20–520 MHz 200 W Saturated LDMOS RF Power Amplifier Module



This LDMOS final-stage module covers 20–520 MHz with 200 W typical saturated output. Its 1 dB compression output is separately specified at 50 W typical, with 53 dB typical small-signal gain.

The 250 × 120 × 30 mm assembly uses 28 VDC, SMA RF input, N-type output, DB-2 power and DB-9 control. The control pinout provides enable and alarm indicators; the source does not establish RS-485 or a TTL voltage. Typical current is 20 A.

Electrical Specifications

25 °C; 50 Ω

Parameter	Symbol	Minimum	Typical	Maximum	Unit
Operating frequency	BW	20	-	520	MHz
Saturated RF output power	Psat	-	200	-	W
Output power at 1 dB compression	P1dB	-	50	-	W
Small-signal gain	G	-	53	-	dB
Power gain flatness	ΔG	-	±2	-	dB
Input/output VSWR	S11 / S22	-	2:1	2.5:1	-
Odd harmonics	H	8	10	-	dBc
Even harmonics	H	20	22	-	dBc
Spurious suppression	Spur	65	70	-	dBc
Operating voltage	VDC	-	28	-	V
Current consumption	I	-	20	-	A

Environmental Specifications

Parameter	Minimum	Typical	Maximum	Unit
Operating temperature	-40	-	+65	°C
Storage temperature	-55	-	+85	°C
Relative humidity (non-condensing)	-	90	-	%

Monitoring and Protection

Parameter	Specification
Thermal overload protection	85°C (maximum)
VSWR overload protection	3:1 (maximum)
Over-current protection	25 A (maximum)
RF input overdrive protection	5 dBm (maximum)

Monitoring and Protection

Parameter	Specification
RF input connector	SMA
RF output connector	N-Type

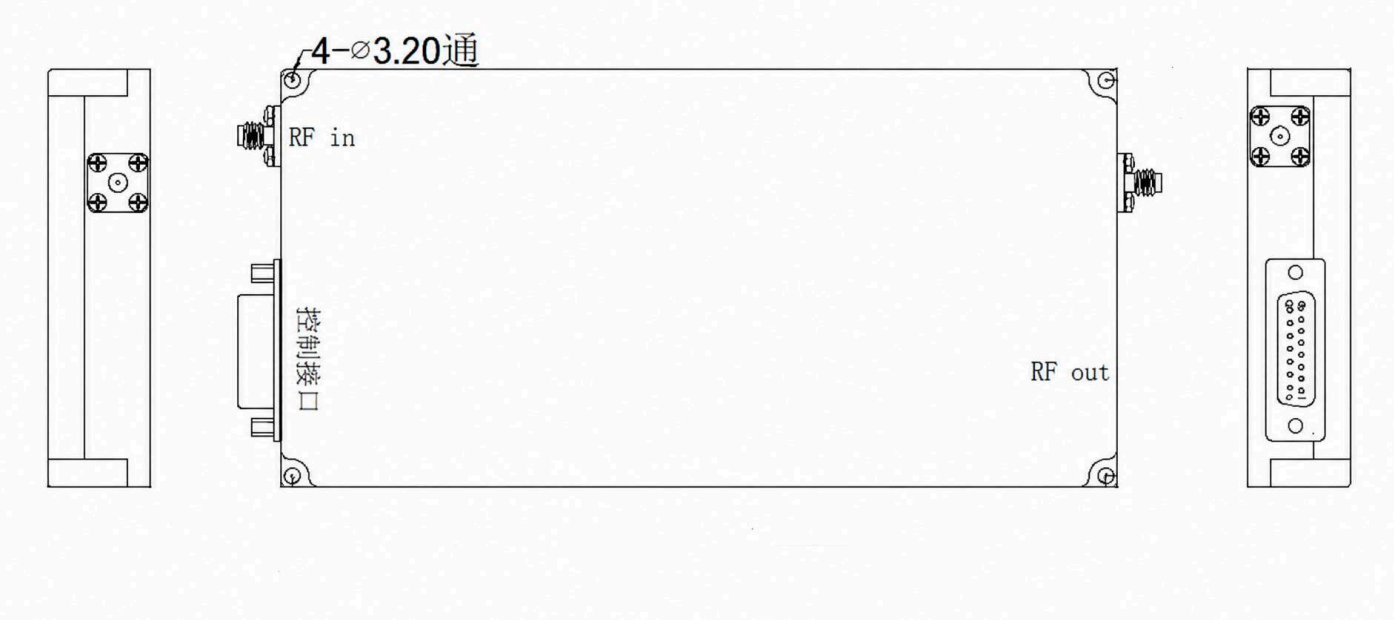
DC and Control Interface

Pin #	Description	Specification
1	1 — PA enable / on-off control	PA enable / on-off control
6	6 — VSWR alarm	VSWR alarm
2	2 — Ground	Ground
7	7 — Power indicator	Power indicator
3	3 — Overdrive no-damage indicator	Overdrive no-damage indicator
8	8 — Not connected	Not connected
4	4 — Not connected	Not connected
9	9 — Overcurrent indicator	Overcurrent indicator
5	5 — Temperature alarm	Temperature alarm

Mechanical Specifications

Parameter	Value	Unit
Model number	LCPAM-20-520-200A	-
Dimensions	250 × 120 × 30	mm
Power connector	DB-2	-
Control connector	DB-9	-
RF input connector	SMA	-
RF output connector	N-Type	-
Input/output impedance	50 Ω	-
Operating voltage	28 VDC	-
Current consumption	20 A (typical)	-

Mechanical Outline



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Document notice

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