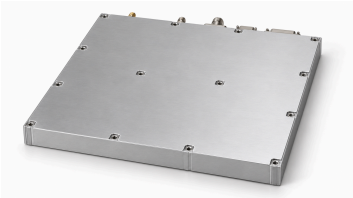
2000–6000 MHz RF Power Amplifier, 300 W Typical, RS-485

This amplifier delivers 300 W typical output across 2000–6000 MHz, with 55 dB typical gain and ±2 dB typical flatness. Its typical supply is 28 VDC within the specified 24–32 VDC limits.



Maximum module dimensions are 400 × 400 × 35 mm, with an SMA input, N output and RS-485 control. Documented protection includes shutdown above 85 °C, reversed polarity and supply outside the stated limits.

Electrical Specifications

+28.0VDC; 25°C; 50Ω; 0dBm The pin 2 positive-supply assignment remains unpublished; confirm the power wiring before integration.

Parameter	Symbol	Minimum	Typical	Maximum	Unit
Operating frequency	BW	2000	-	6000	MHz
Saturated RF output power	Pout	-	300	-	W
Power gain	Gp	-	55	-	dB
Power gain flatness	Gp	-	±2	-	dB
VSWR	S11	-	-	2	-
Harmonics at 300 W	H	-	-10	-	dBc
Spurious signals	Spur	-	-60	-	dBc
Input/output impedance	Impedance	-	50	-	Ω
Operating voltage	VDC	24	28	32	VDC
Power-added efficiency	Eff	-	20	-	%
Coupled output port coupling	-	-	49	-	dB
DC current @ Pout = 300 W	IDD	-	58	-	A

Monitoring and Protection

Parameter	Specification
Monitoring	Voltage, current, temperature and open/short-circuit detection
Output VSWR protection	VSWR = 3 → Normal; Open-circuit protection → Shutdown
Over-temperature protection	85 °C → Shutdown
Supply protection	(VDC >32 V) or (VDC <24 V) or Reversed polarity → Shutdown

Absolute Maximum Ratings

Parameter	Rating
RF input drive without damage	+10 dBm maximum
Load VSWR at Pout = 300 W	∞; All load phases and amplitudes; continuous
Thermal overload	85 °C → Shutdown (maximum)

Environmental Specifications

The environmental figures are design targets. Confirm the applicable values for your project.

Parameter	Minimum	Typical	Maximum	Unit
Operating temperature	-20	-	50	°C
Storage temperature [1]	-25	-	65	°C
Relative humidity (non-condensing)	-	-	95	%

[1] Storage temperature

DC and Control Interface

Pin #	Description	Specification
1	1 — Enable	High level → Enabled; Low level → Disabled
2	2 — Ground	Ground
3	3 — 485A	RS-485 serial communication
4	4 — 485B	RS-485 serial communication
5	5 — Not connected	Not connected
6	6 — Not connected	Not connected
7	7 — Overcurrent indicator	-
8	8 — VSWR alarm	-
9	9 — Temperature alarm	-

Power pin definition

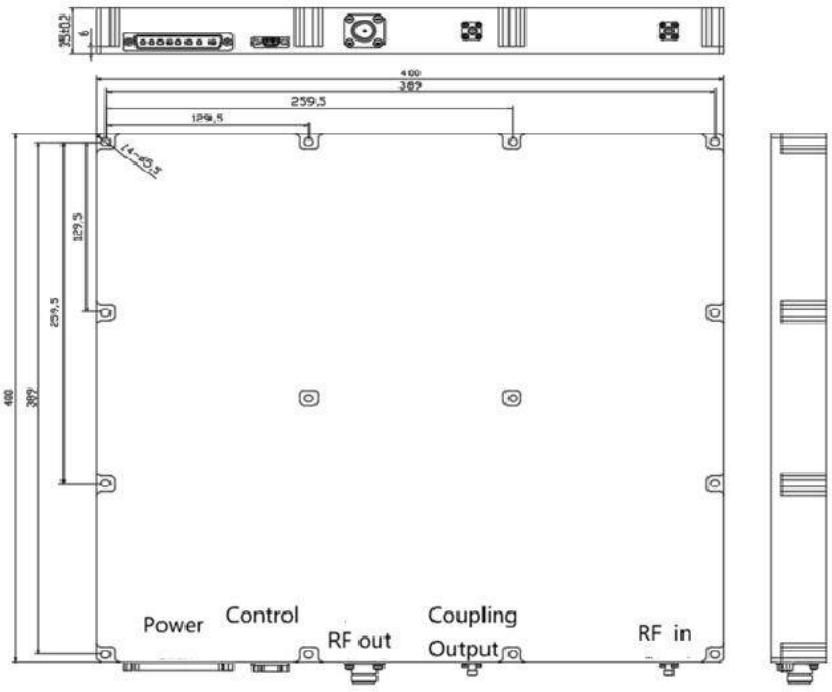
Pin #	Description	Specification
1	1 — Positive supply	Positive supply
3	3 — Ground	Negative supply
4	4 — Ground	Negative supply
5	5 — Not connected	Not connected

Mechanical Specifications

The mechanical table names the power connector Hybrid D-Sub 4, male, while the power-interface section is headed DB5 and lists five pin rows. It names the control connector D-Sub 15, male, while the control-interface heading is J30J-9ZK. The source does not confirm how these designations correspond to delivered connectors. Confirm exact connector designations, contact counts and wiring; do not infer physical contact counts from the listed rows.

Parameter	Value	Unit
Dimensions	400 × 400 × 35[15.75 × 15.75 × 1.38] mm [in] (maximum)	mm [in]
Weight	6[13.2] kg [lb] (maximum)	kg [lb]
RF input connector	SMA, female	-
RF output connector	N, female	-

Mechanical Outline



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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.