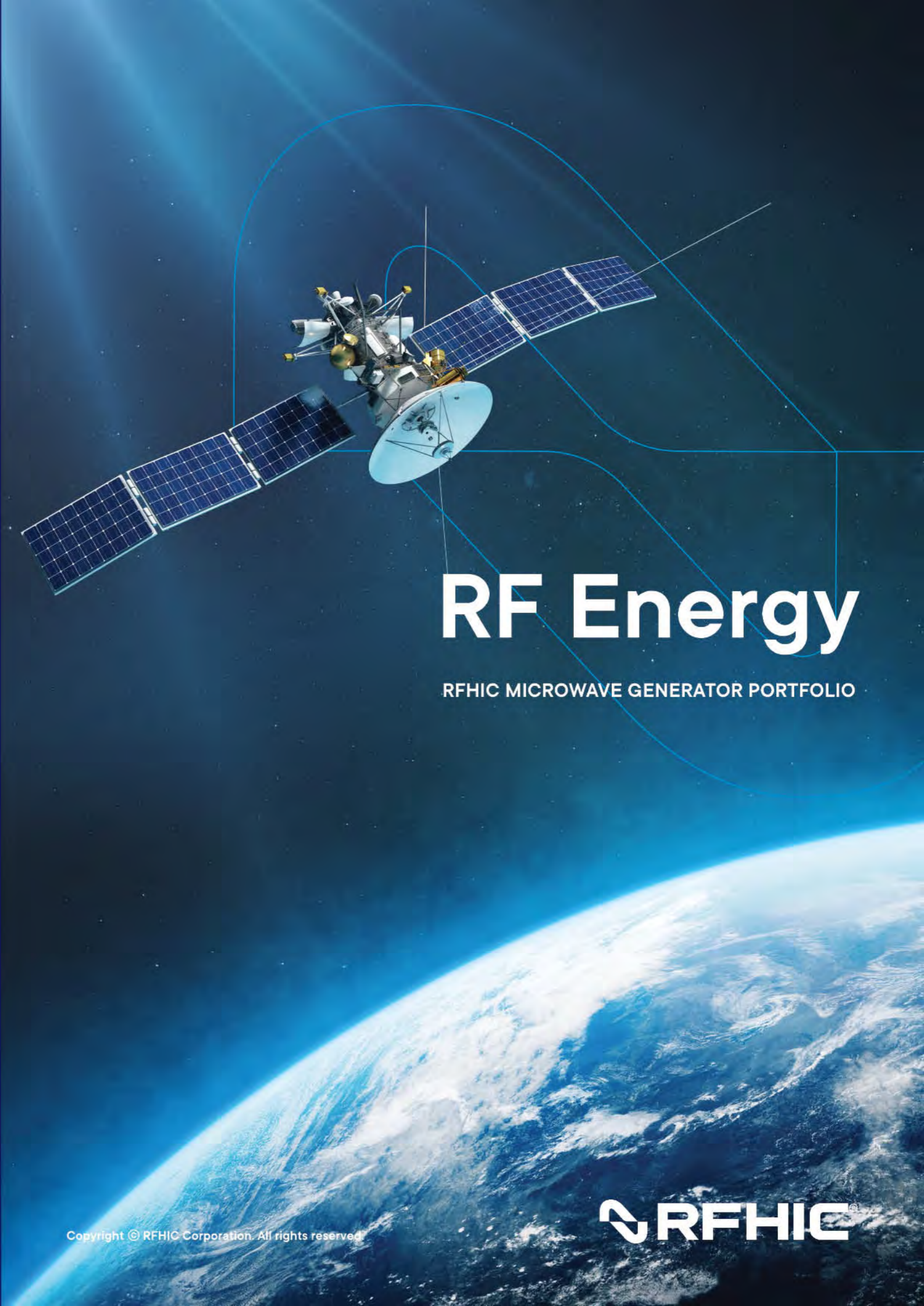




rfhic.com



RF Energy

RFHIC MICROWAVE GENERATOR PORTFOLIO

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About RFHIC 关于RFHIC

We're innovators, creating the technology that transforms industries, enhances lives, and shapes our future.

技术的创造与革新带来产业发展，生活质量提高，塑造未来。

Our Applications 产品应用

RFHIC's portfolio of GaN solid-state power amplifiers and microwave generators is used for various applications. From agriculture to space, RFHIC's proven Gallium Nitride technology allows users to digitally control and monitor like never before. Our innovations are driven by our customers and based on profound experience in industrial, scientific, and medical markets.

