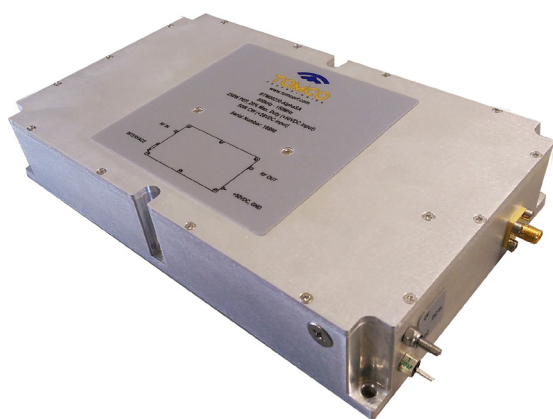


型号: BTM00250-AlphaSA
频率: 500kHz-150MHz
功率: 250W Pulsed/50W CW

• 科学和工业应用



BTM-AlphaSA 系列是涵盖 500kHz 至 150MHz 频率范围的 AB 类射频功率放大器模块系列。

- 坚固的固态设计 - 高可靠性
- 极高的相位和幅度稳定性
- 非常快的脉冲上升/下降时间
- 高线性度
- 非常低的脉冲间噪声
- 具有竞争力的价格

可以仅作为放大器模块提供，也可以与可选的散热器和冷却风扇一起提供

RF Specifications

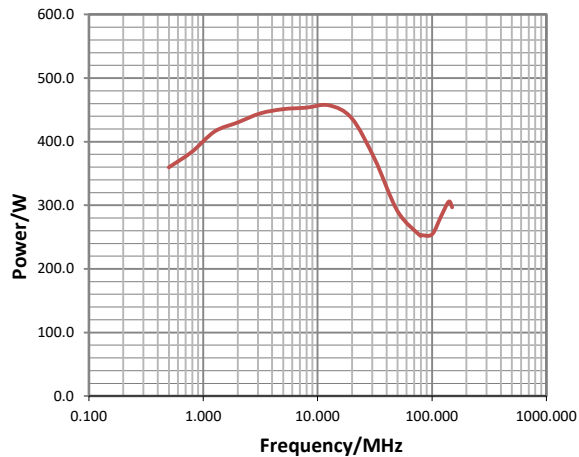
额定功率	250W minimum in pulsed mode 50W minimum in CW mode PEP for input power of 0dBm
P1dB	200W minimum in pulsed mode 40W minimum in CW mode Minimum output power at P1dB compression
增益	54dB minimum in pulsed mode 47dB minimum in CW mode
类型	Class AB MOSFET
频率	500kHz-150MHz
增益平稳度	±2dB maximum (measured at 1/10th rated output power)
最大占空比	20% Maximum GATE duty cycle in pulsed mode
最大脉冲宽度	100ms Maximum GATE pulse width in pulsed mode
脉冲下降	0.5dB maximum Measured at max. pulse width at P1dB level
脉冲上升和下降时间	Risetime: 200ns typical Falltime: 100ns typical using a pre-gated RF input signal
门上升和下降时间	Risetime: 300ns typical Falltime: 150ns typical
门延迟	Rising edge: 1µs typical Falling edge: 500ns typical 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
谐波	Odd: -20dBc typical, -10dBc max. Even: -30dBc typical, -20dBc max. Measured at 1dB below rated output power
杂散	<-70dBc maximum
输出噪声（消隐）	<10dB above thermal (100kHz bandwidth)
相变/功率	<10° from -40dB to full power
相位稳定性	<1° across 100ms pulse
输入/输出阻抗	50 Ω nominal
负载驻波比	Tolerates at least 3:1 @ full rated power without damage External mismatch protection is recommended No internal mismatch protection included
增益控制范围	10dB minimum for 0-5V control voltage Control via parallel interface
射频输入	0dBm nominal, +10dBm for no damage
门（消隐）	Logic low = Blank, logic high = unblank. CMOS and TTL compatible

电气规格

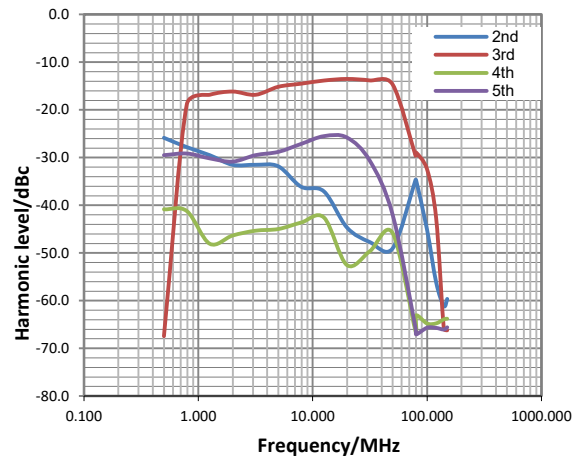
直流电源电压	Pulsed mode: +50V at approx. 3.3A CW mode: +28V at approx. 8A
DC连接	Solder pin

