4400–5000 MHz RF Power Amplifier, 25 W Typical



The amplifier provides 25 W typical output across 4400–5000 MHz and 44 dB typical gain. Typical flatness is ±0.75 dB and VSWR is 1.5:1; operating voltage is 24 V minimum, 28 V typical and 32 V maximum.

Maximum dimensions are 115 × 60 × 20 mm, with SMA input/output and a ten-pin interface. On control is 3.3–5 V, off is 0 V and the default is 0 V; pins include 10 mV/°C temperature output and forward/reflected power signals.

Electrical Specifications

+28.0VDC; 25°C; 50Ω

Parameter	Symbol	Minimum	Typical	Maximum	Unit
Operating frequency	BW	4400	-	5000	MHz
Saturated RF output power	Pout	-	25	-	W
Power gain	Gp	-	44	-	dB
Power gain flatness	Gp	-	±0.75	-	dB
VSWR	S11	-	1.5	-	-
Spurious signals	Spur	-	-60	-	dBc
Input/output impedance	Impedance	-	50	-	Ω
Operating voltage	VDC	24	28	32	VDC
Power-added efficiency	Eff	-	35	-	%
DC current @ Pout = 25 W	IDD	-	3	-	A

Monitoring and Protection

Parameter	Specification
Monitoring	Voltage, current, output power, reflected power, and temperature
Over-temperature protection	85 °C → Shutdown
Supply protection	(VDC >32 V) or (VDC <24 V) or Reversed polarity → Shutdown
Over-current protection	IDD >3 A → Shutdown

Absolute Maximum Ratings

Parameter	Rating
RF input drive without damage	+10 dBm maximum
Load VSWR at Pout = 25 W	3:1; 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	%

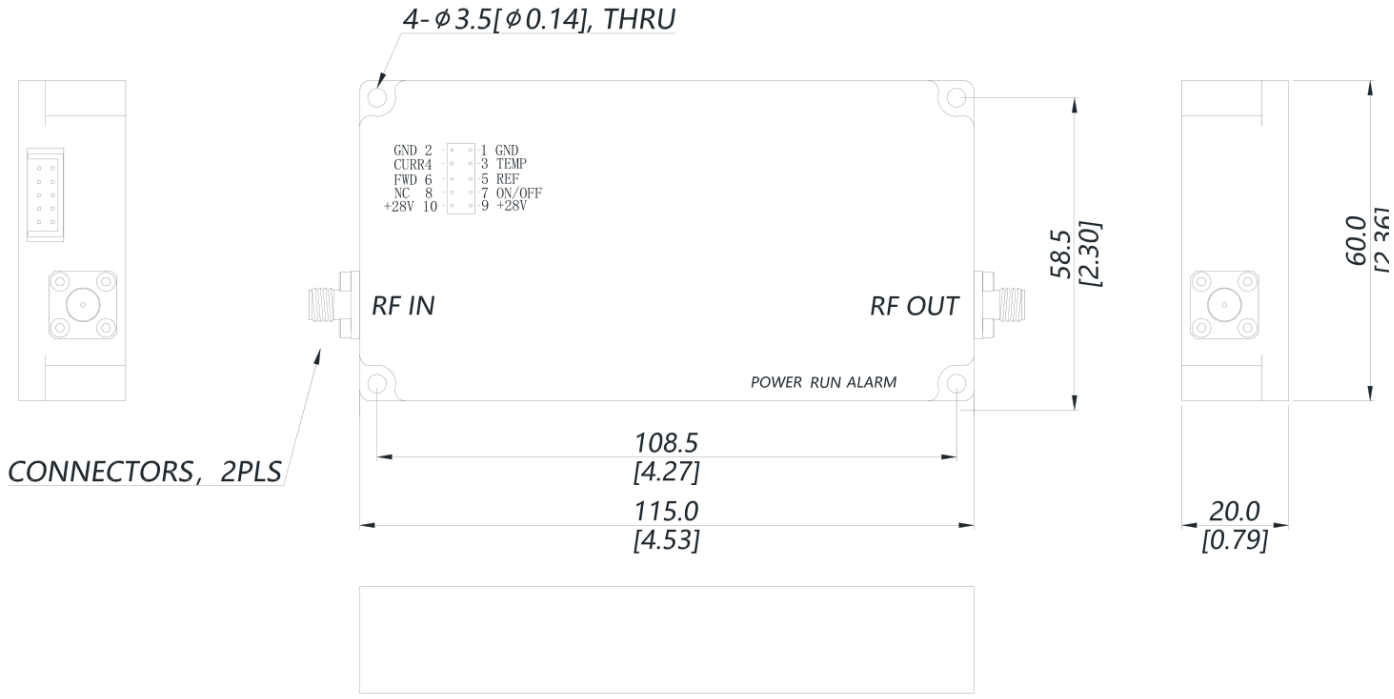
[1] Storage temperature

DC and Control Interface

Pin #	Description	Specification
1	1 — Ground	Ground
2	2 — Ground	Ground
3	3 — Temperature sense output	10 mV/°C
4	4 — Current sense output	mV/A
5	5 — Reflected RF power sense	Reflected RF power sense
6	6 — Forward RF power sense	Forward RF power sense
7	7 — Enable	0 V → Disabled; 3.3–5 V → Enabled; Default: 0 V
8	8 — Not connected	Not connected
9	9 — Positive supply	+28V
10	10 — Positive supply	+28V

Mechanical Specifications

Parameter	Value	Unit
Dimensions	115 × 60 × 20[4.53 × 2.36 × 0.79] mm [in] (maximum)	mm [in]
Weight	0.5[1] kg [lb] (maximum)	kg [lb]
RF input connector	SMA, female	-
RF output connector	SMA, female	-
DC/control interface	10-PIN	-



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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.