RF Amplifier Data Sheet



BT-Gamma-CW Series 5MHz-400MHz 100W/250W CW

- Communications
- Plasma
- **CW Radar**
- Test & Measurement



The BT-Gamma-CW series is a range of class AB RF power amplifiers covering the 5MHz to 400MHz frequency range.

- Rugged, solid-state design high reliability
- Extremely high phase and amplitude stability
- · High linearity
- In-Built Protection
- · Very fast blanking
- Capable of pulsed operation
- Competitively priced

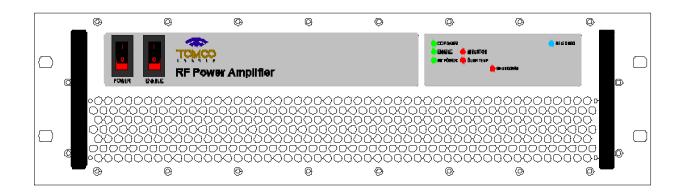
Suitable for CW radar, communications, HF/ VHF jamming, particle accelerator applications/ plasma systems, plasma, RF heating and other scientific applications.

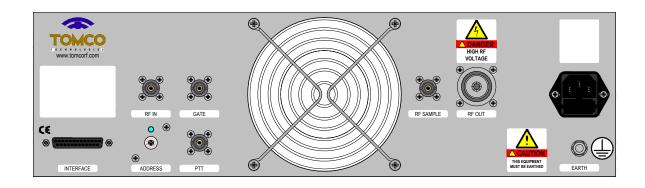
BT-Gamma-CW Series		
Model numbers		BT00100-Gamma-CW/BT00250-Gamma-CW
Modulation types		Faithfully reproduces all types of modulation including FM, AM, PM and pulses ¹
Rated power		100W/250W minimum ²
P1dB		80W/200W minimum ³
Туре		Class AB MOSFET
Frequency		5MHz-400MHz ⁴
Gain flatness		±2dB maximum
Pulsed operation	Pulse droop	0.5dB maximum ⁵
	Pulse rise and fall times	100ns typical using a pre-gate RF input signal
	Gate delay	Rising edge 1µs typical Falling edge: 50ns typical ⁶
Harmonics		Odd: -16dBc typ, -10 <dbc max.<br="">Even: -30dBc typ, -20dBc max</dbc>
Spurious		<-60dBc maximum
Output noise (blanked)		<10dB above thermal (1MHz bandwidth)
Output sample		-50dB into 50 Ω (forward voltage sample)
Input/output impedance		50 Ω nominal
Load VSWR		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, PTT, sample:BNC9
Cooling		Forced air, front to rear
Indicators		DC Power, RF Power, Output Enable, Selected, Mismatch, Over-temp, Shutdown
Gain Control Range Protection		10dB minimum for 0-5V control voltage Over-temp, out-of-band inputs, over-drive
RF drive RF gate (blanking)		0dBm nominal, 10dBm for no damage CMOS/TTL High=Tx
Physical		19" Wx 500mmD x 133mmH (3RU x 19" rack mounting), 28kg
Mains power		110-240V, 50-60Hz, single phase, 1kVA max. ¹⁰
Operating temperature		0 to +50°C
Compliance		CE

- Fidelity guaranteed to within the limits of the amplifier specifications
- PEP for input power of 1mW
- Minimum output power at 1dB gain compression
- The amp provides useful power outside this range, but performance is not guaranteed Measured at $500\mu s$ 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
- Self resetting foldback protection reduces the amplifier gain if VSWR is excessive
- 8. Pin out at www.tomcorf.com/pdf/interface.pdf
- 9. Other connector types available on request
- 10. 3-pin IEC. Mains supply must include an earth



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