Typical Performance Plots

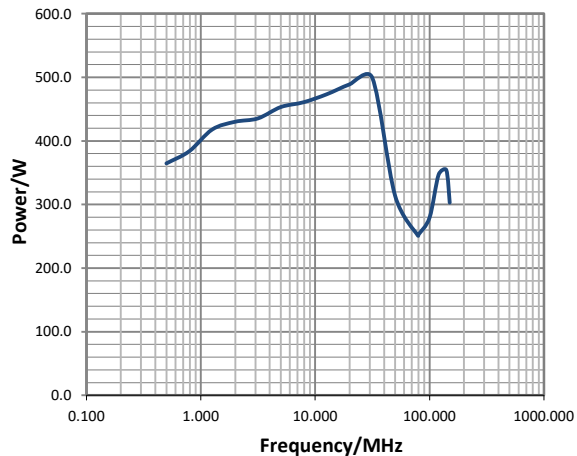
Peak input power for 0dBm RF drive



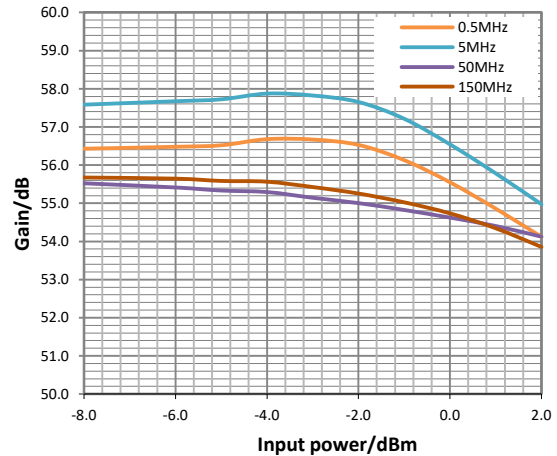
Harmonics



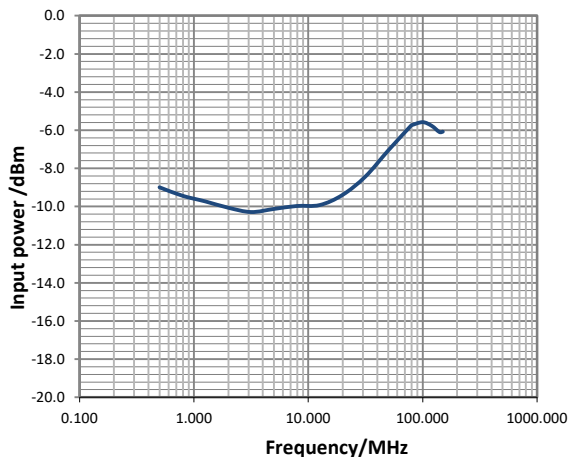
Peak output power at 1dB compression



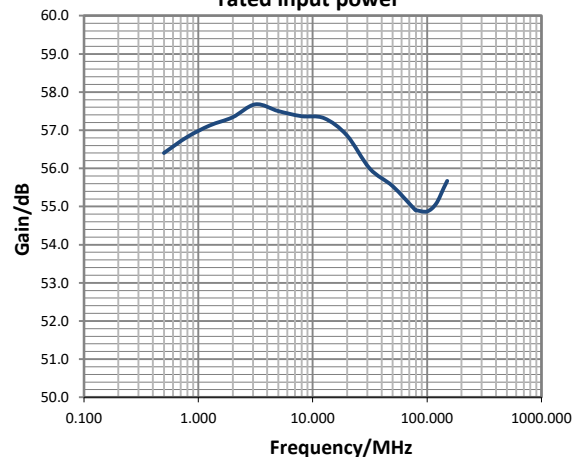
Gain as a function of input power



RF input for 50W CW out at +28V DC

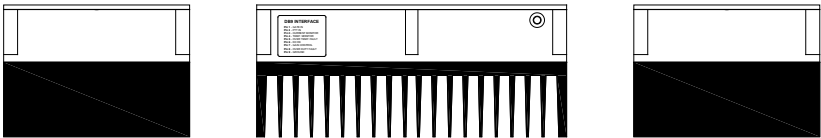
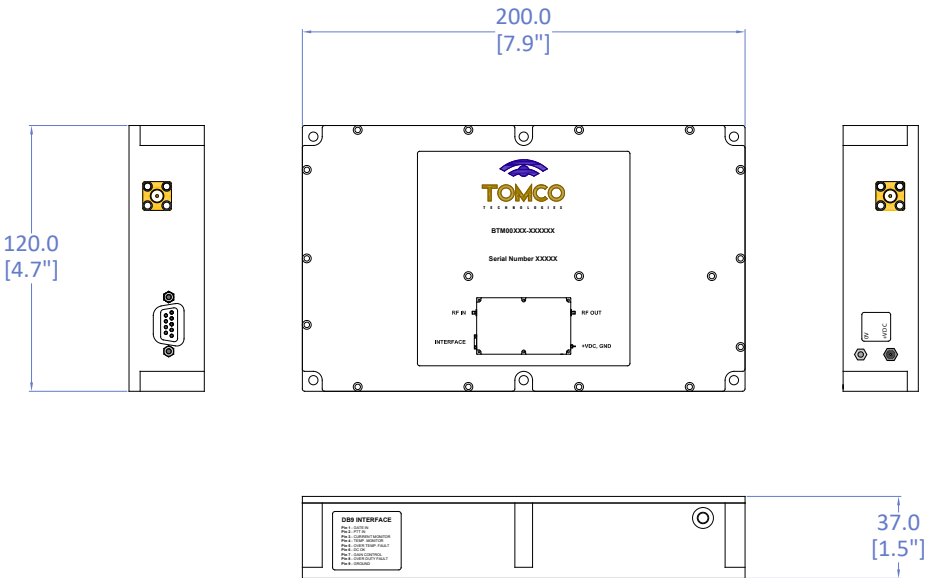


Small signal gain measured at 10% of maximum rated input power

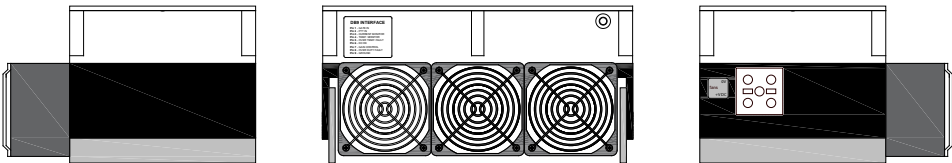


Mechanical Specifications

连接器	RF IN: SMA RF OUT: SMA INTERFACE: DB9 female
尺寸	Module only: 200mm (7.9") x 120mm (4.7") x 37mm (1.5") Module with heatsink: 200mm (7.9") x 120mm (4.7") x 85mm (3.3") Module with heatsink and fan assembly: 200mm (7.9") x 168mm (6.6") x 85mm (3.3")
重量	approx. 1.3kg (2.8lbs), module only
防护等级	IP20



With optional heatsink



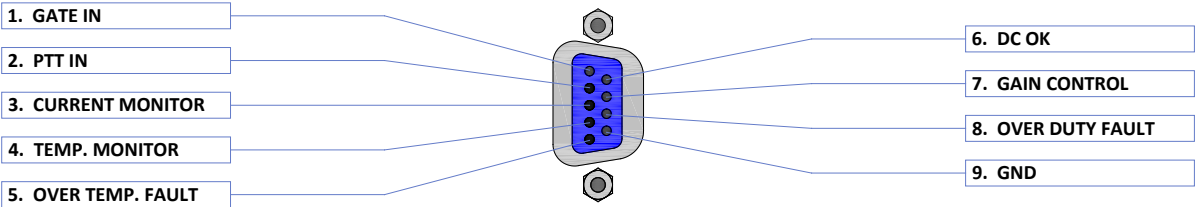
With optional heatsink and fan assembly

Protection

Over temperature	Self-resetting shutdown protection activates if thermal limits are exceeded
Reverse polarity	Reverse-current protection circuitry
Input/output transients	High voltage transient protection circuitry

Monitoring and Control

Parallel Interface	9-pin D-connector female
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Environmental

General	Intended for use only in controlled, indoor environment. Non-consumer product for industrial and scientific use
Cooling	Requires heatsink and/or external fan (optional extras)
Operating temperature	+5°C to +40°C
Storage temperature	-20°C to +60°C
Humidity	80% for temperature up to 31°C, decreasing linearly to 50% relative humidity at 40°C
Operating altitude	Up to 2000m
Pollution degree	2
Electromagnetic compatibility	In line with IEC61326-1:2012 ISM sub-assembly, Group 1, Class A
Safety	In line with IEC61010-1:2010
Electromagnetic field strength	In line with ICNIRP Guidelines: 1998, occupational limits

Change record

Document/Issue number	Originator	Date	Change
DS006714A	JR	21/08/2018	Original
DS006714B	LS	06/05/2021	p.1:H