

TB250

Frequency = 30-512 MHz

Pout = 48.5 dBm

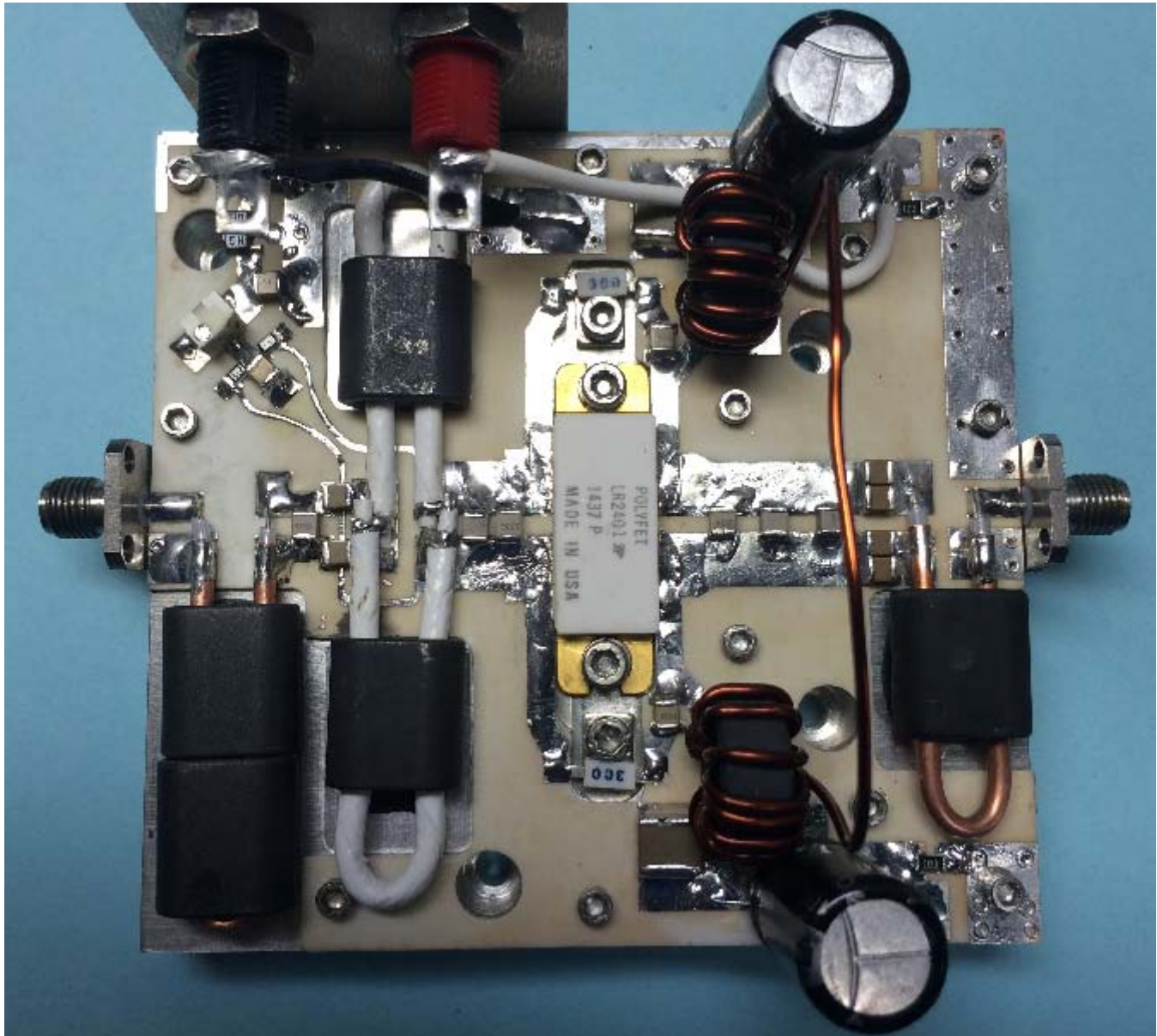
Gain = 20-26 dB

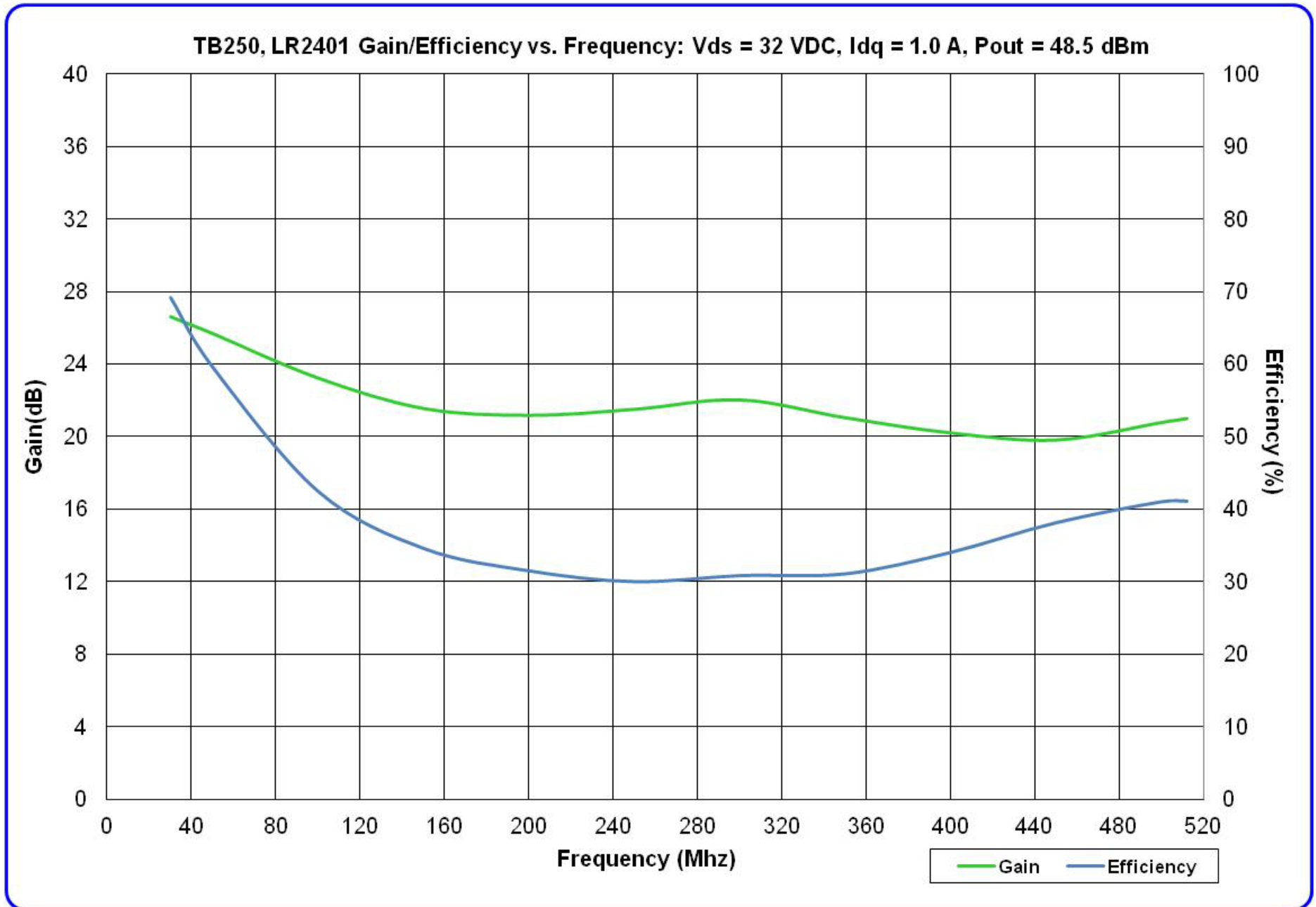
Vds = 32 VDC

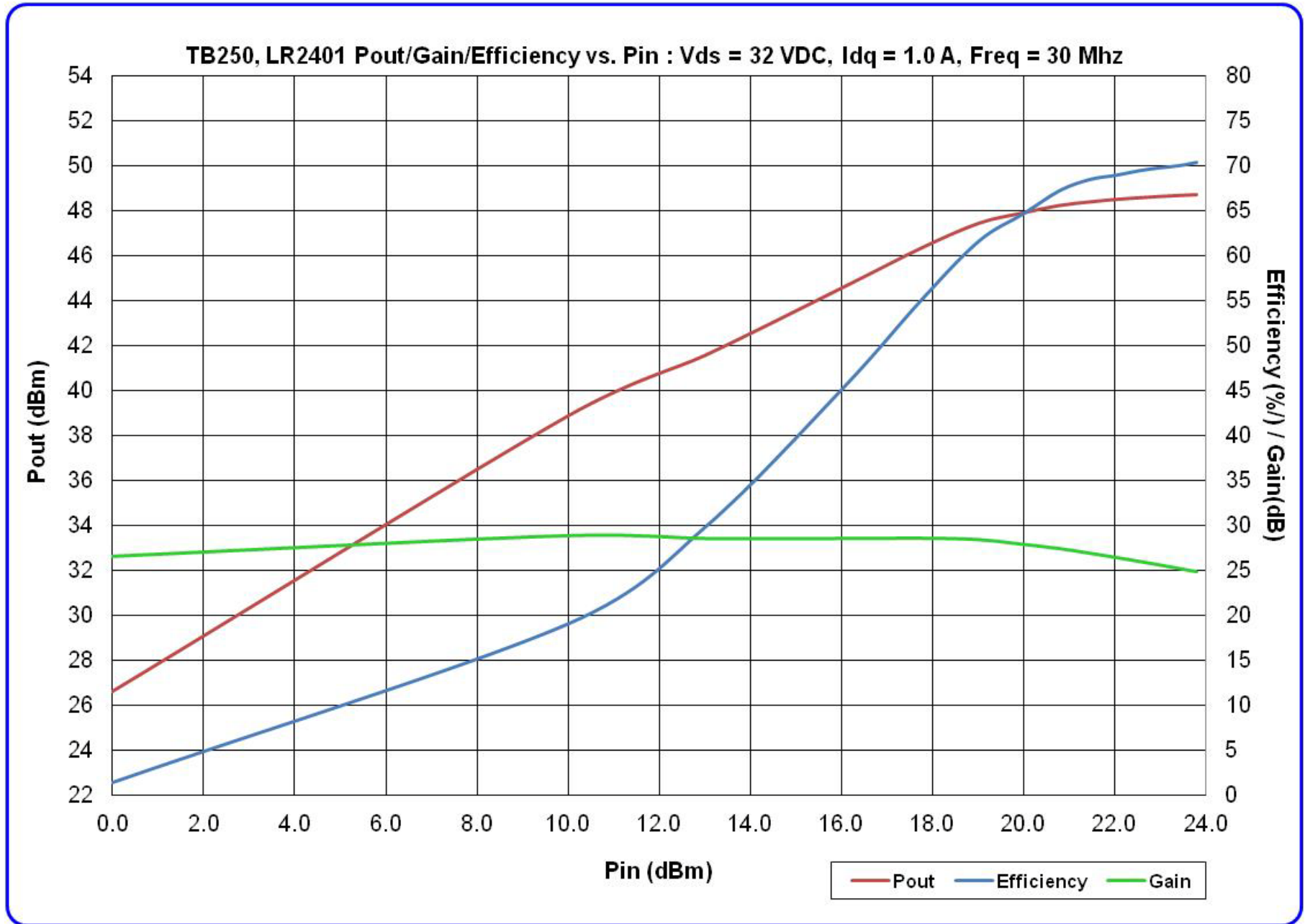
Idq = 1.0 A

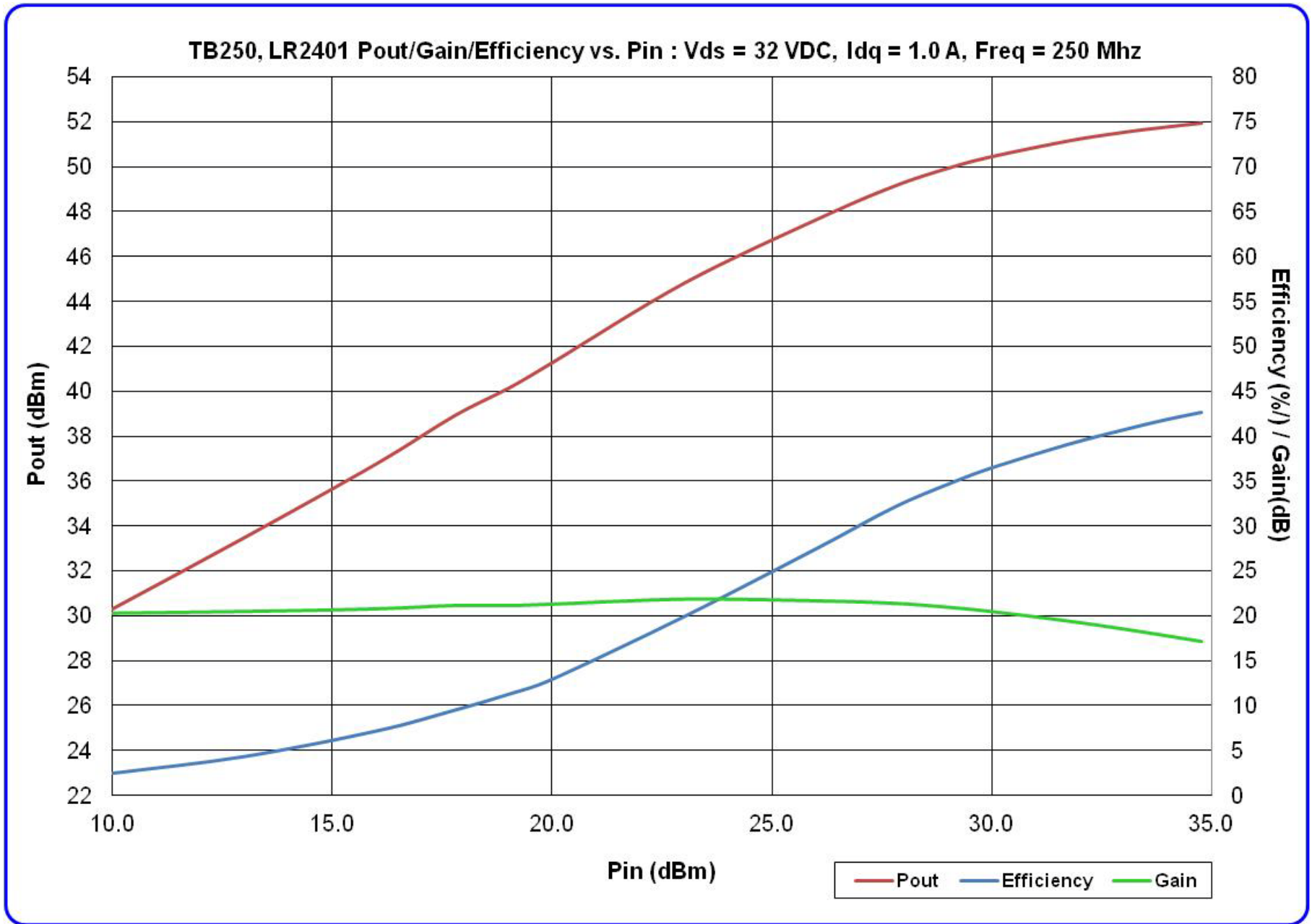
Efficiency = 30-60%

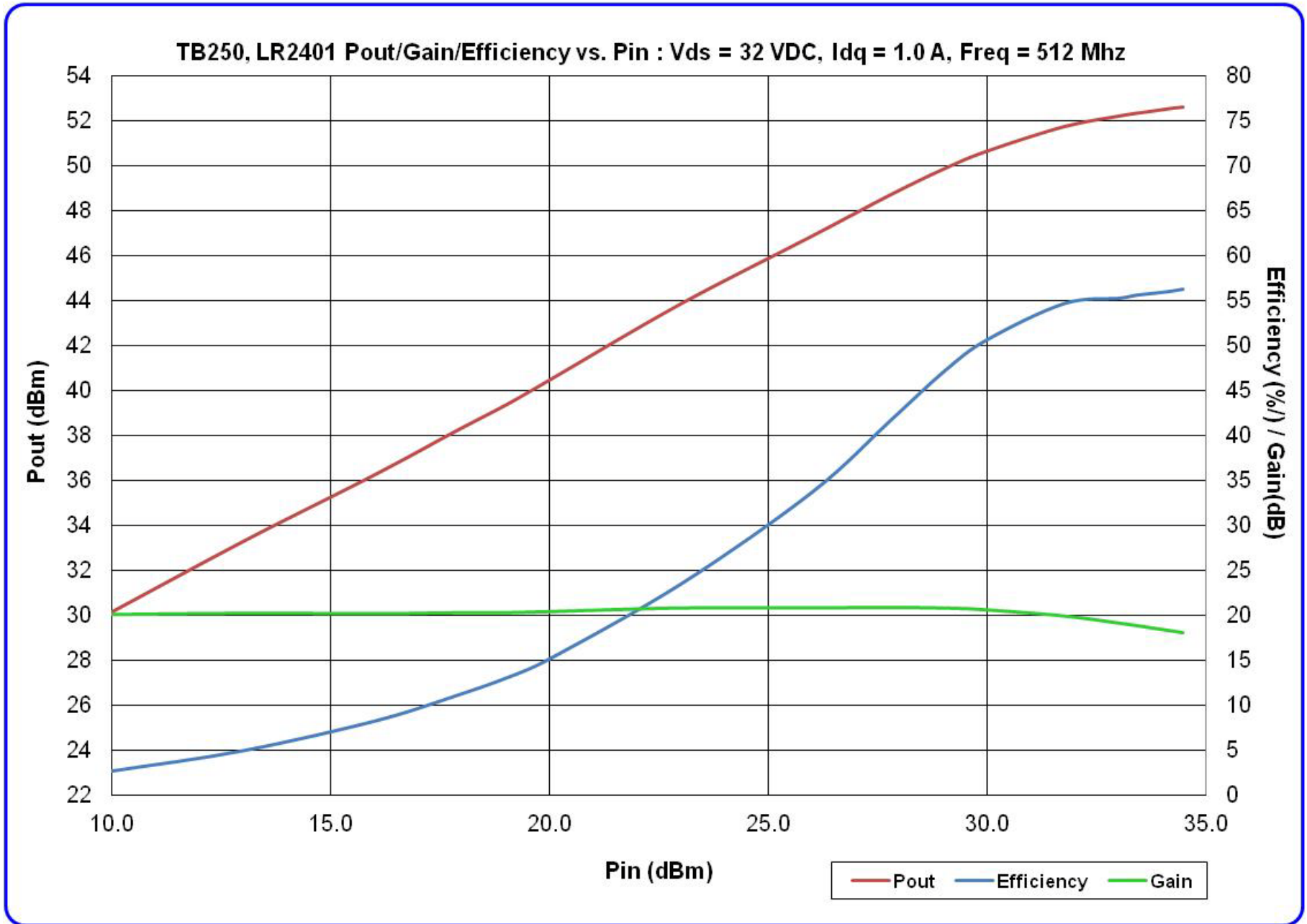
LR2401

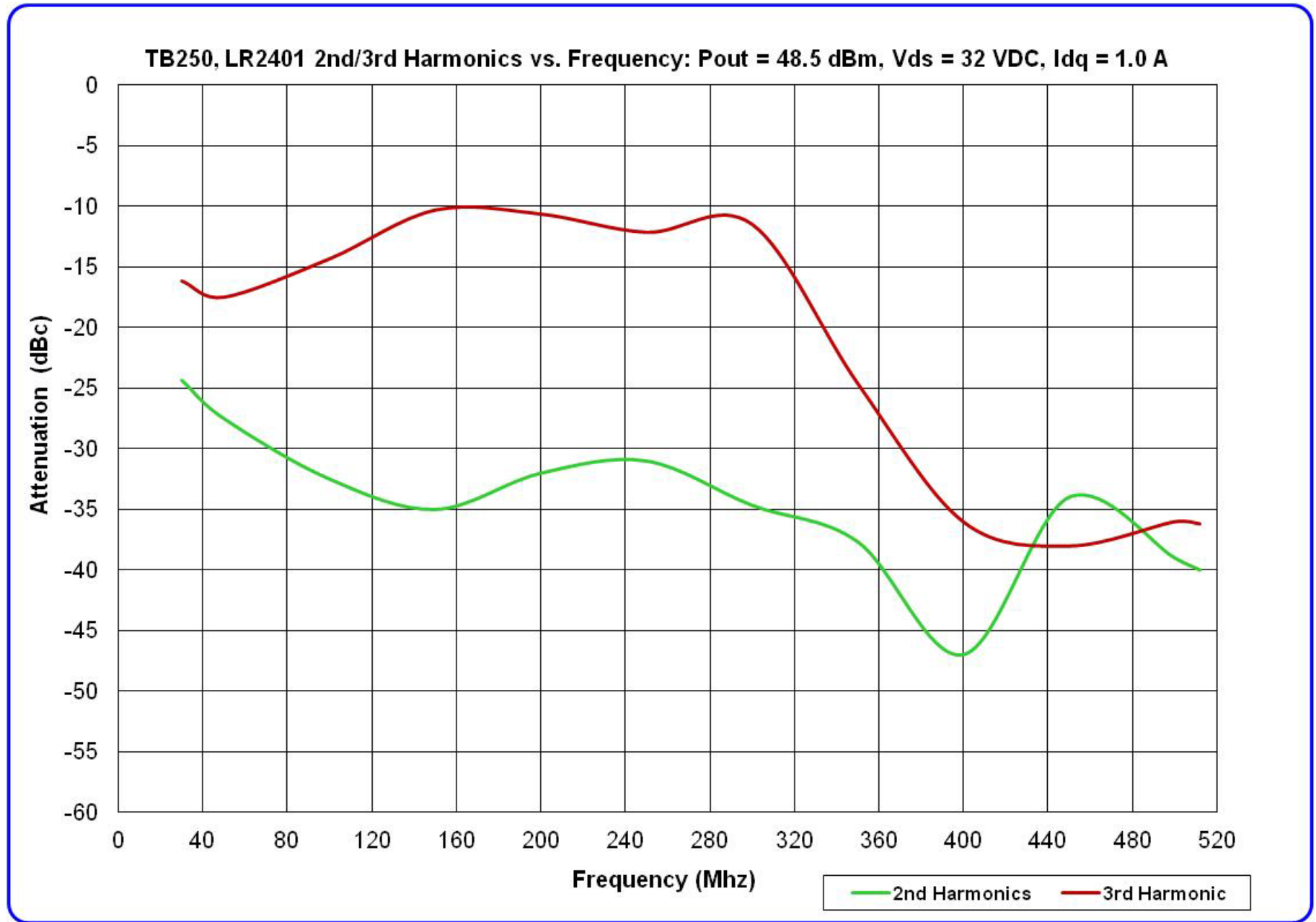


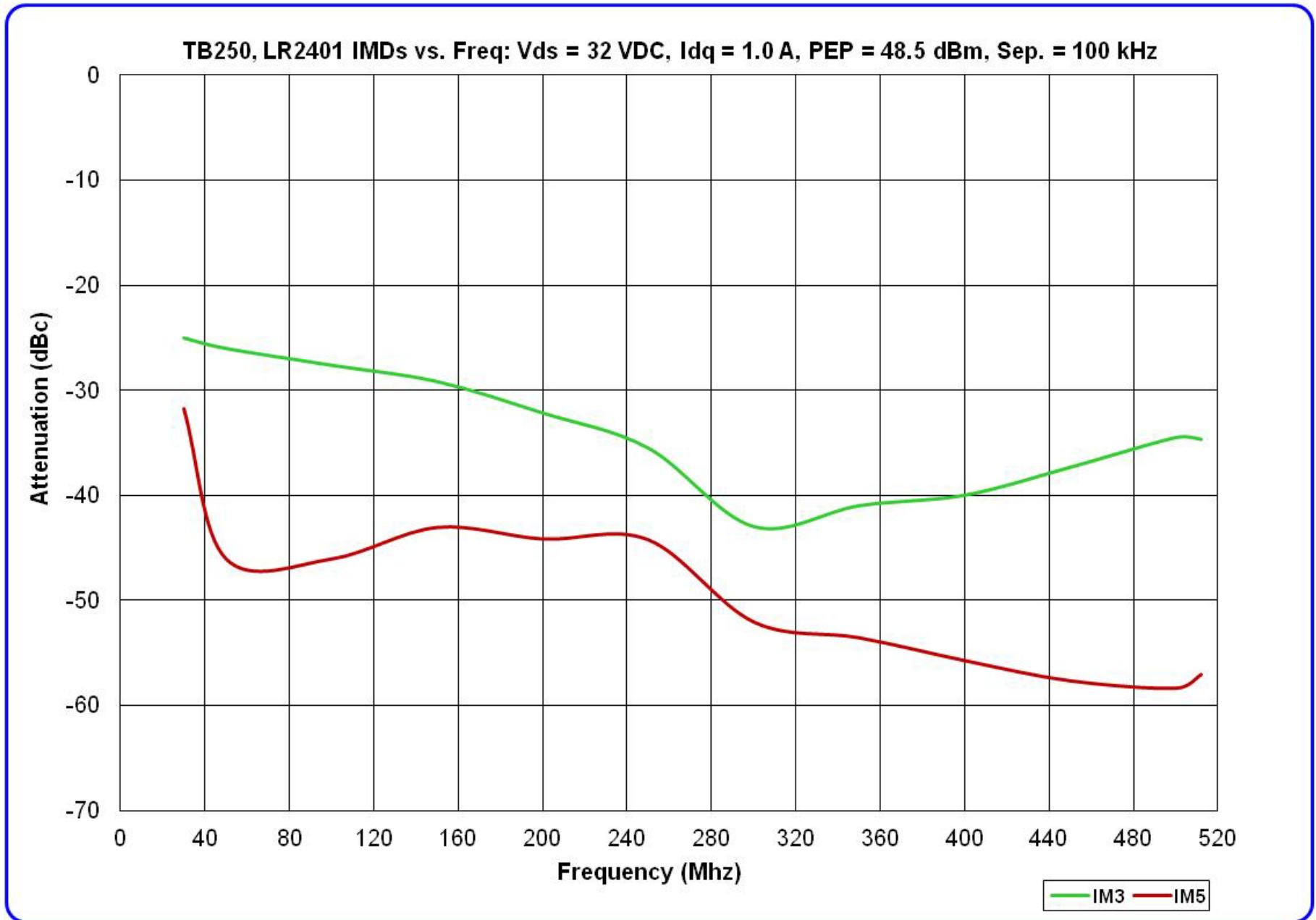




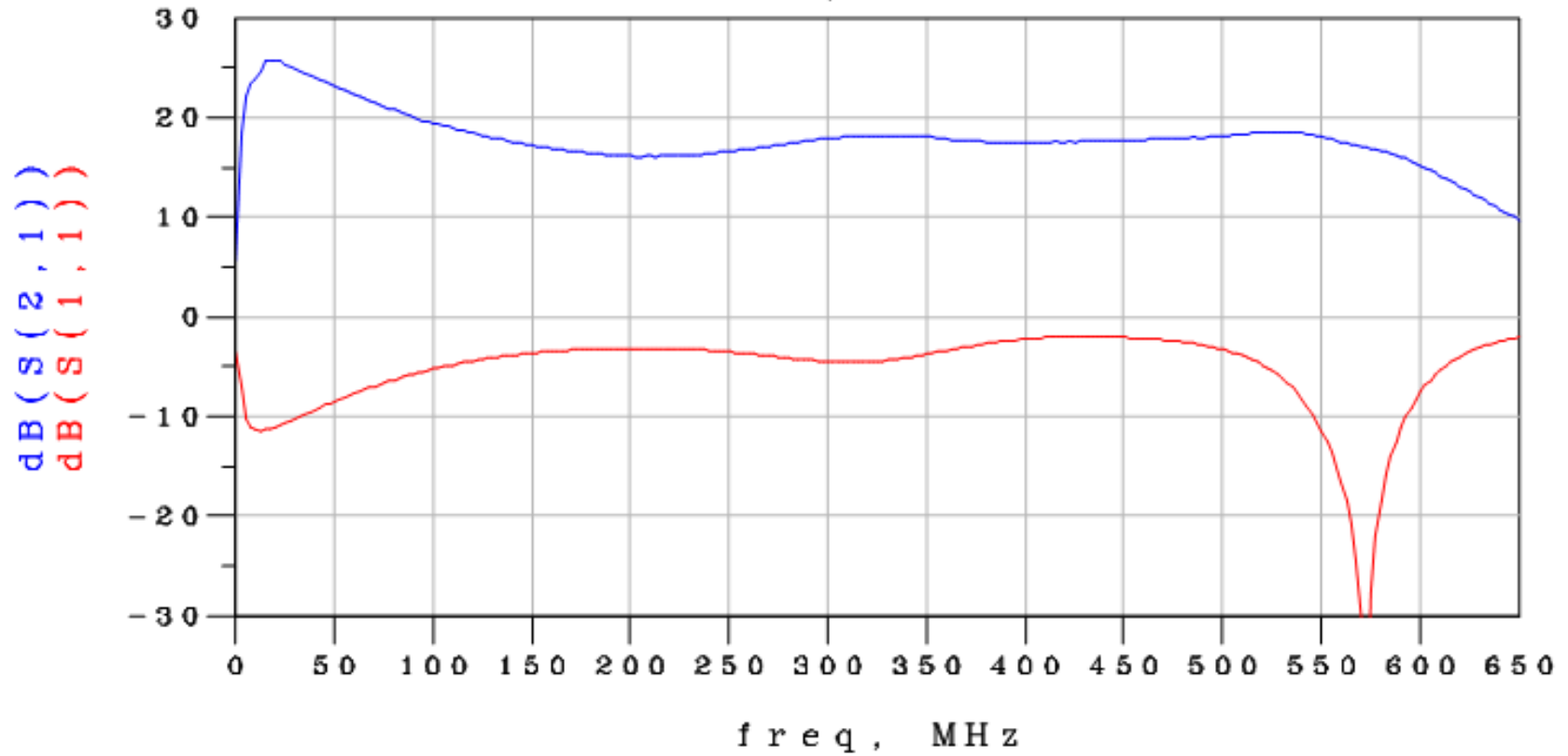


