



Product Brochure

# Microwave Power Amplifiers

100 MHz to 50 GHz



Rev B - 110113

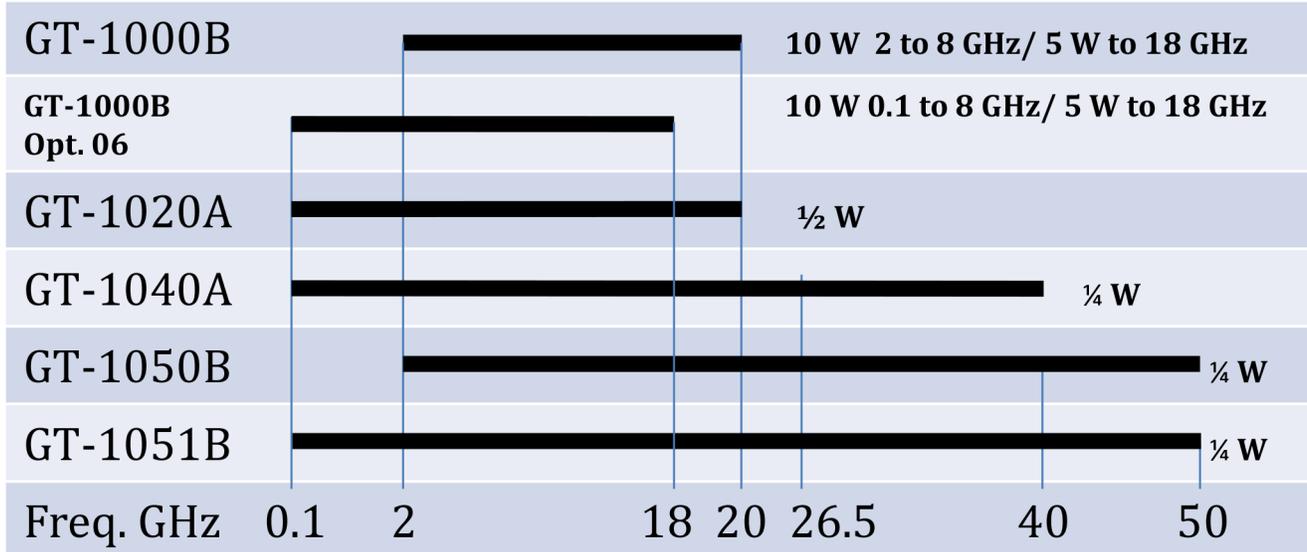
# Key Benefits

- ▣ Replace multiple narrowband amplifiers with one ultra-broadband Instrument-grade linear amplifier for higher performance and lower cost
- ▣ Overcome cable and insertion loss in automated test systems (ATE) to provide the higher power test signals required by many devices-under-test (DUT)
- ▣ Ideal preamp for microwave spectrum and signal analyzers for wider dynamic range and lower noise figure measurements
- ▣ Broadband frequency range provides exceptional pulse performance and the wide linear range provides headroom for digital modulation fidelity



# Microwave Power Amplifiers

## Amplifier Selection Guide



GT-1000B Option 06  
5W, 100 MHz to 18 GHz



GT-1020A  
1/2 W, 100 MHz to 20 GHz



GT-1040A  
1/4 W, 10 MHz to 40 GHz



GT-1050B  
1/4 W, 2 GHz to 50 GHz



GT-1051B  
1/4 W, 10 MHz to 50 GHz

The Giga-tronics Microwave Power Amplifiers offer linear high-power amplification across multi-octave bandwidths. These instrumentation grade amplifiers offer low noise, high gain and outstanding gain flatness for R&D Lab amplifiers or system amplifiers in automated test systems (ATE) for manufacturing test.



# Microwave Power Amplifiers

Giga-tronics Microwave Power Amplifiers deliver outstanding performance and exceptional value. These ultra-broadband amplifiers have excellent pulse performance and modulated signal fidelity, ideal for testing in wireless communications, defense EW and radar testing and general purpose microwave laboratory applications. Have the power you need to overcome cable and switching losses, or to drive higher power mixers, detectors and very high power amplifiers.

