射频放大器数据表

TOMCO

型号：BT02000-双通道
频率：固定频率
功率：2 x 1kW

- 科学和工业应用

BT02000-双通道 系列是 AB 类射频放大器系列，每个单元包含两个独立的射频通道，每个通道都有一个额定输出功率 1kW，可定制以在 40MHz-310MHz 范围内以固定频率运行。

这些单元可以连接起来创建大型多通道系统。提供中央接口单元

主要特点：

- 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

RF Specifications

类型	Class AB MOSFET
额定功率	1000W minimum per channel PEP for input power of 0dBm
P1dB	800W minimum per channel Minimum output power at P1dB compression
增益	60dB minimum per channel
频率	Fixed Frequency in the range 40MHz-310MHz
带宽	±1MHz
增益平稳度	±0.25dB maximum (measured at 1/10th rated output power)
最大占空比	20% Maximum GATE duty cycle
最大脉冲宽度	100ms Maximum GATE pulse width
CW模式最大额定功率	100W per channel
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, -15dBc maximum Even:-30dBc typical, -20dBc maximum 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
输出样本	-60dB into 50 Ω (forward voltage sample)
输入/输出阻抗	50 Ω nominal
负载驻波比	Tolerates at least 2:1 @ full rated power without shut down
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

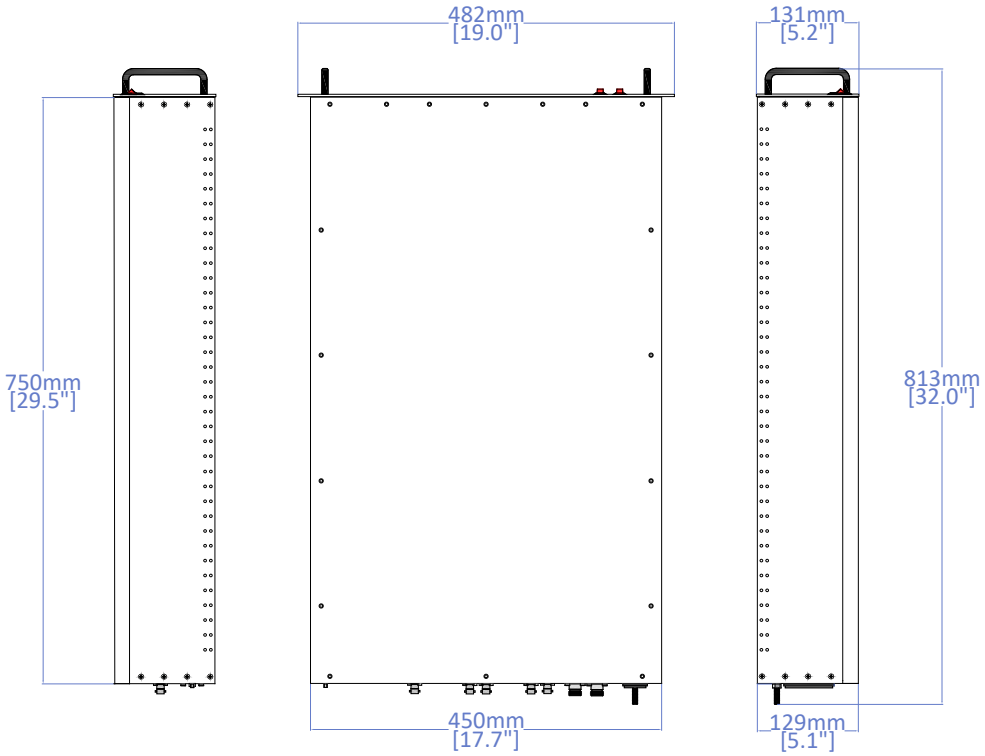
源电压	180-240V, 50-60Hz, single phase
额定功率	4kVA maximum
电源入口	1 x IEC inlet (mains power cord supplied)