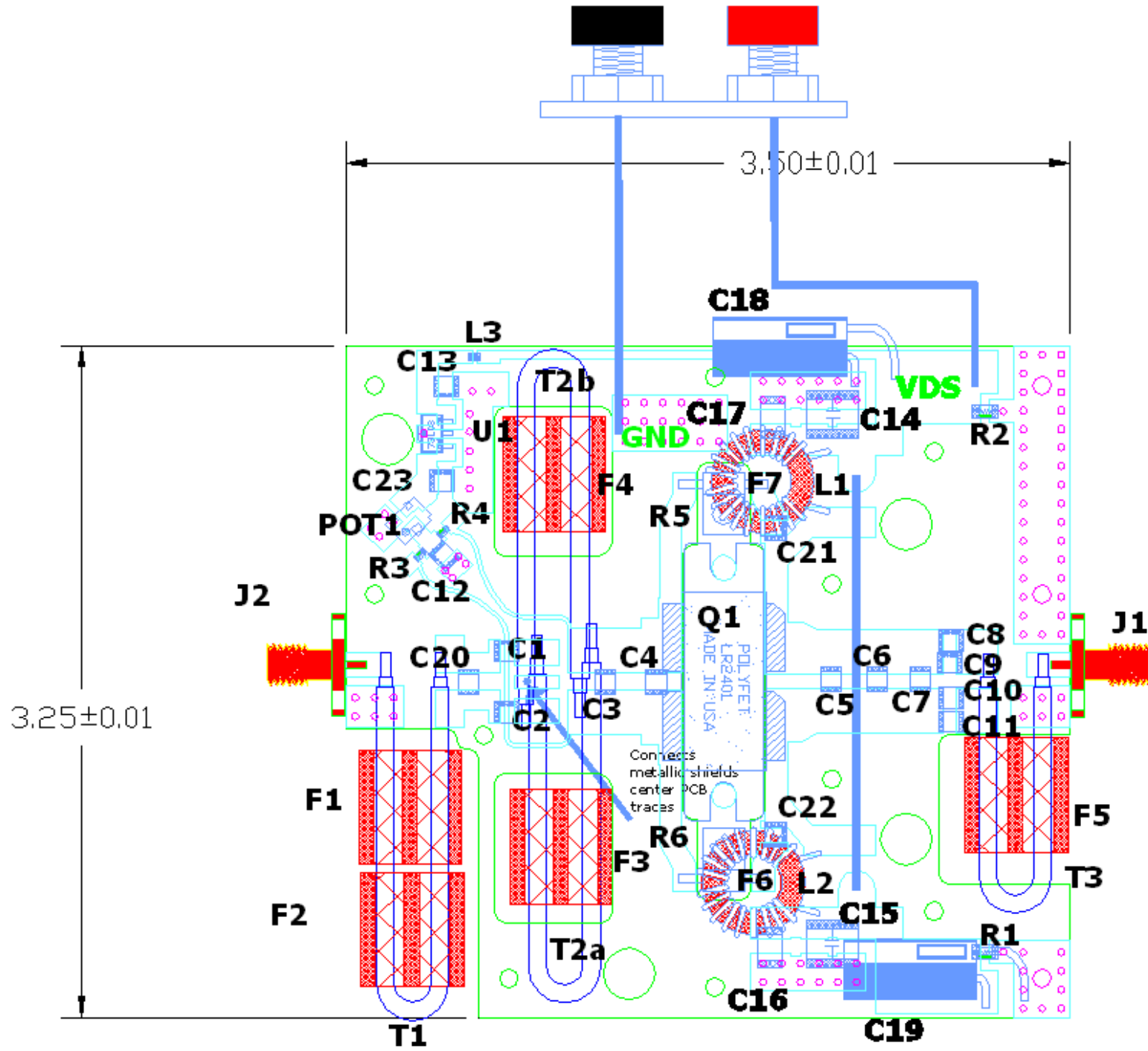


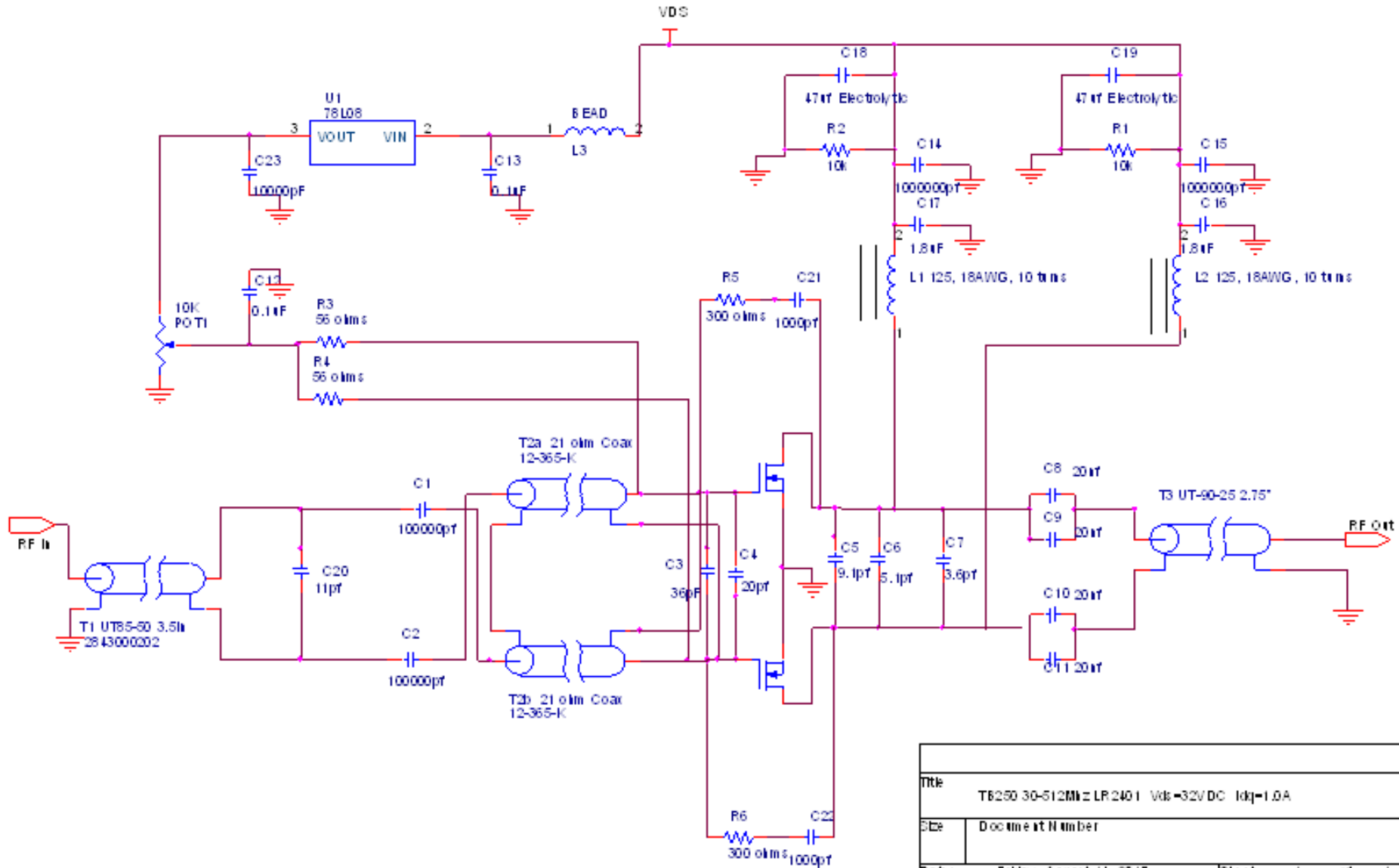




TB250 LR2401, $V_{ds}=32VDC$, $I_{dq}=1.0A$







| | | |
|--------------------------------------------|-------------------------|--------------|
| Title | | |
| TB250 30-512MHz LP 2401 Vds=32VDC Idq=1.0A | | |
| Size | Document Number | Rev |
| Date: | Friday, August 14, 2015 | Sheet 1 of 1 |

| | TB250 | | |
