

Preliminary

GaN Microwave Amplifier

RIK0550K-40T



Product Features

- 498.593 ~ 500.593 MHz
- High Output Power : 50kW(CW)
- Using GaN on SiC HEMT
- 55% System Efficiency
- High Reliability & Stability, Long-run Operation
- Stable frequency spectrum even at low power

Applications

- Building block for high-power systems
- Accelerator Light Source
- Industrial Heating and Drying
- Microwave CVD
- Materials processing
- Study of biological phenomena
- Food sterilization / pasteurization



Sample

Description

The RIK0550K-40T is a high-power microwave generator (SSPA) utilizing cutting-edge GaN on SiC HEMT technology, delivering high breakdown voltage and exceptional power efficiency. This product is engineered to meet the stringent and precise requirements of modern particle accelerators and synchrotron light sources.

Electrical Specifications

PARAMETER		UNIT	MIN	TYP	MAX
Operating Frequency		MHz	498.593	-	500.593
Operating Bandwidth		MHz	-	2	-
CW Output Power		W	50	-	50000
System Efficiency		%	55	-	-
Input Power		dBm	-3	-	3
In/Out Return Loss		dB	-	-	-15
RF Input		-	N-type		
Waveguide Output		-	EIA 6 1/8”		
Operating Voltage		VAC	380 VAC, 3 phase, 4wire ,50/60 Hz		
Monitoring	FWD & RVS Power	System Output and Reflected Power from 10 to 100%			
	Temperature	Individual Power Amplifier			
	Current	+50VDC Output of Power Supply Unit			
Maximum mismatch for full power output		6 : 1 VSWR 30sec.			
Control Interface		EPICS, Ethernet			

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Mechanical Specifications

PARAMETER	UNIT	VALUE
Dimensions (W x D x H)	mm	1700 x 1500 x 2010
Weight	Kg	2200
Cooling Type	-	Water / Air
Water Cooling Condition	-	25±5°C, <10bar, >100L/min

Note

Dimension and weight may be subject to change.

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Revision History

Part Number	Release Date	Version	Description	Data Sheet Status
RIK0550K-40T	Aug, 2026	0.1	Initial release of datasheet	



Certification

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

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