BW1/BW2 300–6000 MHz RF Power Amplifier, 47 dBm Typical, RS-485



The module defines BW1 at 300–2000 MHz and BW2 at 2000–6000 MHz. Output power is 46 dBm minimum and 47 dBm typical, with gain of 46 dB minimum and 47 dB typical.

Maximum dimensions are 200 × 160 × 25 mm, with an SMA input, N output and seven-pin hybrid D-Sub. Pins 3 and 4 provide RS-485, while pin 5 selects the frequency band; typical current is 10 A at 50 W output.

Electrical Specifications

+28.0VDC; 25°C; 50Ω

Parameter	Symbol	Minimum	Typical	Maximum	Unit
Operating frequency — BW1	BW1	300	-	2000	MHz
Operating frequency — BW2	BW2	2000	-	6000	MHz
Saturated RF output power	Pout	46	47	-	dBm
Power gain	Gp	46	47	-	dB
Power gain flatness	Gp	-	±2	-	dB
VSWR	S11	-	1.5	-	-
Harmonics at 50 W	H	-	-12	-	dBc
Spurious signals	Spur	-	-60	-	dBc
Input/output impedance	Impedance	-	50	-	Ω
Operating voltage	VDC	24	28	32	VDC
Power-added efficiency	Eff	-	20	-	%
Current consumption at Pout = 50 W	IDD	-	10	-	A

Monitoring and Protection

Parameter	Specification
Monitoring	Voltage, current, output power, reflected power, and temperature
Output VSWR protection	VSWR 3–3.5 → Shutdown
Over-temperature protection	85 °C → Shutdown
Supply protection	(VDC >32 V) or (VDC <24 V) or Reversed polarity → Shutdown
Over-current protection	IDD >15 A → Shutdown

Absolute Maximum Ratings

Parameter	Rating
RF input drive without damage	+10 dBm maximum
Load VSWR at Pout = 50 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

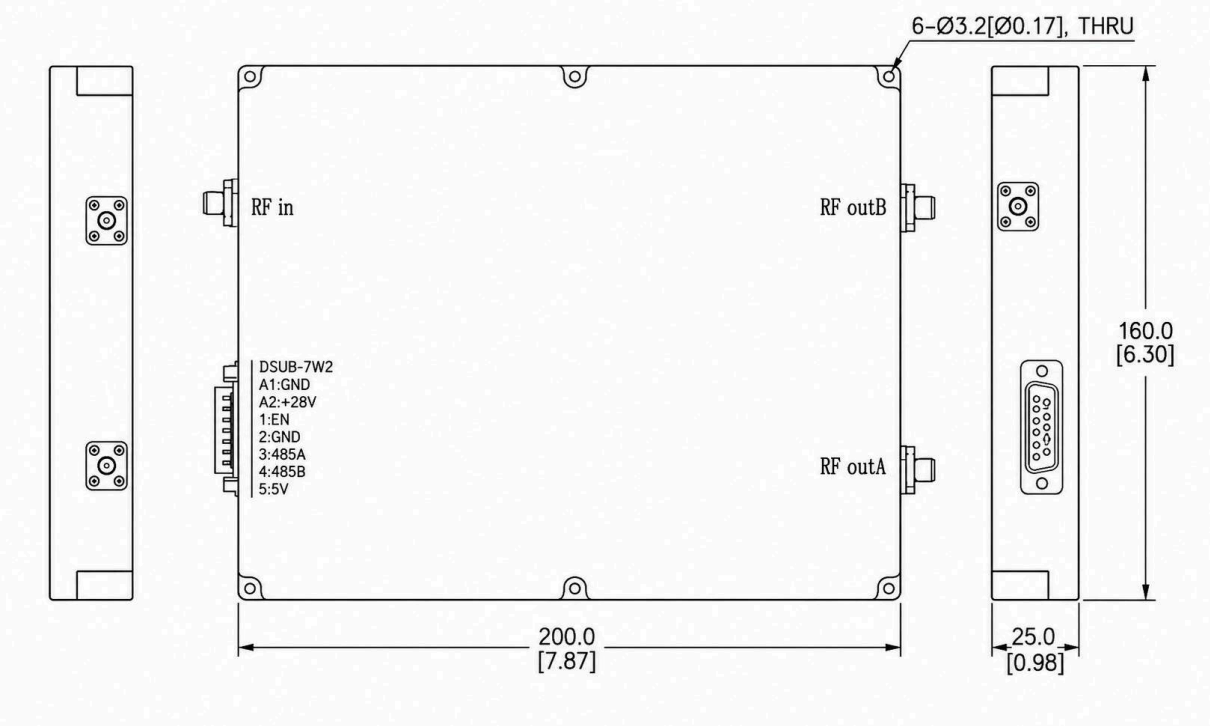
Pin #	Description	Specification
A1	A1 — Ground	Ground
A2	A2 — Positive supply	+28V
1	1 — Enable	TTL logic high (3.3 V); internally pulled low
2	2 — Ground	Ground
3	3 — 485A	RS-485 serial communication
4	4 — 485B	RS-485 serial communication

Mechanical Specifications

For SW pin 5, the source assigns 3.3 V to both TTL High and TTL Low, while the drawing marks pin 5 as 5 V. The switching-level and level-to-band assignments are withheld. Confirm the control levels and band selection before wiring SW.

Parameter	Value	Unit
Dimensions	200 × 160 × 25 mm (maximum)	mm
Weight	2 kg (maximum)	kg
RF input connector	SMA, female	-
RF output connector	N, female	-
DC/control interface	Hybrid, D-Sub 7, male	-

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.