



# High-Power GaN Broadband Power Transistors (BPT)

RFMD's high-power GaN broadband power transistors (BPTs) are optimized for commercial infrastructure, military communications, and general purpose amplifier applications in the 700MHz to 2.2GHz frequency band. This series of BPTs are therefore ideal for constant envelope, pulsed, WCDMA, and LTE applications. Using an advanced 48V high power density gallium nitride (GaN) semiconductor process optimized for high peak-to-average ratio applications, these high-performance amplifiers achieve high efficiency and flat gain over a broad frequency range in a single amplifier design. The RFG1M series are input-matched GaN transistors packaged in an air cavity ceramic package which provides excellent thermal stability. Ease of integration is accomplished through the incorporation of simple, optimized matching networks external to the package that provide wideband gain, efficiency, and potential high linearity performance in a single amplifier.

## Specifications

RF Freq (Min) (MHz)	RF Freq (Max) (MHz)	Gain (dB)	OP1dB (W)	ACP at 7.5dB PAR (dBc)	Drain Efficiency (%)	V <sub>D</sub> (V)	I <sub>D</sub> (mA)	Package	Part Number
1800	2200	15.0	180	-36	36.6	48	600	RF400-2	RFG1M20180
1800	2200	15.5	90	-36	35.0	48	300	RF400-2	RFG1M20090
700	1000	20.0	180	-32	39.0	48	600	RF400-2	RFG1M09180
700	1000	20.0	90	-34	38.0	48	300	RF400-2	RFG1M09090
200	450	19.0	125	-35	35	48	600	RF465-2	RFHA1042
1200	1850	15.0	125	TBD	35	48	600	RF465-2	RFHA1043

## Features

- Advanced GaN HEMT Technology
- High Peak Modulated Power
- Advanced Heat Sink Technology
- 25°C to 85°C Operating Temperature
- Optimized for Video Bandwidth and Minimized Memory Effects
- RF-tested for 3GPP Performance
- RF-tested for Peak Power using IS95
- Large signal models available

## Applications

- Commercial Wireless Infrastructure
- High Efficiency Doherty
- High Efficiency Envelope Tracking
- Military Communications

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