## Specification Summary

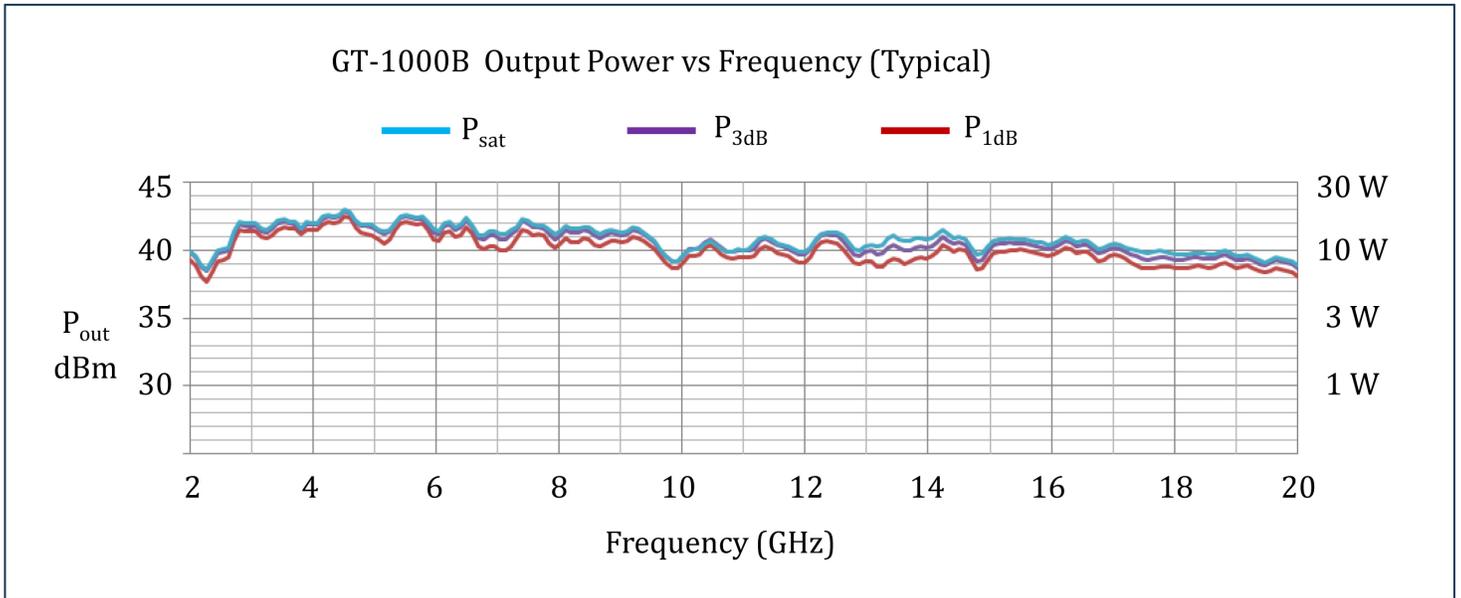
Model	Freq. Range (GHz)	Psat (Minimum)	Gain (Nominal)	Gain Flatness (Maximum)	Noise Figure (Typical)
GT-1000B (Opt. 06)	2 to 20 (0.1 to 18)	0.1-8 GHz: 38.5 dBm (7W) 8-12 GHz: 37 dBm (5W) 12-18 GHz: 36 dBm (4W)	40 dB (35 dB)	± 3.5 dB	< 10 dB
GT-1020A	0.1 to 20	0.1-10 GHz: 26 dBm (0.4W) 10-20 GHz: 25 dBm (0.3W)	35 dB	± 3.5 dB	< 5 dB
GT-1040A	0.1 to 40	0.1-0.5 GHz: 20 dBm (0.1W) 0.5-26.5 GHz: 23 dBm (0.2W) 26.5-40 GHz: 20 dBm (0.1W)	20 dB	± 3.5 dB	< 8 dB
GT-1050B	2 to 50	2-10 GHz: 26 dBm (0.4W) 10-30 GHz: 25 dBm (0.3W) 30-40 GHz: 23 dBm (0.2W) 40-50 GHz: 20 dBm (0.1W)	25 dB	± 3.5 dB Nominal	< 10 dB
GT-1051B	0.1 to 50	0.1-2 GHz: 27 dBm (0.5W) 2-10 GHz: 26 dBm (0.4W) 10-30 GHz: 25 dBm (0.3W) 30-40 GHz: 23 dBm (0.2W) 40-50 GHz: 20 dBm (0.1W)	25 dB	± 3.5 dB Nominal	< 10 dB



