RF Amplifier Data Sheet
BT-AlphaSA-CW series
1kW CW

- CW radar
- Communications
- Plasma
- Test & Measurement

The BT-AlphaSA-CW series is a range of class AB RF power amplifiers covering the 500kHz-150MHz 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-AlphaSA-CW series

Model number	BT01000-AlphaSA-CW
Modulation types	Faithfully reproduces all types of modulation including FM, AM, PM, pulses[1]
Rated power	1kW minimum[2]
P1dB	800W minimum[3]
Type	Class AB MOSFET
Frequency	500kHz-150MHz[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: 2μs typical Falling edge: 1μs typical[8]
Harmonics	Odd: -20dBc typical, -10dBc maximum Even:-30dBc typical, -20dBc maximum
Spurious	<-60dBc maximum
Output noise (blanked)	<10dB above thermal (1MHz bandwidth)
Output sample	-50dB into 50Ω(forward voltage sample)
Input/output impedance	50 Ω nominal
Load SWR	Tolerates at least 3:1 @ full rated power without shut down[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
Gain control range	10dB minimum for 0-5V control voltage
Indicators	DC Power, Output Enable, RF Power, Over-temp, Load mismatch
RF drive RF gate (blanking)	0dBm nominal, 10dBm for no damage CMOS/TTL High=Tx
Physical	19" Wx 500mmD x 180mmH (5RU x 19" rack mounting),28kg
Mains power	110-240V, 50-60Hz, single phase, 3kVA 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 100ms 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 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. 3x3-pin IEC. Mains supply must include an earth

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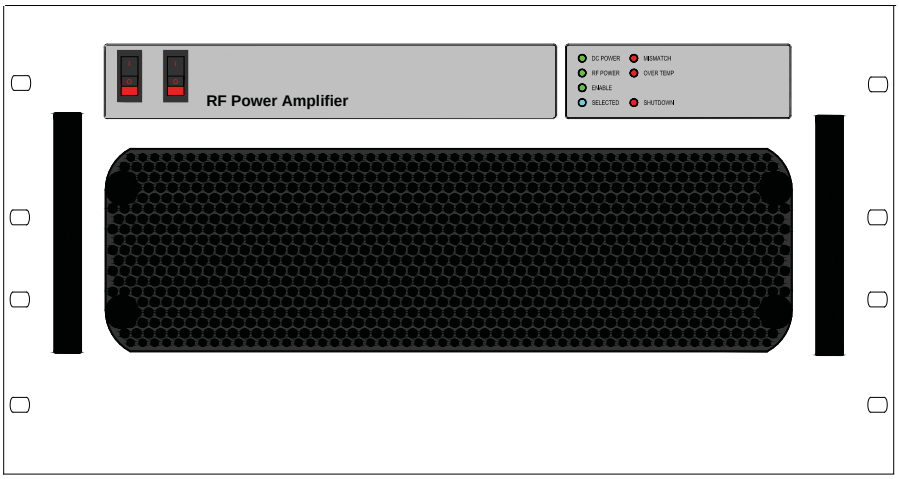

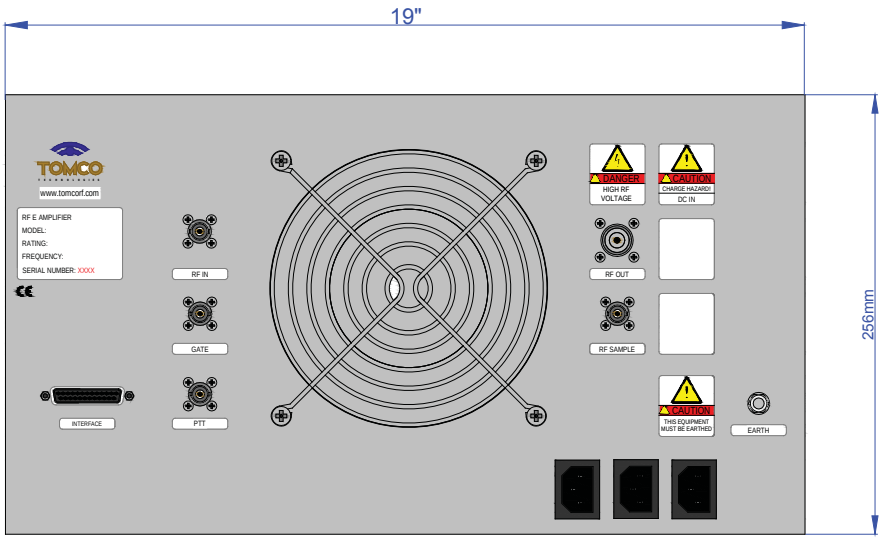

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