



RF Amplifier Module Data Sheet

BTM-AlphaS 100kHz-30MHz

250W Pulsed/50W CW

- NMR, MRI, EPR
- Radar
- Ultrasound
- Test & Measurement



The BTM-AlphaS module is a class AB RF power amplifier module covering the 100kHz-30MHz range.

- Pulsed and CW operation
- Rugged, compact, simple to interface
- Excellent phase and amplitude stability

Suitable for OEM manufacturers in the fields of radar, NMR, MRI, NQR, EPR, ultrasound systems, plasma and accelerator systems, communications and other scientific applications.

BTM-AlphaS series	
Model numbers	BTM00250-AlphaS
Rated power	250W pulsed minimum ^{1/} 50W CW minimum
P1dB	200W minimum ^{2/} 40W CW minimum ²
Type	Class AB MOSFET
Frequency	100kHz-30MHz
Gain flatness	±2dB maximum
Max. duty cycle	20%
Max. pulse width	100ms
Harmonics	Odd: -12dBc maximum, Even:-20dBc maximum
Spurious	<-70dBc maximum
Output noise (blanked)	<10dB above thermal (1MHz bandwidth)
Phase stability	<5° from -40dB to full rated power
Phase stability across pulse	<1° across 100ms pulse
Input/output impedance	50 Ω nominal
Remote Interface	Parallel Status Monitoring via 9 pin D connector ³ 1. DC Power OK (>~15V) 2. RF Power Out Detected 3. Over Temperature 4. Duty Limit 5. Gate In 6-9: Ground
Connectors	RF output: SMA RF input, gate:SMA
Cooling	Heatsink required <0.5°C/W recommended Maximum allowable case temperature 80°C (Module can be supplied with a heatsink fitted)
Indicators	DC Power, RF Power, Over-temp, Over-duty
RF drive RF gate (blanking)	0dBm nominal, 10dBm for no damage 0-5V CMOS
Physical	200m x 120mm x 65mm (without heatsink)
Supply Voltages	+50V for 250W pulsed (6A max.) +28V for 50W CW (6A max.)
Compliance	CE

1. Input power=1mW
 2. Minimum output power at 1dB gain compression
 3. For more info visit www.tomcorfamplifiers.com/pdf/moduleS_hb.pdf

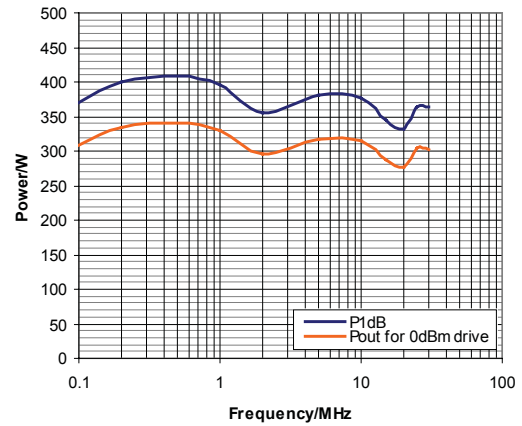


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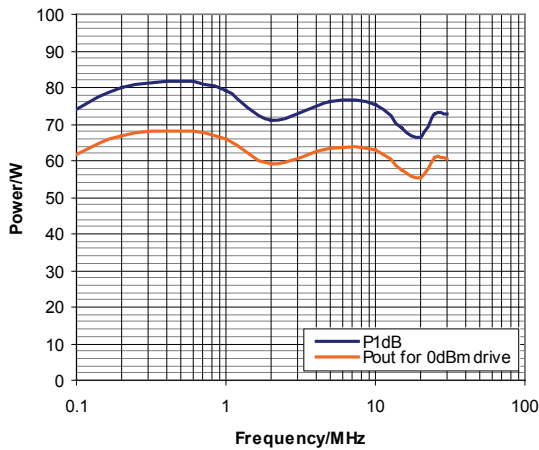
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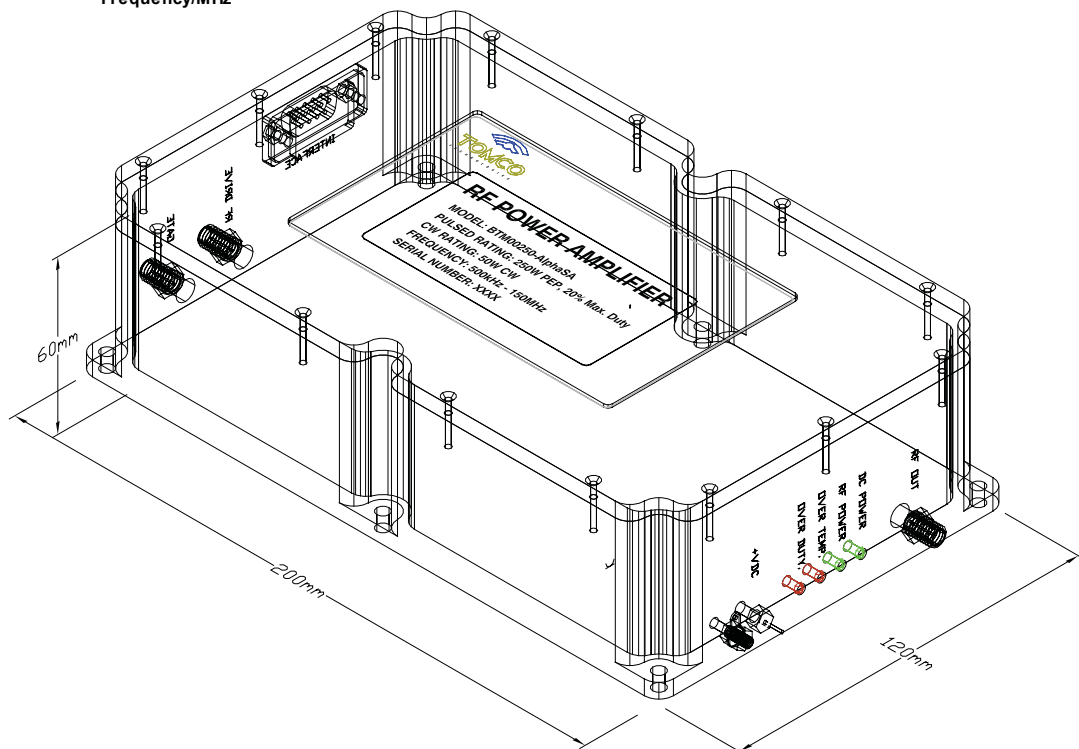
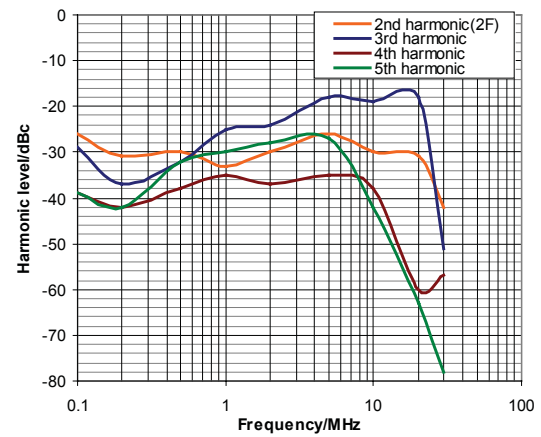
Peak pulsed output power



Peak CW output power



Harmonics



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