# RF AMPLIFIERS
## BT-Alpha Series
## 100kHz to 3MHz
## 4kW

**POWER AND PRECISION**

**The BT-Alpha series is a range of class AB RF power amplifiers available in a range of LF/MF bands**

**Available at peak output power levels up to 8kW.**

**Excellent phase and amplitude stability.**

**High efficiency**
**High linearity**

**Available as stand alone amplifier systems or as plug-in modules for OEMs**

**Suitable for NMR, MRI, NQR, ultrasound systems and other scientific applications**

| | |
|---|---|
| Model number | BT04000-AlphaB |
| Peak output power for 0dBm drive | 4kW |
| Output power @ 1dB compression | 3.2kW |
| Type | Class AB MOSFET |
| Frequency | 100kHz to 3MHz |
| Gain flatness | ±2dB max. |
| $IP_3$ | +73dBm typ. |
| Duty cycle | 20%max.(higher values available) |
| Max.pulse width | 10ms (higher values available) |
| Pulse droop | <0.5dB @ max.pulse width |
| Harmonics | <-20dBC even, <-10dBc odd<br>Measured @ 1dB compression |
| Spurious | <-60dBC |
| Rise/fall times | <100ns typical |
| Output noise (blanked) | <10dB above thermal (1MHz bandwidth) |
| Noise figure | Approx.10dB |
| Phase stability | 5° max change over a 1ms pulse |
| Phase change/power | 5° max.change from -30dB to full power |
| Phase stability/time | <1° max.change in 24hrs |
| Blanking delay | 1 microsecond approx. |
| Input VSWR | 2:1 max. |
| Input/output impedance | 50Ω nominal |
| Protection | Overheating, load mismatch, drive faults, limited transient protection on inputs and outputs |



| | |
|---|---|
| Drive signals:<br>RF drive<br>RF gate (blanking) | <br>0dBm nominal, 10dBm for no damage<br>0-5V CMOS |
| Dimensions | Transmitter: 19”x 640mm x 270mm<br>Power supply: 19”x 640mm x 270mm |
| Connectors | RF out: N type<br>Inputs: BNC |
| Cooling | Forced air |
| Temperature | 0ºC-40ºC |
| Humidity | 95% non-condensing |
| Compliance | CE |

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