|---------------------|-----------------------------------------------------------|----------------------------------|----------------------|
| NOMENCLATURE | DESCRIPTION | VENDER | VENDER PART # |
| C1,C2,C8,C9,C10,C11 | 20nF +/-20% RF By-Pass Capacitors,1111X | Passive Plus, Inc | 1111X203MW500 |
| C3 | 36pF +/-2% Ultra-low ESR, Microwave Cap., 1111N | Passive Plus, Inc | 1111N360BW501 |
| C4 | 20pF +/-2% Ultra-low ESR, Microwave Cap., 1111N | Passive Plus, Inc | 1111N200BW501 |
| C5 | 9.1pF +/-2% Ultra-low ESR, Microwave Cap., 1111N | Passive Plus, Inc | 1111N9R1BW501 |
| C6 | 5.1pF +/-2% Ultra-low ESR, Microwave Cap., 1111N | Passive Plus, Inc | 1111N5R1BW501 |
| C7 | 3.6pF +/-2% Ultra-low ESR, Microwave Cap., 1111N | Passive Plus, Inc | 1111N3R6BW501 |
| C12,C13 | 0.1uF +/-10% RF By-Pass Capacitors,1111X | Passive Plus, Inc | 1111X104KW500 |
| C23 | 10,000pF +/-10% RF By-Pass Capacitors,1111X | Passive Plus, Inc | 111X103KW500 |
