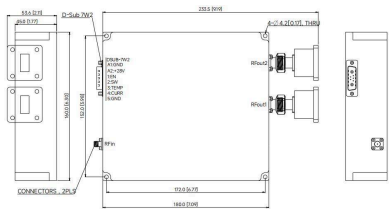


10700–12750 MHz GaN RF Power Amplifier, 100 W Typical, WR75 Adapter

The GaN amplifier covers 10700–12750 MHz with 100 W typical saturated output and 50 dB minimum gain. Typical output at 1 dB compression is 40 W; typical current is 21 A at 100 W.



Electrical Specifications · +28.0VDC; 25°C; 50Ω

Parameter	Symbol	Minimum	Typical	Maximum	Unit
Operating frequency	BW	10700	-	12750	MHz
Output power at 1 dB compression	P-1dB	-	40	-	W
RF output power @ PSAT	PSAT	-	100	-	W
Power gain @ PSAT	Gp	50	-	-	dB
Power gain flatness @ PSAT	ΔGp	-	±1	-	dB
Input return loss	S11	-	-15	-	dB
Harmonics at 100 W	H	-	-20	-	dBc
Spurious signals @ PSAT	Spur	-	-60	-	dBc
Input/output impedance	Impedance	-	50	-	Ω
Operating voltage	VDC	-	28	-	VDC
Power-added efficiency @ 100W	Eff	-	25	-	%
DC current @ 100W	IDD	-	21	-	A

Absolute Maximum Ratings

Parameter	Rating
RF input drive without damage	+10 dBm maximum
Load VSWR at Pout = 100 W	∞; All load phases and amplitudes; continuous
Thermal overload	85 °C → Shutdown (maximum)

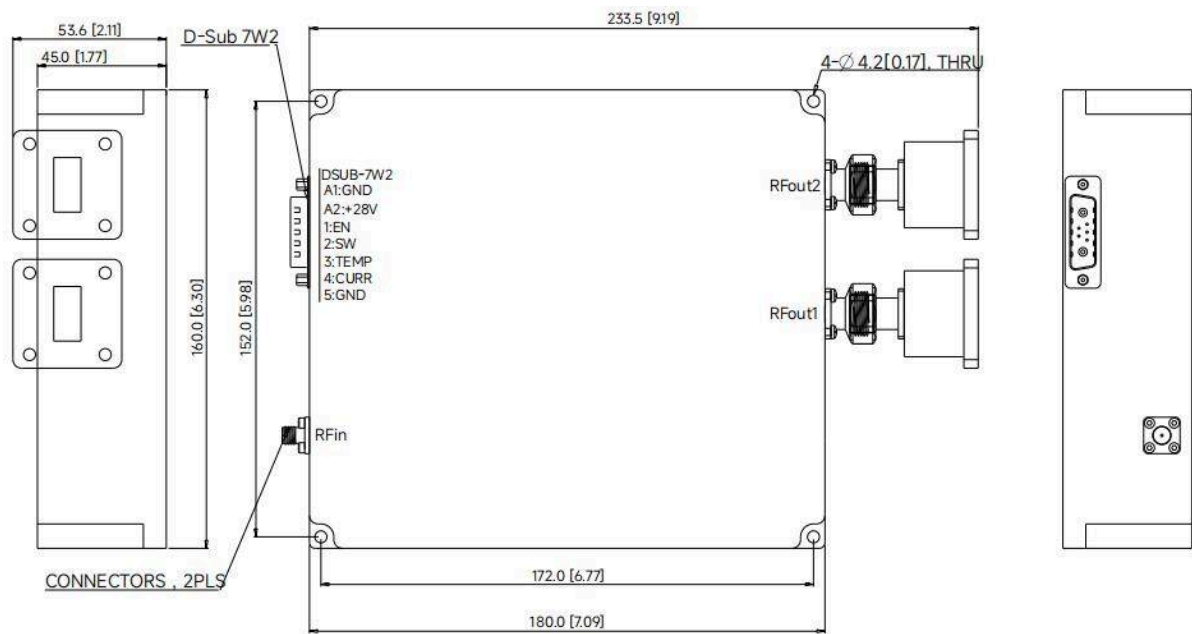
Environmental Specifications · Design targets; project confirmation required

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

Mechanical Specifications · The source table gives 180 × 160 × 45 mm maximum. The original CAD also labels overall spans of 233.5 mm and 53.6 mm beyond the drawn body. The intended maximum envelope is unresolved and requires confirmation. The source table assigns pin 5 to the VSWR alarm, while the original CAD marks pin 5 GND. This assignment is withheld; confirmed wiring is required.

Parameter	Value	Unit
Weight	2.5 kg (maximum)	kg
RF input connector	SMA, female	-
RF output connector	N-K → WR75 Waveguide adapter	-
DC/control interface	Hybrid, D-Sub 7, male	-

Mechanical Outline



All dimensions are in mm [in].

DC and Control Interface

Pin #	Description	Specification
A1	A1 — Ground	Ground
A2	A2 — Positive supply	+28V
1	1 — Enable	TTL logic high (3.3 V); internally pulled low
2	2 — RF channel selection (SW)	CH1: Low level; CH2: High level; <15 ms
3	3 — Temperature sense output	750 ±20 mV @25 °C; 10 mV/°C
4	4 — Current sense output	100 mV/A

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.