

Pulsed RF Amplifier Data Sheet
BT-AlphaA series
250W, 500W



The BT-AlphaA series is a range of class AB RF power amplifiers covering the 10kHz-3MHz frequency range

- Rugged, solid-state design - high reliability
- Extremely high phase and amplitude stability
- Very fast pulse rise/fall times
- High linearity
- Low power CW operation
- Very low interpulse noise
- Competitively priced

Suitable for pulsed radar, NMR, MRI, NQR,EPR, ultrasound systems and other scientific applications.

BT-AlphaA series

Model number	BT00250-AlphaA, BT00500-AlphaA
Rated power	250W, 500W minimum[1]
P1dB	200W, 400W minimum[2]
Type	Class AB MOSFET
Frequency	10kHz-3MHz
Gain flatness	±1.5dB maximum
Duty cycle	20% maximum[3]
Maximum pulse width	10ms[4]
CW mode	25W, 50W typical[5]
Pulse droop	5% maximum
Phase change with power	<5° from -40dB to full power
Phase stability	<1° across 100ms pulse
Harmonics	Odd: -12dBc maximum Even:-20dBc maximum
Spurious	<-70dBC maximum
Rise/fall times	<100ns typical
Output noise (blanked)	<10dB above thermal (1MHz bandwidth)
Load SWR	Tolerates at least 3:1 at full rated power without shutdown[6]
Gate delay	1µs maximum

BT-AlphaA series

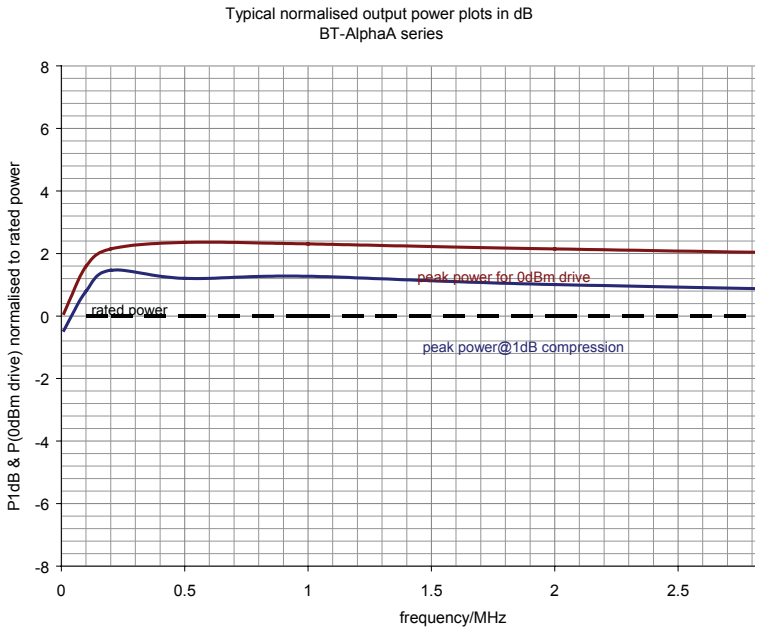
Input/output impedance	50 Ω nominal
Indicators	DC Power Output Enable RF Power Over-temp Over-duty Load mismatch
Status monitoring interface	Optional: RS232, RS422, RS485 supported
Cooling	Forced air
Drive signals: RF drive RF gate (blanking)	 0dBm nominal, 10dBm for no damage 0-5V CMOS
Physical	19" Wx 350mmD x 128mmH[7]
Connectors	RF output: N type RF input, gate, sample:BNC
Mains power requirements	110-240V, 50-60Hz, single phase, 500VA maximum[8]
Compliance	CE

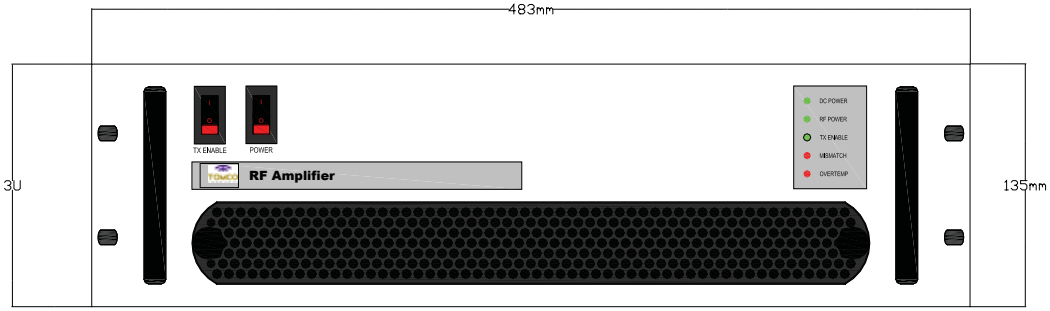
1. Input power=1mW
2. Minimum output power at 1dB gain compression
3. Maximum gate duty cycle
4. Maximum gate pulse width
5. CW operation automatically available at RF drive level~ -10dBm
6. Self resetting protection shuts the amplifier off if the load SWR is excessive
7. 3RU x 19" inch rack mounting
8. 3-pin IEC. Mains supply must include an earth

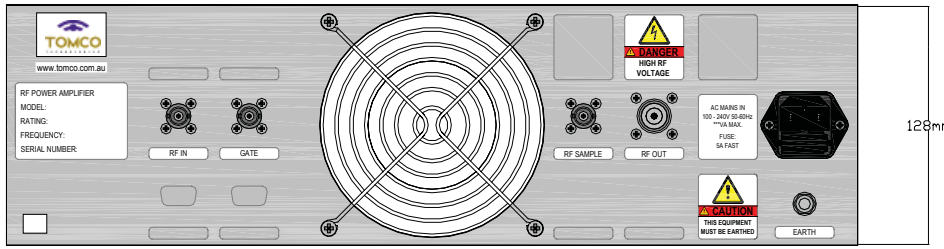
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