

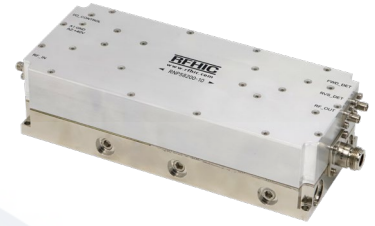


## Product Features

- 5725 ~ 5875MHz Operation Bandwidth
- High Output power : 200W(CW) Peak Power
- Using GaN on SiC HEMT Transistor
- 35% Drain Efficiency @ 40V
- High reliability & stability, long-run operation
- Accurate adjustment function on output power, phase, frequency
- Very good frequency spectrum even at low power

## Applications

- Building block for high-power systems
- Plasma generation
- Industrial heating and drying
- Microwave CVD
- Microwave sintering
- Microwave chemistry
- Materials processing
- Study of biological phenomena
- Semiconductor equipment



## Description

The RNP58200-10 uses GaN on SiC HEMT technology which performs high breakdown voltage and high efficiency. This product is able to control its RF power and monitoring FWD and RVS power with the water cooling system. And this product is designed for high power ISM(Industrial, Scientific, Medical) applications with adjustable power up to 200W. This microwave power amplifier is suitable for use in CW applications. This high efficiency rugged device is targeted to power industrial heating, drying, microwave CVD and sintering.

## Electrical Specifications @ $V_{DC} = 40V$ ; $T_c = 25^{\circ}C$ ; $Z_S = Z_L = 50\Omega$

PARAMETER		UNIT	MIN	TYP	MAX
Operating Frequency		MHz	5725	5800	5875
Operating Bandwidth		MHz	-	150	-
CW Output Power		W	-	200	-
Power Gain		dB	-	40	-
Nominal Input Power		dBm	-	13	-
In/Out Return Loss		dB	-	12	-
Operating Voltage		V <sub>DC</sub>	39	40	41
Efficiency @ Po=200W, CW		%	-	35	-
Mismatch for full power output		VSWR	6 : 1		
Interface	DC Power	A1	GND		
		A2	40V <sub>DC</sub>		
	I/O Signal	1	GND		
		3	FWD Power_Monitor (0 ~ 3V)		
		5	RVS Power_Monitor (0 ~ 3V)		
		7	PA En/Dis : Enable(TTL Low), Disable(TTL High)		
		9	RS232_TX		
		11	RS232_RX		
Control (GUI)	PA On / Off	Enable / Disable			
Monitoring (GUI)		FWD & RVS Power, PA Temperature			
Control Interface		RS-232			

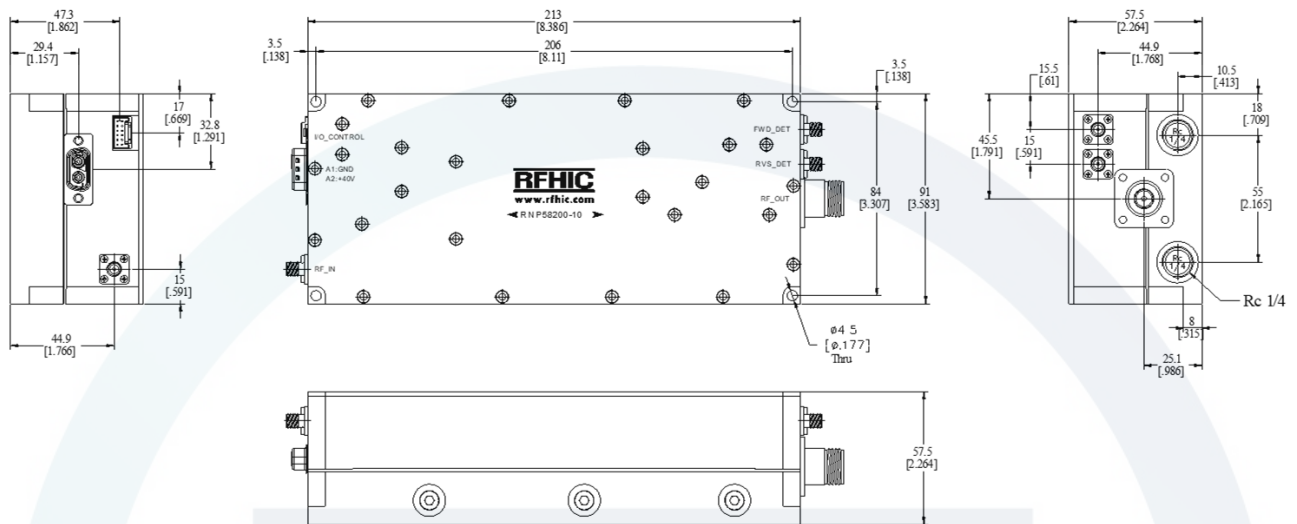
### Absolute Maximum Ratings

PARAMETER	UNIT	RATING
RF Input Power	dBm	18
Supply Voltage	V	43
Load Mismatch Value	VSWR	7 : 1
Operating Case Temperature	°C	40
Storage Temperature	°C	0 ~ 60

### Mechanical Specifications

PARAMETER	UNIT	VALUE
Dimensions (L x W x H)	mm	213 x 91 x 57.5
Weight	Kg	1.8 (typ.)
In / Output RF Connector	-	SMA (Female) / N-type (Female)
DC Connector	-	2W2
I/O Connector	-	SMAW200-12C
Cooling Type	-	<b><u>Water Cooling</u></b> - Water Temperature : 25°C (typ.) - Water Flow : 3L/min (typ.) - Water I/O Connector size : Rc 1/4 - Relative humidity below dew point (non-condensing) - De-ionized water shall be used to prevent system damage

**Mechanical drawing**



## Revision History

Part Number	Release Date	Version	Description	Data Sheet Status
RNP58200-10	Feb, 2021	0.1	Initial release of datasheet	Preliminary
RNP58200-10	Jun, 2022	0.2	Interface connector pins changed	Preliminary
RNP58200-10	Nov, 2022	0.3	Communication specifications changed	Preliminary



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