| C14,C15 | 1000000pF +/-20% High Q ,100V Capacitors, 2225X | Passive Plus, Inc | 2225X105MW101X |
| C16,C17 | Multilayer Ceramic Capacitors MLCC 1.8uF 100volts X7R 10% | Vishay / Vitramon | VJ2225Y185KXBAT |
| C18,C19 | Electrolytic 470UF 63V ELECT NHG RADIAL | Panasonic | ECA-1JHG471 |
| C20 | 6.8pF +/-2% Ultra-low ESR, Microwave Cap., 1111N | Passive Plus, Inc | 1111N6R8BW501 |
| C21,C22 | 1000pF +/-2% Ultra-low ESR, Microwave Cap., 1111N | Passive Plus, Inc | 1111N102GW500 |
| R1,R2 | RES 10K OHM 1/4W 5% 1206 SMD | Rohm Semiconductor | MCR18EZPJ103 |
| R3,R4 | RES SMD 1/2watt 56ohms 5% 200ppm High Power | Vishay / Dale | CRCW120656R0JNEAHP |
| R5,R6 | 30W, 300OHM | Innovative Power Products-IPP | IPP-RB201-300 |
| L1, L2 | 10 Turns of WIRE1 Toroid with Ferrite F6,F7 | ----- | ----- |
| L3 | 0805 1kohms HiSpeed EMI Filter Beads,Chokes & Arrays | Murata Electronics North America | 81-BLM21BD102SH1D |