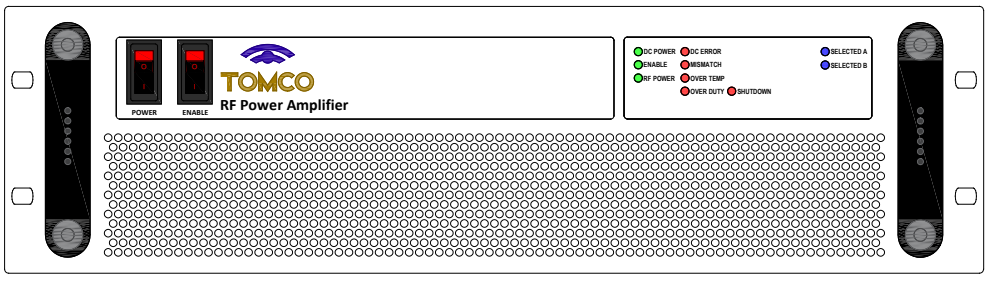
RF Amplifier Data Sheet

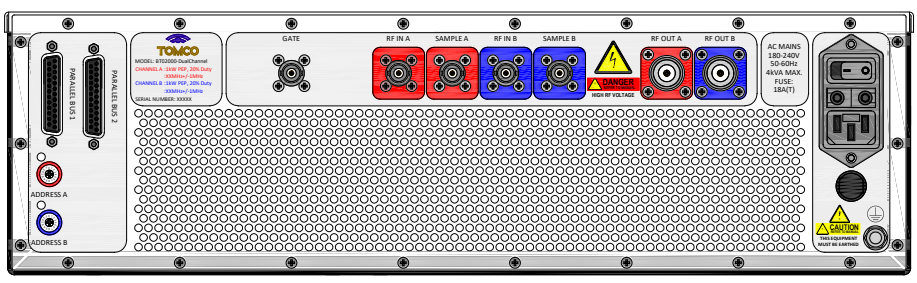
TOMCO

Mechanical Specifications

连接器	GATE: BNC female RF IN: BNC female SAMPLE: BNC female RF OUT: N type female INTERFACE: DB25 female Other connectors types available on request
尺寸	Chassis size: 450mmW (17.7”W) x 750mmD (29.5”D) x 129mmH (5.1”H) Total size: 482mmW (19”W) x 813mm (32”D) x 131mm (5.2”H) Rack compatibility: 19” 3RU
重量	approx. 17kg (38lbs)
防护等级	IP20







保护

负载驻波比	Tolerates up to VSWR 2:1 at full rated power without shutdown Self-resetting shutdown protection activates if VSWR limits are exceeded
过温	Self-resetting shutdown protection activates if thermal limits are exceeded
占空比	Duty cycle limit is determined from the GATE signal duty cycle. Self-resetting shutdown protection activates if duty cycle limit is exceeded If output power is less than approx. 10% of maximum rated power, duty cycle protection is disabled and auto-CW operation is available
脉冲宽度	Pulse width limit is determined from the GATE signal pulse width. Self-resetting shutdown protection activates if pulse width limit is exceeded

Monitoring and Control

Front panel switches	Power (turns on DC power) Enable (enables RF)
Front panel LEDs	• DC POWER • DC AUX • RF POWER • PSU FAULT • MISMATCH • OVER TEMP • OVER DUTY • INTERLOCK • SELECTED A • SELECTED B
Parallel interface	Channel A and Channel B addressable via Parallel interface

Environmental

General	Intended for use only in controlled, indoor environment. Non-consumer product for industrial and scientific use
Cooling	Forced air, front to rear
Operating temperature	+5^{0}C to +40^{0}C
Storage temperature	-20^{0}C to +60^{0}C
Humidity	80% for temperature up to 31^{0}C, decreasing linearly to 50% relative humidity at 40^{0}C
Operating altitude	Up to 2000m
Pollution degree	2
Transient voltage compatibilty	Category II, in line with IEC 60364-4-44:2007
Electromagnetic compatibility	In line with IEC61326-1:2012 ISM equipment, Group 1, Class A For use only in shielded areas. ENC55011 (CISPR 11) limits exceeded by up to 40dB
Safety	In line with IEC61010-1:2010
Electromagnetic field strength	In line with ICNIRP Guidelines: 1998, occupational limits

Change record

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