



**Product Features**

- 900 ~ 930MHz
- 2000W CW Peak Power @ 50V
- 63% Drain Efficiency @ 50V
- Low Cost, Light Weight, Compact
- Using GaN-on-SiC HEMT Transistor
- Excellent Thermal Stability and Ruggedness
- Externally 50Ω Matched

**Applications**

- High Power Industry
- Microwave CVD Reactor
- Plasma Generator
- Food Science
- MW Heating and Drying

**Description**

RIM092K0-20 using GaN-on-SiC transistors is designed for industrial, scientific, medical (ISM) and plasma applications at 915MHz. RIM092K0-20 is the world's highest power and efficiency SSPA with affordable price. This amplifier is suitable for use in CW, ISM applications. This high efficiency rugged device is targeted to replace industrial magnetrons and other vacuum tubes which are currently applying into high power industrial applications, artificial diamond manufacturing, semiconductor equipments, and plasma systems.

**Electrical Specifications @ V<sub>DS</sub> =50V, T=25°C, 50Ω System**

PARAMETER		UNIT	MIN	TYP	MAX	SYMBOL
Operating Frequency		MHz	900	-	930	F <sub>O</sub>
Operating Bandwidth		MHz	-	30	-	OBW
CW Output Power		W	-	2000	-	P <sub>O</sub>
Efficiency		%	-	63	-	Eff
Input Power		dBm	-	7	-	P <sub>I</sub>
Power Gain @ Peak Power		dB	-	56	-	G <sub>P</sub>
Gain Flatness		dB	-	0.5	1.0	ΔG <sub>P</sub>
In/Out Return Loss		dB	-	-	-15	S <sub>11</sub>
Operating Voltage		V	-	50	-	V <sub>dc</sub>
Operating Case Temperature			-	-	60	T <sub>c</sub>
DC & Controls Connector	3W3	A1	50V ±1%			
		A2	GND			
		A3	50V ±1%			
	D-SUB 2Array 15pin	1	Current Monitor			
		2	Temp Monitor			
		3	Forward Power Monitor			
		4	Reflect Power Monitor			
		5	Input Power Monitor			
		6	+50VDC Voltage Monitor			
		7	RF En/Dis : Enable(Low), Disable(High or Open)			
		8	Gain Control			
		9,14~15	Reseved			
		10~,11	+5.6V±5%			
12~13	GND					

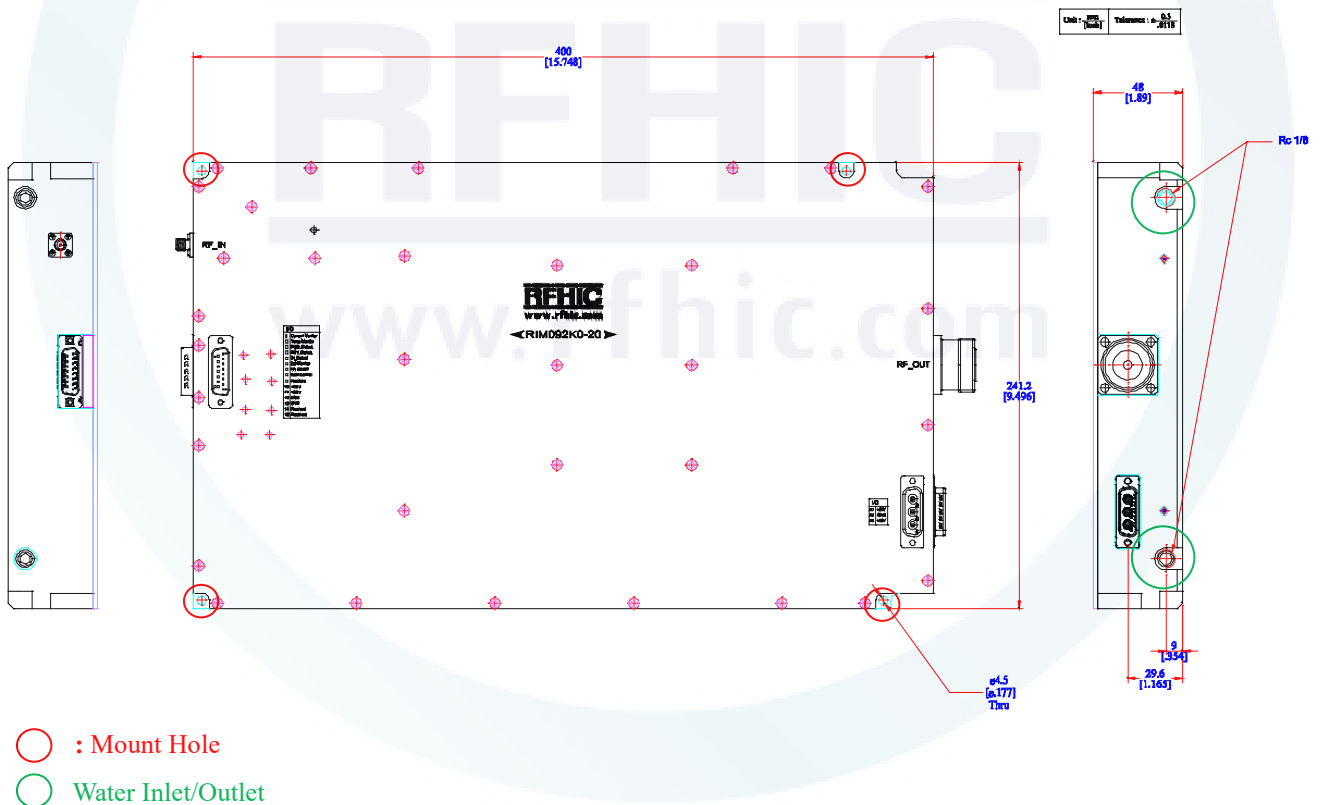
**Mechanical Specifications**

PARAMETER	UNIT	VALUE
Dimensions (L x W x H)	mm	400 x 241 x 45
Weight	Kg	7.0 typ
RF Input Connectors	-	SMA, Female
RF Output Connectors	-	7/16 DIN, Female
DC & I/O Connector	-	3W3 & D-sub 2array 15pin
Cooling	-	Water cooling ( 20°C typ, 2 liter per minute, 0.2 bar)

**Note**

Water cooling condition may be subject to change.

**Mechanical drawing**



**Revision History**

Part Number	Release Date	Version	Description	Data Sheet Status
RIM092K0-20	Jan, 2019	0.1	Initial release of datasheet	Preliminary
RIM092K0-20	May, 2020	0.2		Preliminary



RFHIC Corporation reserves the right to make changes to any products herein or to discontinue any product at any time without notice. While product specifications have been thoroughly examined for reliability, RFHIC Corporation strongly recommends buyers to verify that the information they are using is accurate before ordering. RFHIC Corporation does not assume any liability for the suitability of its products for any particular purpose, and disclaims any and all liability, including without limitation consequential or incidental damages. RFHIC products are not intended for use in life support equipment or application where malfunction of the product can be expected to result in personal injury or death. Buyer uses or sells such products for any such unintended or unauthorized application, buyer shall indemnify, protect and hold RFHIC Corporation and its directors, officers, stockholders, employees, representatives and distributors harmless against any and all claims arising out of such unauthorized use. Sales, inquiries and support should be directed to the local authorized geographic distributor for RFHIC Corporation. For customers in the US, please contact the US Sales Team at +1-919-677-8780. For all other inquiries, please contact the International Sales Team at +82-31-8069-3000.