RF Amplifier Data Sheet



BT-AlphaA-CW Series 10kHz-1MHz 1kW CW

- Communications
- Plasma
- CW Radar
- Test & Measurement



The BT-AlphaA-CW series is a range of class AB RF power amplifiers covering the 10kHz to 1MHz 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

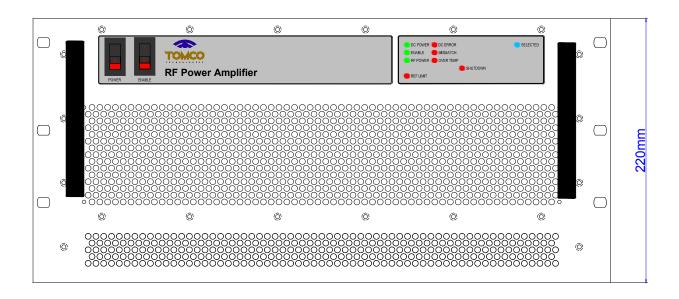
Suitable for CW radar, communications, HF/ VHF jamming, particle accelerator applications/ plasma systems, plasma, RF heating and other scientific applications.

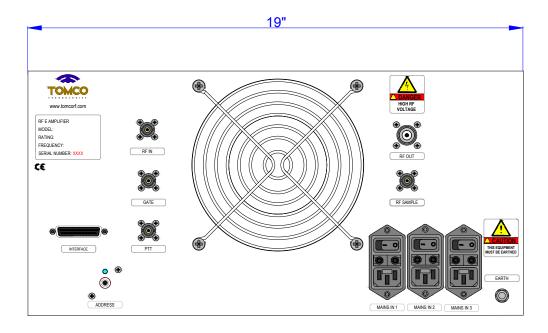
BT-AlphaA-CW Series		
Model numbers		BT01000-AlphaA-CW
Modulation types		Faithfully reproduces all types of modulation including FM, AM, PM and pulses ¹
Rated power		1kW minimum²
P1dB		800W minimum³
Туре		Class AB MOSFET
Frequency		10kHz-1MHz ⁴
Gain flatness		±2dB maximum
Pulsed operation	Pulse droop	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: -12dBc maximum. Even: -20dBc maximum.
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:BNC ⁹
Cooling		Forced air, front to rear
Indicators		DC Power, Output Enable, RF Power, DC Error, Mismatch, Over-temp, Ref limit, Shutdown, Selected
Gain Control Range Protection		10dB minimum for 0-5V control voltage Over-temp, out-of-band inputs
RF drive RF gate (blanking)		0dBm nominal, 10dBm for no damage CMOS/TTL High=Tx
Physical		19" Wx 500mmD x 220mmH (5RU x 19" rack mounting), ~35kg
Mains power		110-240V, 50-60Hz, single phase, 3kVA max. ¹⁰
Operating temperature		0 to +40°C
Compliance		CE

- 1. Fidelity guaranteed to within the limits of the amplifier specifications
- 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
- Measured at 500µs 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 VSWR is excessive
- 8. Pin out at www.tomcorf.com/pdf/interface.pdf
- 9. Other connector types available on request
- 10. 3 x 3-pin IEC. Mains supply must include an earth



BT-AlphaA-CW Series 1kW CW





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