RF Amplifier Data Sheet
BT-AlphaS series
250W, 500W CW



The BT-AlphaS series is a range of class AB RF power amplifiers covering the 100kHz to 30MHz 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-AlphaS series

Model numbers	BT00250-AlphaS-CW BT00500-AlphaS-CW
Rated power	250W, 500W minimum[1]
P1dB	200W, 400W minimum[2]
Type	Class AB MOSFET
Frequency	100kHz-30MHz
Gain flatness	±1.5dB maximum
Harmonics	Odd: -12dBc maximum Even:-20dBc maximum
Spurious	<-70dBC maximum
Output noise (blanked)	<10dB above thermal (1MHz bandwidth)
Output sample	-40dB into 50Ω
Input/output impedance	50 Ω nominal
Protection	Over temperature, load mismatch protection via automatic level control(ALC[3])

BT-AlphaS series

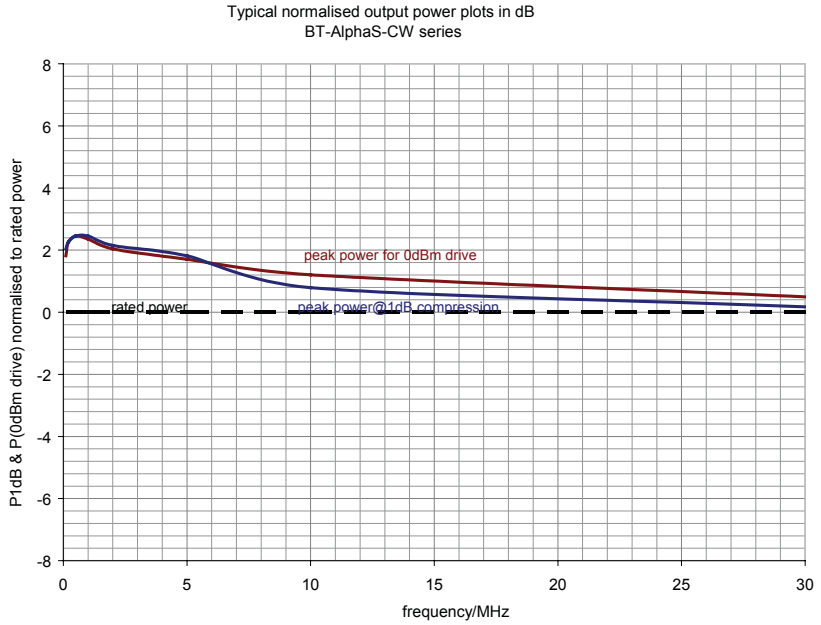
Indicators	DC Power Output Enable RF Power Over-temp Load mismatch
Status monitoring interface	Optional: RS232, RS422, RS485 supported
Cooling	Forced air
Drive signals: RF drive RF gate (blanking)	 0dBm nominal, 10dBm for no damage 0-5V CMOS
Physical	19” Wx 600mmD x 128mmH[4]
RF input signal format	CW/AM/FM/PM/pulse
Connectors	RF output: N type RF input, gate, sample:BNC
Mains power requirements	110-240V, 50-60Hz, single phase, 750VA max. 250W[5] 1.5kVA max. 500W[5]
Compliance	CE

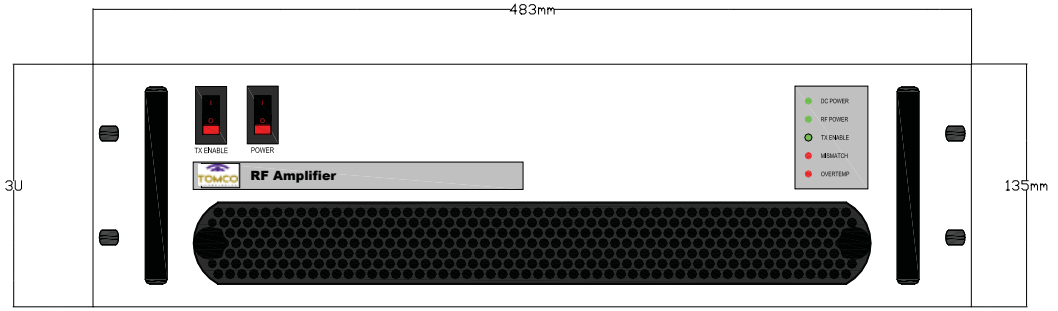
1. Input power=1mW
2. Minimum output power at 1dB gain compression
3. ALC becomes active at not less than SWR 2:1 at full rated power
4. 3RU x 19” inch rack mounting
5. 3-pin IEC. Mains supply must include an earth

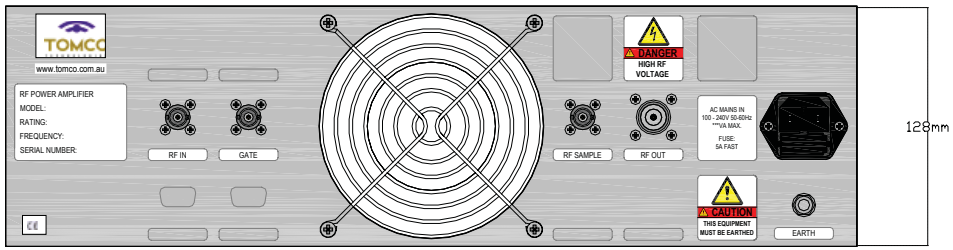
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RF Amplifier Data Sheet
BT-AlphaS series, 100kHz-30MHz







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