RF Amplifier Data Sheet
BT-EPR-bb series
250W/500W/1kW

The BT-EPR series is a range of class AB pulsed RF power amplifiers offering ultra fast pulse rise and fall times. They are available in a range of bands from 100MHz to 1GHz, eg, 100-600MHz, 200-750MHz, 350MHz-1GHz

- Rugged, solid-state design - high reliability
- Extremely high phase and amplitude stability
- Ultra fast pulse rise/fall times - typically less than 20ns
- High linearity
- Very low interpulse noise

Suitable for EPR, ESR, ENDOR and pulsed radar system which use very short pulses

BT-EPR series

Model numbers	BT250-EPR/ BT500-EPR/ BT1000-EPR
Rated power	250W/500W/1kW minimum[1]
P1dB	200W/400W/800W minimum[2]
Type	Class AB MOSFET
Frequency	100-600MHz, 200-750MHz or 350-800MHz
Gain flatness	±1.5dB maximum
Max. duty cycle	5%[3]
Max. pulse width	10µs[4]
Pulse droop	0.25dB maximum[5]
Pulse rise and fall times	<20ns typical from 10% to 90% full power using a pre-gate RF input signal
Gate delay	Rising edge: 50ns typical Falling edge: 50ns typical[6]
Harmonics	Odd: -16dBc typical, -10dBc maximum Even:-30dBc typical, -20dBc maximum
Spurious	<-70dBC maximum
Output noise (blanked)	<10dB above thermal
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, sample:BNC[9]
Cooling	Forced air
Indicators	DC Power, Output Enable, RF Power, Over-temp, Over-duty, Load mismatch
Gain control range	10dB minimum for 0-5V control voltage
RF drive RF gate (blanking)	0dBm nominal, 10dBm for no damage 0-5V CMOS
Physical	19" Wx 500mmD x 133mmH (3RU x 19" rack mounting) 15kg
Mains power	110-240V, 50-60Hz, single phase, 250VA max.[10]
Typical mains power consumption	65W/110W/190W when running at full power, full duty cycle. 30W/40W/50W standby
Compliance	CE

1. RMS PEP for input power of 1mW
2. Minimum output power at 1dB gain compression
3. Duty cycle is internally limited in pulsed mode
4. Maximum gate pulse width in pulsed mode (internally limited)
5. Measured at max. 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 shuts the amplifier off if the load SWR is excessive
8. Pin out at www.tomcorfamplifiers.com/pdf/interface.pdf
9. Other connector types available on request
10. 3-pin IEC. Mains supply must include an earth

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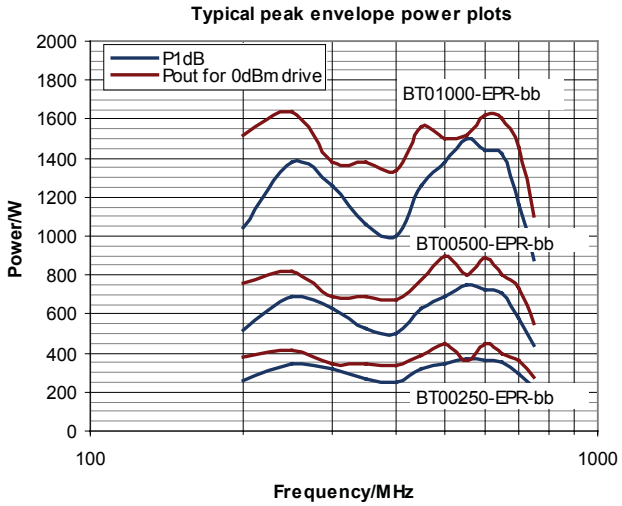

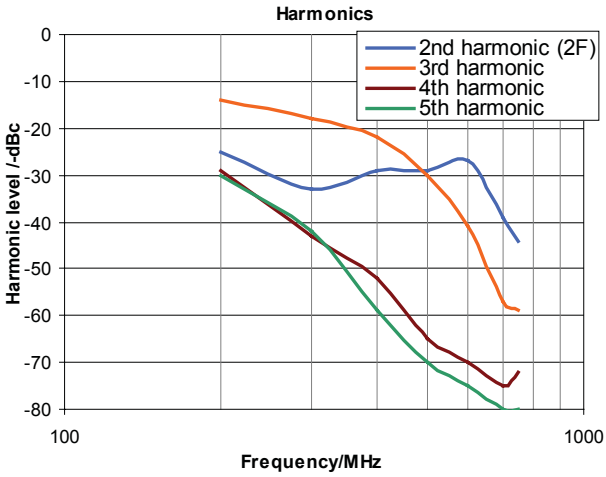

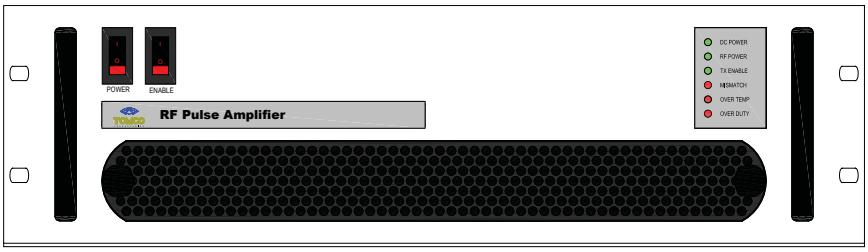

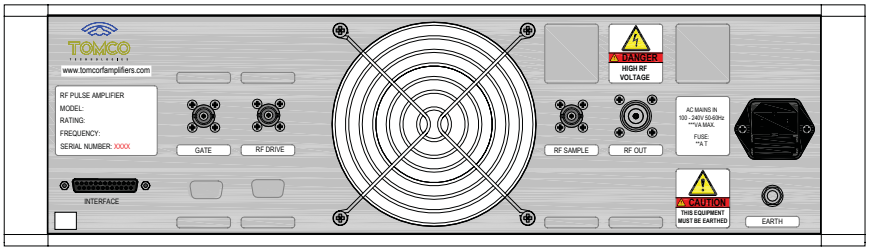

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