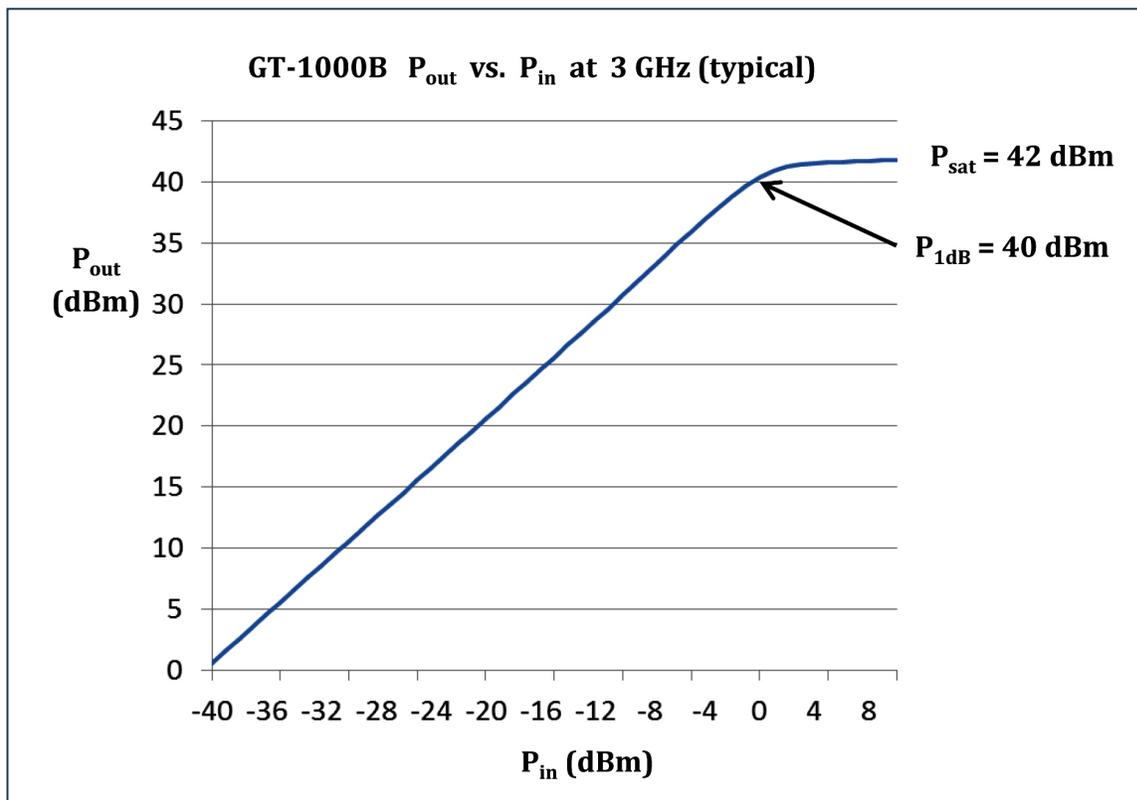
The rise and fall times of the Giga-tronics broadband microwave power amplifiers are less than 5 ns with minimal overshoot or ringing.

