

Preliminary GaN Solid State Power Amplifier RIF281K2-20S



Product Features

- 2856MHz (ISM band)
- Output power: 1200W (Pulse) Peak Power
- Using GaN on SiC HEMT
- Output Power Adjustable 200W to 1200W

Applications

- Accelerator application



Description

The RIF281K2-20S is a GaN solid-state Power Amplifier designed for accelerator application.

The RIK281K2-20S delivering an output power ranging from 200 W to 1200 W.

The power amplifier operates 2856 MHz. Provided with a Delta configuration, 1kW power supply unit and a DC cable.

Electrical Specifications

PARAMETER		UNIT	MIN	TYP	MAX
Operating Frequency	Adjustable Range	MHz	-	2856	-
	Bandwidth	MHz	-	10	-
Output Power	Adjustable Range	W	200	-	1200
	Step Size	W	-	100	-
Power Gain @ Peak Power		dB	-	60.8	-
RF Input Power		dBm	-10	0	10
Operating RF		Pulse @ Pulse Duty < 10%			
Input RF Coupling		dB	-	1	-
FWD RF Coupling		dB	-	50	-
Monitoring	FWD & Input Power	Forward Power from 200 ~ 1200W Input Power from -10dBm ~ 10dBm			
	Temperature	Internal Temperature Sensor			
	Current	Internal Current Sensor			
Operating Voltage		Vac		220	

Generator Alarm & Protection Features

PARAMETER	State	CONDITION
Output Power	Alarm Disabled	Output Power > 1200W

Preliminary
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Over-Temperature	Alarm Disabled	Amplifier Temperature > 50 C°
Over-Current	Alarm Disabled	Amplifier Current > 10A

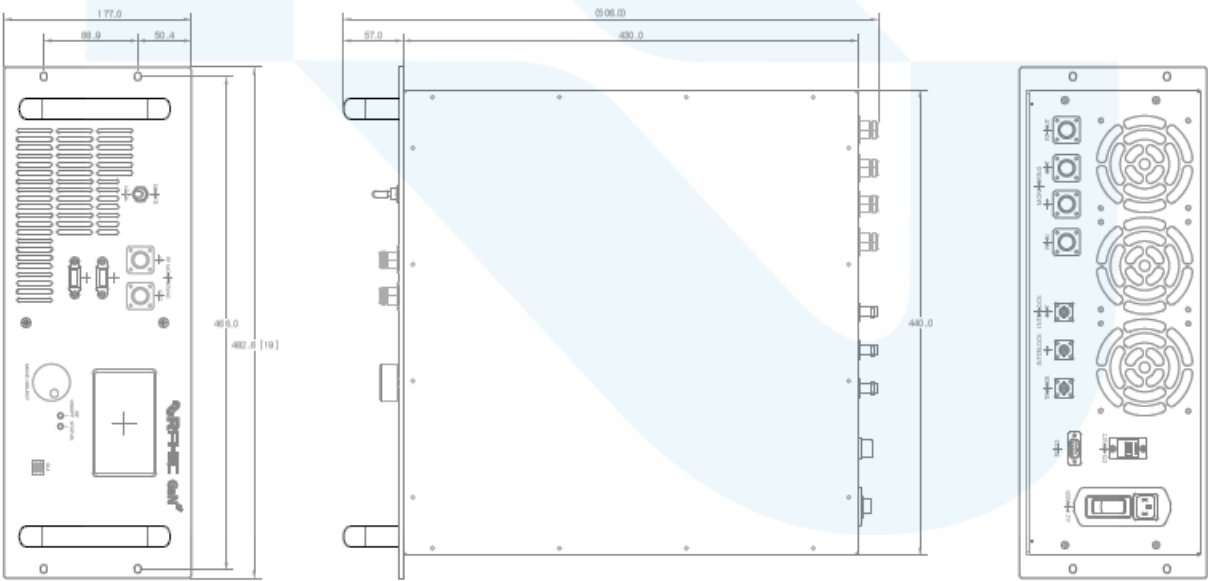
*Remarks

Mechanical Specifications

PARAMETER	UNIT	VALUE
Dimensions (W x D x H)	mm	440 x 430 x 177
Weight	Kg	8
Microwave Output Port	-	N type connector
Microwave Coupling Port	-	N type connector
Trigger & Interlock	-	BNC connector
I/O Connector	-	USB, Ethernet, D-Sub 9pin
Cooling	-	Air @ AC cooling pan

Remarks:

Mechanical Drawing



Preliminary
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Revision History

Part Number	Release Date	Version	Description	Data Sheet Status
RIF281K20-20S	JUL, 2025	0.1	Initial release of datasheet	Preliminary



Certification

This product is manufactured by a company that is certified for the AS9100D quality management system.

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