Pulsed RF Amplifier Data Sheet
BT-EPR series
2000W

The BT-EPR series is a range of class AB RF power amplifiers. The model presented is tuned for operation at 250MHz and offers extremely fast pulse rise/fall times.

- Robust, reliable solid state design
- Extremely high phase and amplitude stability
- Very fast pulse rise/fall times
- High linearity
- Very low interpulse noise
- Fast blanking

Suitable for EPR/ESR/ENDOR and pulsed radar systems which use very short pulse widths

BT-EPR series	
Model numbers	BT2000-EPR
Rated power	2000W minimum[1]
P1dB	1600W minimum[2]
Type	Class AB MOSFET
Frequency	250MHz ± 10MHz
Gain flatness	±2dB maximum
Duty cycle	2% maximum[3]
Maximum pulse width	1µs[4]
Pulse droop	5% maximum
Harmonics	Odd: -12dBc maximum Even:-20dBc maximum
Spurious	<-70dBC maximum
Rise/fall times	<20ns from 10% to 90% full power
Output noise (blanked)	<10dB above thermal (1MHz bandwidth)
Load SWR	Tolerates at least 2:1 at full rated power without shutting down[6]
Blanking transition	80ns from 90% RF amplitude
Output sample	-50dB into 50Ω
Phase change/power	<5° from -40dB to full power
Phase stability across pulse	<1° across 1ms pulse

BT-EPR 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 (blinking)	 0dBm nominal, 10dBm for no damage 0-5V CMOS
Physical	19" Wx 600mmD x 270mmH[7] Mass: 60kg approx.
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. 6RU x 19" inch rack mounting
8. 3-pin IEC. Mains supply must include an earth

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