

2.5–6 GHz 50 W Minimum Broadband RF Power Amplifier Module

The latest source specifies 2.5–6 GHz and 50 W minimum saturated output, with 47 dB typical gain. Current of 8 A typical and harmonics of –12 dBc typical are expressly conditioned at 30 W.



Electrical Specifications · +28.0 VDC, 25 °C, 50 Ω system unless otherwise stated; Input power 0 dBm

Parameter	Symbol	Minimum	Typical	Maximum	Unit
Operating frequency	BW	2500	-	6000	MHz
Saturated RF output power	Pout	50	-	-	W
Power gain	Gp	-	47	-	dB
Power gain flatness	Gp	-	±1.5	-	dB
VSWR	S11	-	-	2	-
Harmonics at 30 W	H	-	-12	-	dBc
Spurious signals	Spur	-	-60	-	dBc
Input/output impedance	Impedance	-	50	-	Ω
Operating voltage	VDC	24	28	32	VDC
Power-added efficiency	Eff	-	30	-	%
Current consumption at Pout = 30 W	IDD	-	8	-	A

Monitoring and Protection

Parameter	Specification
Monitoring	Voltage, current, temperature and open/short-circuit detection
Over-temperature protection	Amplifier shutdown above 85 °C
Supply protection	Shutdown above 32 V, below 24 V, or with accidental reverse wiring

Absolute Maximum Ratings · Exceeding these ratings may damage the module

Parameter	Rating
RF input drive without damage	+10 dBm
Load VSWR at Pout = 30 W	5:1 at all load phases, continuous
Thermal overload	85 °C shutdown

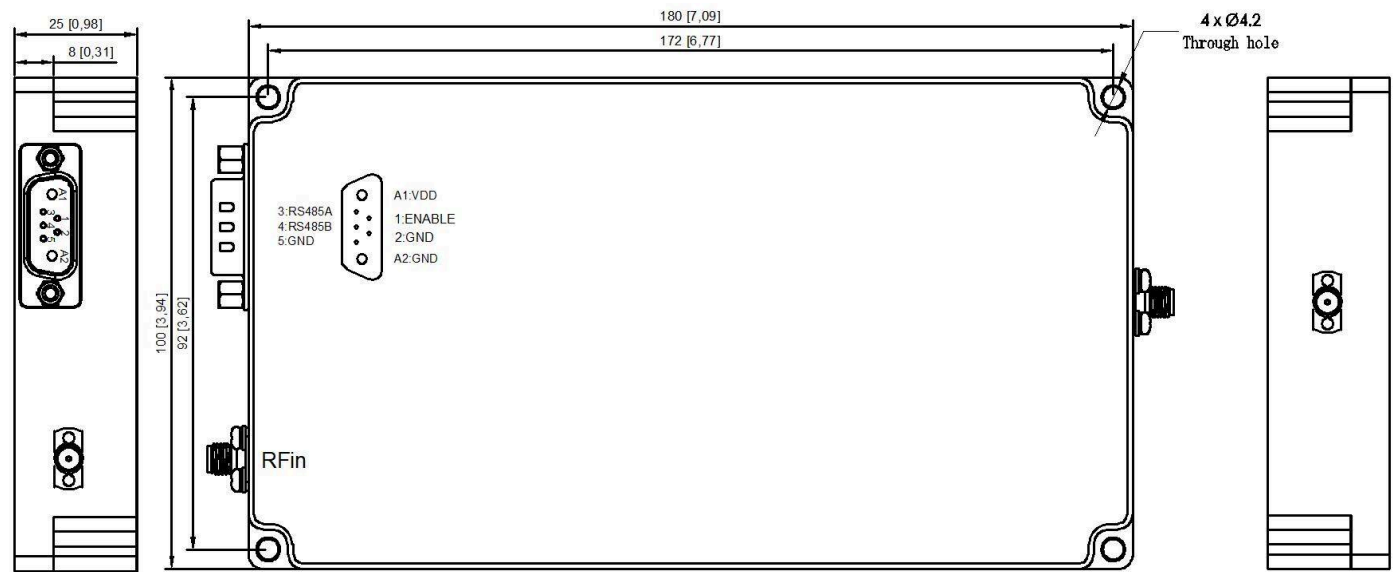
Environmental Specifications · Design targets; project confirmation required

Parameter	Minimum	Typical	Maximum	Unit
Operating temperature	-20	-	60	°C
Storage temperature	-25	-	65	°C
Relative humidity (non-condensing)	-	-	95	% RH

Mechanical Specifications · Hybrid D-Sub 7-pin male connector; The source table marks pin 5 as NC; the source drawing marks it as GND. Confirm the function and wiring of pin 5 before connection.

Parameter	Value	Unit
Dimensions	180 × 100 × 25[7.09 × 3.94 × 0.98] (Maximum)	mm [in]
Weight	1[2.2] (Typical)	kg [lb]
RF input connector	SMA female	-
RF output connector	SMA female	-
DC/control interface	Hybrid D-Sub 7-pin male	-

Mechanical Outline



All dimensions are in mm [in].

DC and Control Interface

Pin #	Description	Specification
A1	A1 VDD	+28 VDC
A2	A2 GND	Ground
1	1 ENABLE	TTL logic high (3.3 V); internally pulled low
2	2 GND	Ground
3	3 RS485A	RS-485 serial communication
4	4 RS485B	RS-485 serial communication

Document notice

Specifications are subject to revision. Before design release, confirm the current document revision and product-specific requirements with LCRF. The approved quotation and order documentation define the supplied configuration.