| T1 | 50 Ω Semi-ridge Coax , 3.5 inch | MICROWAVE | UT-85-50 |
| T2a,T2b | 21 Ω One-Conductor 18AWG 1C SHIELD ,3.25" | Belden Wire & Cable | 83307E 0091000 |
| T3 | 25 Ω Semi Rigid, 2.75" | MICROWAVE | UT-90-25 |
| F1,F2 | Multi-Aperture cores ferrite material 43 | Fair-Rite Products Corp. | 2843000202 |
| F3,F4.F5 | Balun Ferrite K Material 12-365-K 125u | Ferronics | 12-365-K |
| F6,F7 | Toroid Ferrite K Material | Ferronics | 11-750-K |
| POT1 | Trimmer Resistors - 10K OHM 0.25W SMD | Murata Electronics North America | PVG5A103C03R00 |
| WIRE1 | Magnetic Wire 18AWG ,155°C | www.electromechaniconline.com | MW180SPNRD |
| U1 | IC 8V positive regulator SOT89 | NJR | NJM78L08UA |
| J2 | PE4328 N Female; 4 Hole Panel Mount | Pasternack | PE4328 |
| J1 | PE4000-SF SMA Female; 4 Hole Panel Mount | Pasternack | PE4000-SF |
| PCB | RO4725JXR 1TC/1TC 0307+-002/DI | Rogers. Corp | RO4725 |
| Q1 | LDMOS | Polyfet RF Devices | LR2401 |