1100–1700 MHz RF Power Amplifier, 300 W Minimum, RS-485



This amplifier covers 1100–1700 MHz with 300 W minimum output power and 55 dB typical gain. Typical gain flatness is ±2.5 dB, with 45 A typical current specified at 300 W output.

The RF path uses an SMA input and N output, alongside RS-485 control. Maximum dimensions are 360 × 240 × 40 mm; monitoring covers voltage, current, temperature and open/short-circuit detection.

Electrical Specifications

+28.0VDC; 25°C; 50Ω; 0dBm

Parameter	Symbol	Minimum	Typical	Maximum	Unit
Operating frequency	BW	1100	-	1700	MHz
Saturated RF output power	Pout	300	-	-	W
Power gain	Gp	-	55	-	dB
Power gain flatness	Gp	-	±2.5	-	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	-	28	-	%
Current consumption at Pout = 300 W	IDD	-	45	-	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	-	55	°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

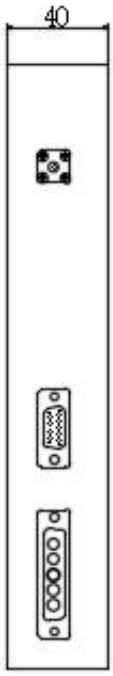
Pin #	Description	Specification
1	1 — Positive supply	Positive supply
2	2 — Positive supply	Positive supply; Total current: 45 A
3	3 — Ground	Negative supply
4	4 — Ground	Negative supply
5	5 — Not connected	Not connected

Mechanical Specifications

Partial end view from the original mechanical drawing; this excerpt is not a complete outline or a confirmed wiring diagram. The source mechanical table specifies Hybrid D-Sub 4, while the power-pin section states DB5 and five pins. Exact connector designation and pin count require confirmation. The mechanical table calls the control connector D-Sub 15, male, while the control-interface heading states J30J-9ZK. The source does not establish whether these designate the same interface. Confirm the exact connector designation, pin count and wiring; the documented pin-function rows are retained as source records.

Parameter	Value	Unit
Dimensions	360 × 240 × 40[14.17 × 9.45 × 1.57] mm [in] (maximum)	mm [in]
Weight	6[13.2] kg [lb] (typical)	kg [lb]
RF input connector	SMA, female	-
RF output connector	N, female	-

Mechanical Outline



Current publication record · 1.4 · 2026-11-11. Specification tables updated. Replaces revision 1.3.

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.