# Microwave Power Amplifiers

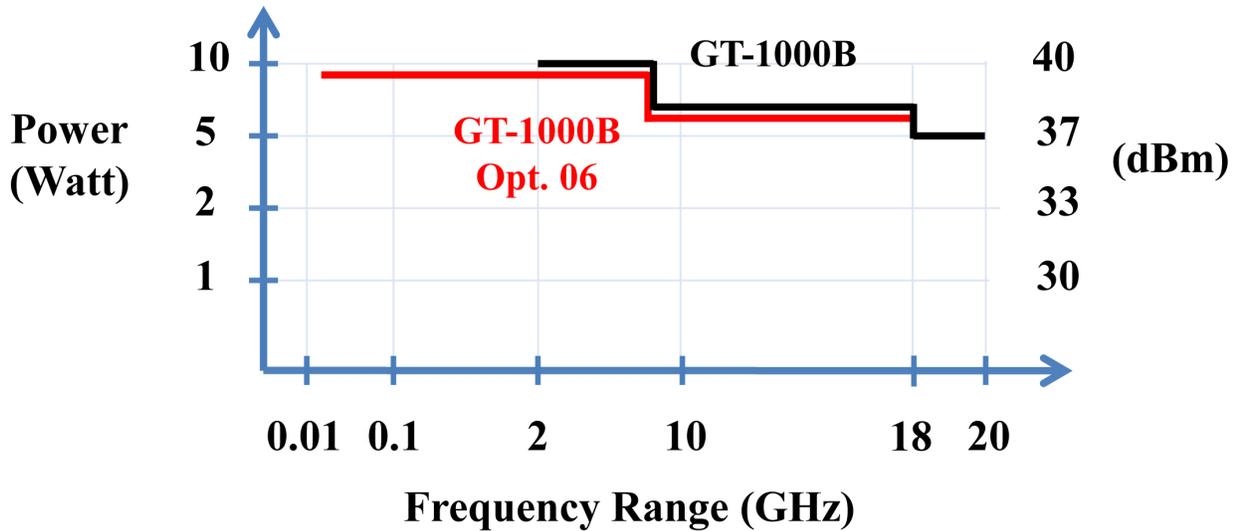
## High Power, Highly Linear



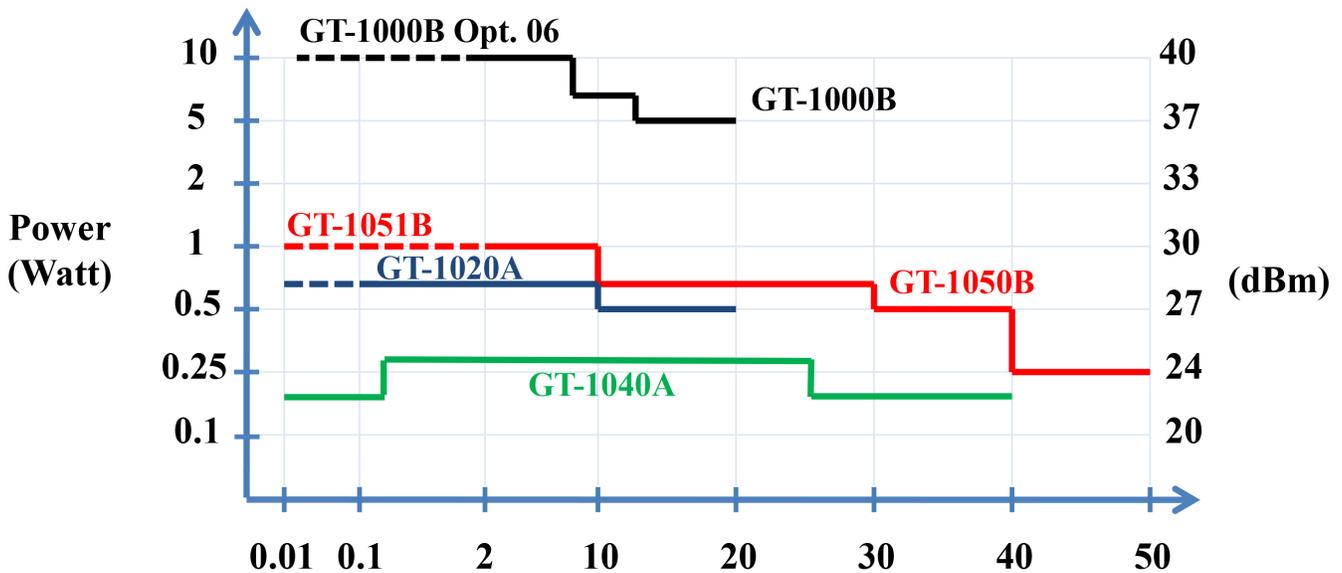
## GT-1000B $P_{1dB}$ is typically within 2 dB of $P_{sat}$



# Microwave Power Amplifiers



Power versus frequency for the GT-1000B standard (2 to 20 GHz) and GT-1000B with option 06, covering 100 MHz to 18 GHz in a single amplifier.



Power versus frequency for the GT-1020A (100 MHz to 20 GHz), GT-1040A (10 MHz to 40 GHz), GT-1050B (2 to 50 GHz), and GT-1051B (10 MHz to 50 GHz).



## Microwave Power Amplifiers

The Giga-tronics Microwave Power Amplifiers offer linear high-power amplification across multi-octave bands. They are ideal for testing in EMC, wireless communications applications and Defense EW systems, allowing broadband testing without band switching or swapping narrow band amplifiers resulting in faster and more accurate testing.

The amplifiers can be used in wireless communications and component testing wherever a highly linear amplifier is needed. These microwave power amplifiers with excellent pulse fidelity are ideal for many Aerospace and Defense applications, including EW, ECM, ECCM, radar and satellite system signal simulation and testing. They are an ideal ATE system building block for boosting test signals to overcome cable and connector loss whenever long cable runs are needed in assembly bays, environmental test chambers or field locations.

The amplifiers can be paired with Giga-tronics 2500B series Microwave Signal Generators, increasing the overall output power while preserving the synthesizer's fast switching speed, modulation, and high signal fidelity.



## Ordering Information

Giga-tronics offers engineering and technical expertise to help you gain the maximum return on your investment. At Giga-tronics, we understand the challenges you face. We help you achieve both top-line growth and bottom-line efficiencies by working to identify your precise needs and implement smart and result orientated solutions. Our support services are tailored to assist your team with integration and next-generation product and process technology.

For Quotes, Order Assistance, or Demonstration Equipment, please contact your local Giga-tronics representative. The contact information is available at: <http://www.gigatronics.com/Where-to-Buy>

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