RF Amplifier Data Sheet
BT-EPR series
2kW Broadband

- EPR, ENDOR
- Pulsed Radar

The BT-EPR series is a range of class AB RF power amplifiers which exhibit extremely fast pulse rise and fall times.

These high power amplifiers are available as narrowband and broadband models and at power levels up to 8kW. They are ideally suited for EPR, ENDOR and pulsed radar systems using very short pulses.

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

BT-EPR series

Model numbers	BT2000-EPR-bb
Rated power	2kW minimum[1]
P1dB	1.6kW minimum[2]
Type	Class AB MOSFET
Frequency	100-600MHz or 250-750MHz or 350MHz-800MHz[3]
Gain flatness	±3dB maximum (measured at 1/10th of rated output power)
Max. duty cycle	5%[4]
Max. pulse width	10µs[5]
Pulse droop	0.5dB maximum (@ max. pulse width at nominal P1dB level)
Pulse rise and fall times	20ns typical using a pre-gate RF input signal[6]
Gate delay	Rising edge: 50ns typical Falling edge: 50ns typical[7]
Harmonics	Odd: -16dBc typ, -10dBc max. Even:-30dBc typ, -20dBc max
Spurious	<-60dBC maximum
Output noise (blanked)	<10dB above thermal
Phase change/power	<5° from -40dB to full power
Phase stability	<1° across 100ms pulse
Output sample	-50dB into 50Ω(forward voltage sample from each 1kW amp)
Input/output impedance	50 Ω nominal
Load SWR	Tolerates at least 3:1 @ full rated power without shut down[8]
Remote interface	Parallel status monitoring and control via 25-pin D female[9]
Gain control range	10dB minimum for 0-5V control voltage[10]
Connectors	RF output: N-type RF input, gate, sample:BNC[11]
Cooling	Forced air, front to rear
Indicators	DC Power, Output Enable, RF Power, Over-temp, Over-duty, Load mismatch
Input signals	RF drive: 10dBm nominal RF GATE:CMOS/TTL high=Tx
Physical	19" W x 500mmD x 470mmH(9RU), 70kg System is supplied in a 19inch x 9RU rack
Mains power	110-240V AC, 50-60Hz, rated to 1kVA[12]
Operating temparature	0 to +50°C
Compliance	CE

1. RMS PEP for input power of 1mW
2. Minimum output power at 1dB gain compression
3. The amplifier provides useful power outside this range but the performance is not guaranteed
4. Duty cycle is internally limited.
5. Maximum GATE pulse width (internally limited)
6. Measured from 10% to 90% of RF output voltage at full rated power
7. 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
8. Self resetting protection shuts the amplifier off if the load SWR is excessive
9. Fitted as standard, see www.tomcorfamplifiers.com/pdf/interface.pdf
10. Pulse rise/fall times are guaranteed at maximum gain
11. Other connector types available on request
12. Two 3-pin IEC inputs. Mains supply must include an earth

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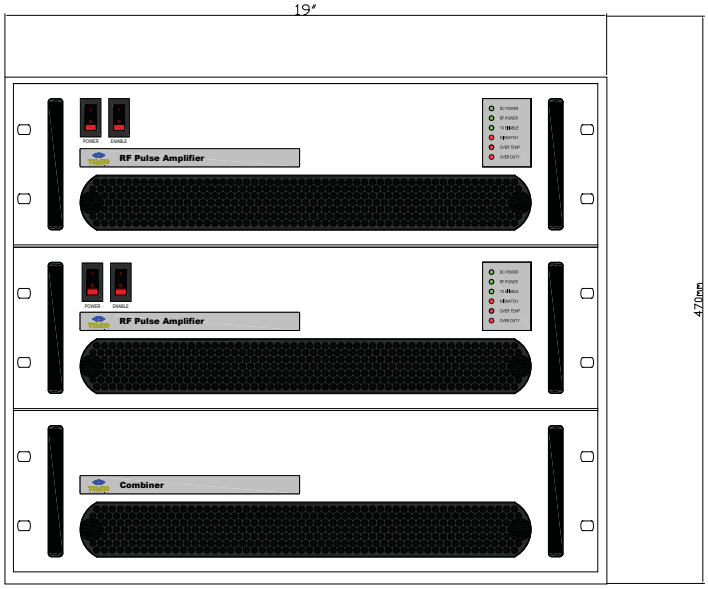

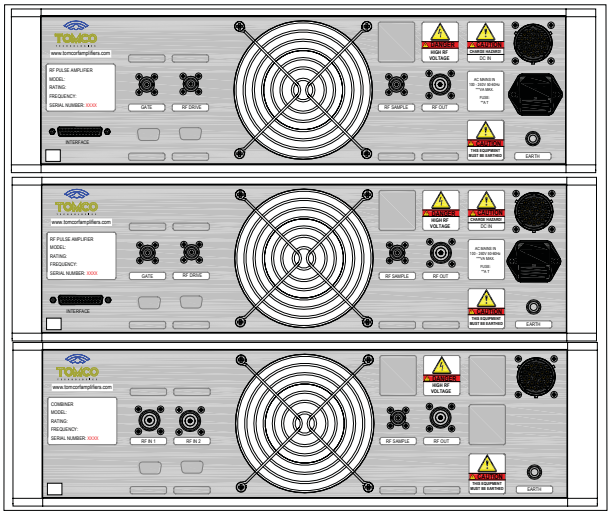

Tomco Technologies reserves the right to change specifications without notice

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