



RF Amplifier Data Sheet

BT-Gamma series

20-400MHz

1kW CW

- Communications
- Plasma
- CW Radar
- Test & Measurement

The BT-Gamma-CW series is a range of class AB RF power amplifiers. The model presented covers the 20-400MHz frequency range

- Excellent phase and amplitude stability
- Rugged, reliable, modular solid-state design
- High linearity
- In-built protection
- Very fast blanking
- Capable of pulsed operation

Suitable for CW radar, communications, HF/VHF jamming, particle accelerator/ plasma systems, plasma, RF heating and other scientific applications.

BT-Gamma series

Model numbers	BT01000-Gamma-CW
Modulation types	Faithfully reproduces all types of modulation including FM, AM, PM, pulses ¹
Rated CW power	1kW minimum ²
P1dB	800W minimum ³
Type	Class AB MOSFET
Frequency	20MHz-400MHz ⁴
Gain flatness	±2dB maximum
Pulse droop	0.5dB maximum ⁵
Pulse rise and fall times	100ns typical using a pre-gate RF input signal
Gate delay	Rising edge: 1microsecond typical Falling edge: 50ns typical ⁶
Harmonics	Odd: -16dBc typ, -10dBc max. Even:-30dBc typ. -20dBc max.
Spurious	<-60dBC maximum
3rd order intermodulation products	Better than -35dB (two tones of 1/10th rated power each)
Output noise (blanked)	<10dB above thermal
Output sample	-50dB into 50 Ω (forward voltage sample)
Input/output impedance	50 Ω nominal
Load SWR	Tolerates at least 3:1 @ full rated power without foldback ⁷
Remote interface	Parallel status monitoring via 25 pin D connector ⁸
Connectors	RF output: N type RF input, gate, sample:BNC ⁹
Cooling	Forced air, front to rear
Indicators	DC Power, Output Enable, RF Power, Over-temp, Over-duty, Load mismatch
Gain control range	10dB minimum for 0-5V control voltage
Input signals	RF drive: 0dBm RF GATE: CMOS/TTL High=Tx
Physical	Supplied in 19" rack, dimensions 19" Wx 500mmD x 767mmH
Mains power	110-240V, 50-60Hz, single phase, 4kVA max. ¹⁰
Operating temperature	0 to +50°C
Compliance	CE

1. Includes high speed gating and noise blanking for pulsed operation

2. PEP for input power of 1mW

3. Minimum output power at 1dB gain compression

4. The amp provides useful power outside this range, but performance is not guaranteed

5. Measured at 100μs pulse width at nominal P1dB level

6. Rising edge measured from rising edge of GATE pulse to 90% RF output voltage. Falling edge measured from falling edge of GATE pulse to 10% RF output voltage

7. Self resetting foldback protection reduces the amplifier gain if the load SWR is excessive

8. Pin out at www.tomcorf.com/pdf/interface.pdf

9. Other connector types available on request

10. 4x3-pin IEC. Mains supply must include an earth



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