

Preliminary

GaN Microwave Generator

RIK154K0-40T



Product Features

- 1496 ~ 1502MHz
- High Output Power : 4kW(CW) Peak Power
- Using GaN on SiC HEMT
- 50% System Efficiency
- High Reliability & Stability, Long-run Operation
- Stable frequency spectrum even at low power

Applications

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



Description

The RIK154K0-40T uses GaN on SiC HEMT technology which performs high breakdown voltage and high efficiency. This product is packaged in a rack mountable shelf with the water cooling system. And this product is designed for high power ISM(Industrial, Scientific, Medical) applications with adjustable power up to 4kW. This microwave generator is suitable for use in CW and linear applications. This high efficiency rugged device is targeted to replace industrial magnetrons and other vacuum tubes currently powering industrial heating, drying, microwave CVD and sintering.

Electrical Specifications

PARAMETER		UNIT	MIN	TYP	MAX
Operating Frequency		MHz	1496	-	1502
Operating Bandwidth		MHz	-	6	-
CW Output Power		W	400	-	4000
System Efficiency		%	55	-	-
Input Power		dBm	-3	-	3
In/Out Return Loss		dB	-	-	-15
Operating Voltage		V	-	50	-
Operating Case Temperature		°C	-	-	60
RF Input		-	N-type		
Waveguide Output		-	3 1/8 Inchs EIA		
Operating Voltage		VAC	380 VAC 3 phase 4wire 50/60 Hz		
Monitoring	FWD & RVS Power	System Output and Reflect 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		Ethernet			

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Mechanical Specifications

PARAMETER	UNIT	VALUE
Dimensions (W x D x H)	mm	600 x 750x 2031
Weight	Kg	150
Cooling Type	-	Water
Water Cooling Condition	-	25±1°C, 5bar, >15L/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
RIK154K0-40T	Oct, 2022	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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