


# Pulsed RF Amplifier Data Sheet
# BT-Beta series
# 2kW




The BT-Beta series is a range of class AB RF power amplifiers covering the 1-30MHz frequency range

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

Suitable for pulsed radar, NMR, MRI, NQR,EPR, ultrasound systems and other scientific applications.

## BT-Beta series

| | |
|---|---|
| Model number | BT02000-Beta |
| Rated power | 2000W minimum[1] |
| P1dB | 1600W minimum[2] |
| Type | Class AB MOSFET |
| Frequency | 1-30MHz |
| Gain flatness | ±1.5dB maximum |
| Duty cycle | 30% maximum[3] |
| Maximum pulse width | 10ms[4] |
| Pulse droop | 5% maximum |
| Phase change with power | <5$^{O}$ from -40dB to full power |
| Phase stability across pulse | <1$^{O}$ across 100ms pulse |
| Harmonics | Odd: -12dBc maximum<br>Even:-20dBc maximum |
| Spurious | <-70dBC maximum |
| Rise/fall times | <100ns typical |
| Output noise (blanked) | <10dB above thermal (1MHz bandwidth) |
| Load SWR | Tolerates at least 3:1 at full rated power without shutdown[6] |
| Gate delay | 1µs maximum |

## BT-Beta series

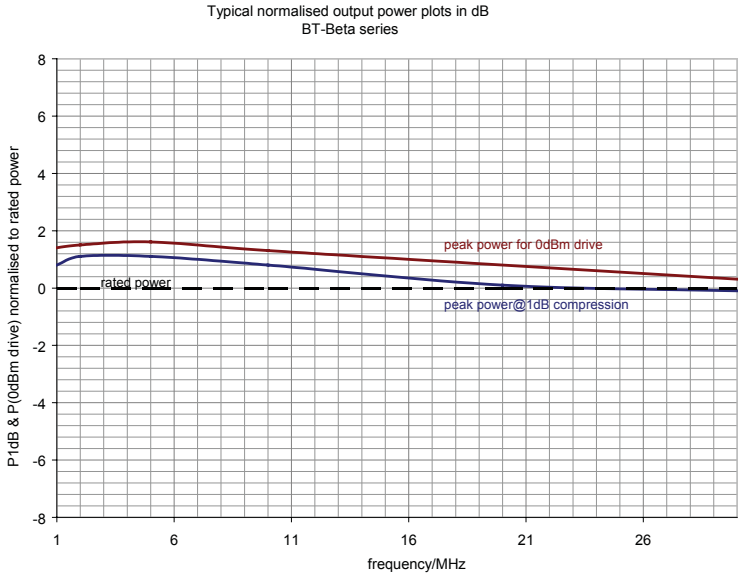
| | |
|---|---|
| RF output impedance | 50<0$^{O}$ Ω |
| Indicators | DC Power<br>Output Enable<br>RF Power<br>Over-temp<br>Over-duty<br>Load mismatch |
| Status monitoring interface | Optional: RS232, RS422, RS485 supported |
| Cooling | Forced air |
| Drive signals:<br>RF drive<br><br>RF gate (blanking) | <br>0dBm nominal, 10dBm for no damage<br>0-5V CMOS |
| Physical | 19" Wx 600mmD x 180mmH[7] |
| Connectors | RF output: N type<br>RF input, gate, sample:BNC |
| Mains power requirements | 110-240V, 50-60Hz, single phase, 2000VA maximum[8] |
| Compliance | CE |

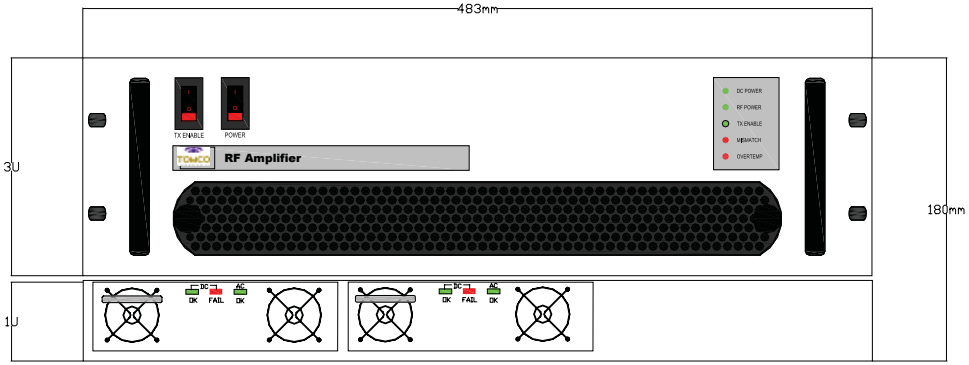
*1. Input power=1mW*
*2. Minimum output power at 1dB gain compression*
*3. Maximum gate duty cycle*
*4. Maximum gate pulse width*
*5. CW operation automatically available at RF drive level~ -10dBm*
*6. Self resetting protection shuts the amplifier off if the load SWR is excessive*
*7. 4RU x 19" inch rack mounting*
*8. 3-pin IEC. Mains supply must include an earth*

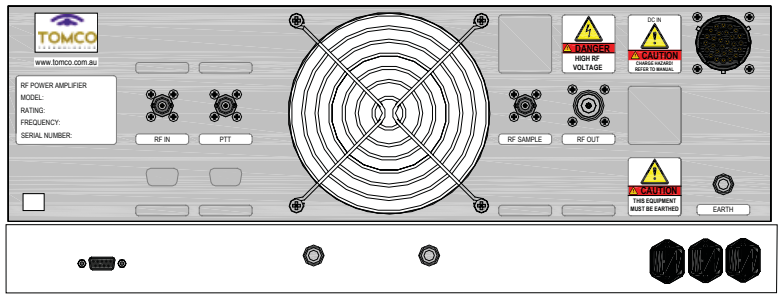
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