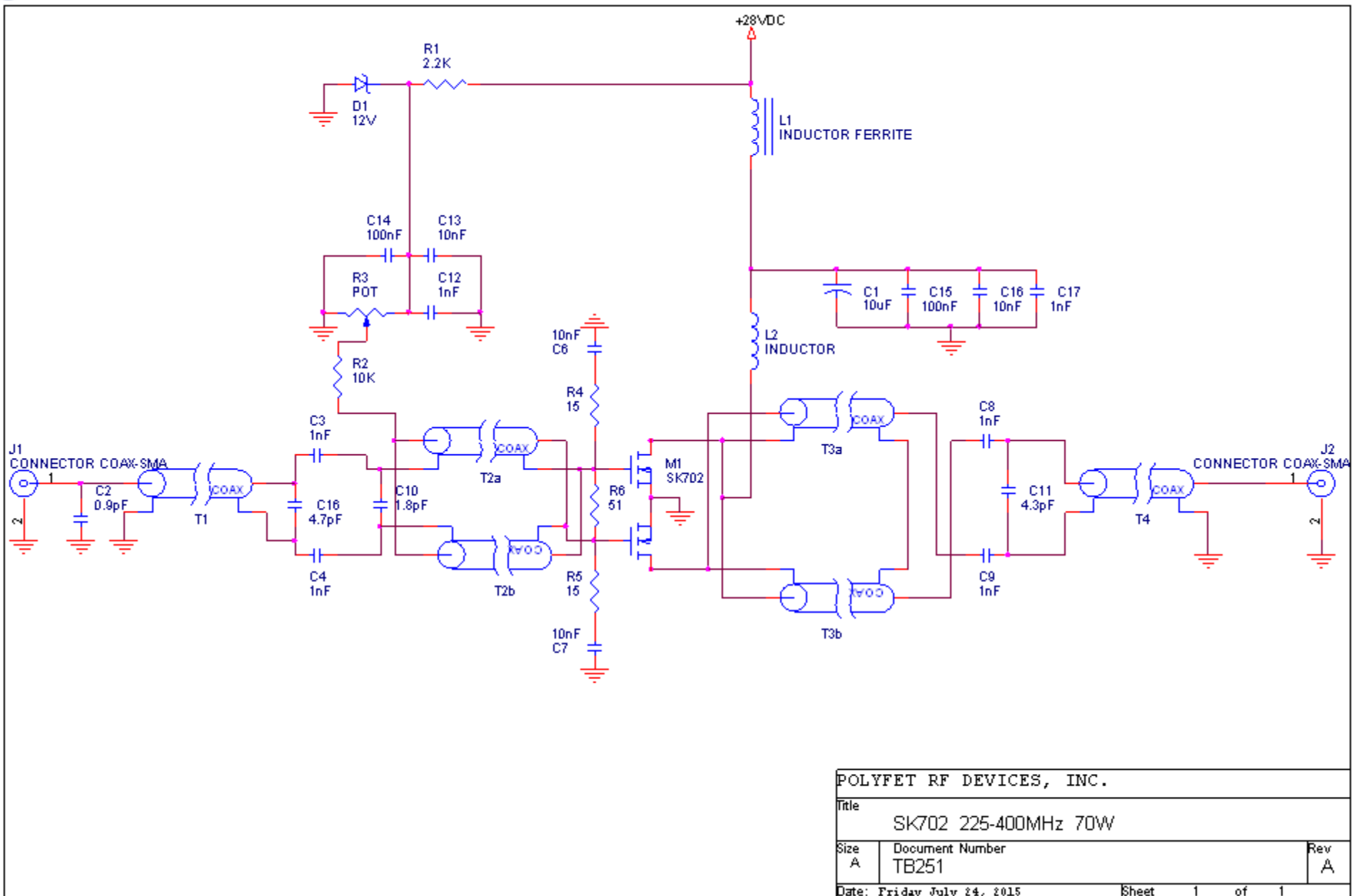
TB251 SK702 Vds=28VDC, Idq=800mA



TB251: Vds=28Vdc, Idq=0.8A, Pin=0dBm



Units in Inches



POLYFET RF DEVICES, INC.		
Title SK702 225-400MHz 70W		
Size A	Document Number TB251	Rev A
Date: Friday July 24, 2015	Sheet 1 of 1	

(Polyfet TB251)			
NOMENCLATURE	DESCRIPTION	VENDER	VENDER PART #
C1	CAP TANT 10UF 50V 10% LOESR SMD	Digi-Key	495-1589-1-ND
C2	0.9pF +/-2% Ultra-low ESR, Microwave Cap., 1111N	Passive Plus, Inc	1111N0R9BW501
C3, C4, C8, C9, C12, C17	1000pF +/-2% Ultra-low ESR, Microwave Cap., 1111N	Passive Plus, Inc	1111N102GW500
C6, C7, C13, C1 6	10,000pF +/-10% RF By-Pass Capacitors,1111X	Passive Plus, Inc	1111X103KW500
C10	4.7pF +/-2% Ultra-low ESR, Microwave Cap., 1111N	Passive Plus, Inc	1111N4R7BW501
C11	4.3pF +/-2% Ultra-low ESR, Microwave Cap., 1111N	Passive Plus, Inc	1111N4R3BW501
C14, C15	100,000pF +/-10% RF By-Pass Capacitors,1111X	Passive Plus, Inc	1111X104KW500
C16	1.8pF +/-2% Ultra-low ESR, Microwave Cap., 1111N	Passive Plus, Inc	1111N1R8BW501
R1	RES 1.2kOhm 1/4W 5% 1206 SMD	Digi-Key	RHM1.2kECT-ND
R2	RES 10k ohm 1/4W 5% 1206 SMD	Digi-Key	311-10.0KFRCT-ND
R3	Trimmer Resistors – 10kOhm 0.25W SMD	Mouser Electronics	490-2661-1-ND
R4, R5	RES 15.0 ohm 1/4W 5% 1206 SMD	Digi-Key	RHM15ECT-ND
R6	RES 51 Ohm Metal Film 1W 5%	Digi-Key	PPC51W-1CT-ND
L1	18AWG Mag Wire, 9-turns around	www.electromechaniconline.com	MW180SPNRD
	850ui toroid ferrite	Amidon	FT-50-43
L2	16AWG Mag Wire, 5-turn Air Coil, ID: 0.2"	www.electromechaniconline.com	MW180SPNRD
T1	3.0" 50 ohm Coaxial Balun	Amawave	UT34-50
	125mu Binocular Ferrite	Amidon	BN-61-2402
T2	2.5" 25 ohm Coaxial 4:1 Transformer	Amawave	UT34-25
	850mu Binocular Ferrite	Amidon	BN43-2402
T3	2.55" 10 ohm Coaxial 4:1 Transformer	Amawave	UT70-10
	125mu Binocular Ferrite	Amidon	BN61-202
T4	2.5" 50 ohm Coaxial Balun	Amawave	UT85-50
	125mu Binocular Ferrite	Amidon	BN61-202
D1	12V Zener Diode	Digi-Key	1N5242BDICT-ND
J1, J2	SMA Female; 4 Hole Panel Mount	Pasternack	PE4000-SF
PCB	Double-side Teflon ER=2.5, H=0.064in, 2oz	Rogers Corp.	RT/duroid 5880
Q1	VDMOS	Polyfet RF Devices	SK702