RFHIC多种GaN固态功放及固态微波源在很多产业上应用，从农业到太空领域，RFHIC提供成熟的氮化镓技术数字控制及监控功能。我们的创新是基于客户主导产业，科学，医疗市场上的丰富经验为基板。



Agriculture 农业

- MW Weed Treatment
- MW Plasma Lighting



Food Processing 食品加工

- MW Heating
- MW Drying
- MW Sterilization



Green Energy 环保能源

- Hydrogen Conversion
- Syngas Production



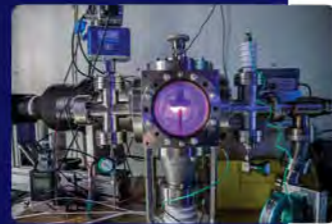
Materials 源材料

- Nanomaterial Production
- MW Welding & Cladding
- MW Plasma Treatment Coating



Medical 医疗

- MW Ablation
- Hyperthermia
- MW Oncology and Radiation



Semiconductor 半导体

- MPCVD
- MW Etching



Waste 处理垃圾

- Medical Waste Sterilization
- Waste Gasification



Space 宇宙

- Rocket Thruster
- GEO & LEO Satellites

Experts in GaN Solid State 专注于GaN固态方案

Being the world's leader in designing and manufacturing GaN solid-state industrial microwave generators, we strive to build reliable, sustainable, cost-efficient, and agile systems for various industrial, medical, and scientific applications. As a global solutions provider, we focus on solving our customers' biggest challenges to achieve the extraordinary.

作为设计和制造GaN固态微波发生器的世界领先企业，我们努力为工业，医疗，科学的发展提供可靠，可持续，低成本，高效解决方案。

\$1.3B

by 2024 with 96% CAGR

Source: Yole and Company Estimates

Cost Perspective 成本分析

	RFHIC's GaN SSMG	Magnetron
Average Lifetime Hours (Yrs.)	50,000~100,000 (6-10 yrs)	4,000~6,000 (< 1 yr)
ROI	High	Low
Investment Costs	Intermediate	Low
Operating Costs	Intermediate	High
Maintenance Costs	Low	High
Labour Costs	Low	High

Product Capabilities 产品性能

Frequency Control & Flexibility	✓	✗
Power Control & Monitoring Capability	✓	✗
Phase Control & Flexibility	✓	✗
Windows GUI Software	✓	✗

Safety & Space 安全 / 空间

Operational Voltage	Low (50V)	High (38,000V +)
Footprint	Low	High



RFHIC's GaN SSMG

VS

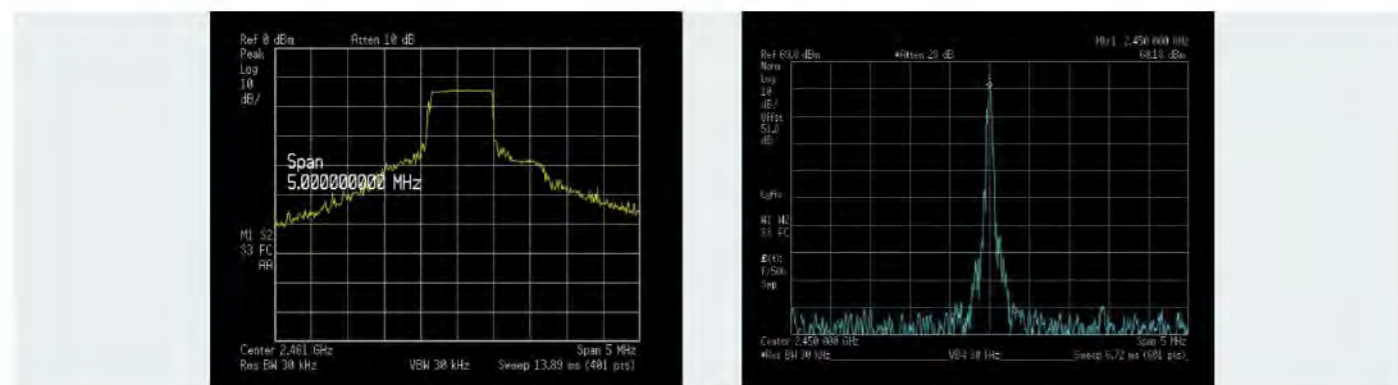


Magnetron

Spectrum Clarity

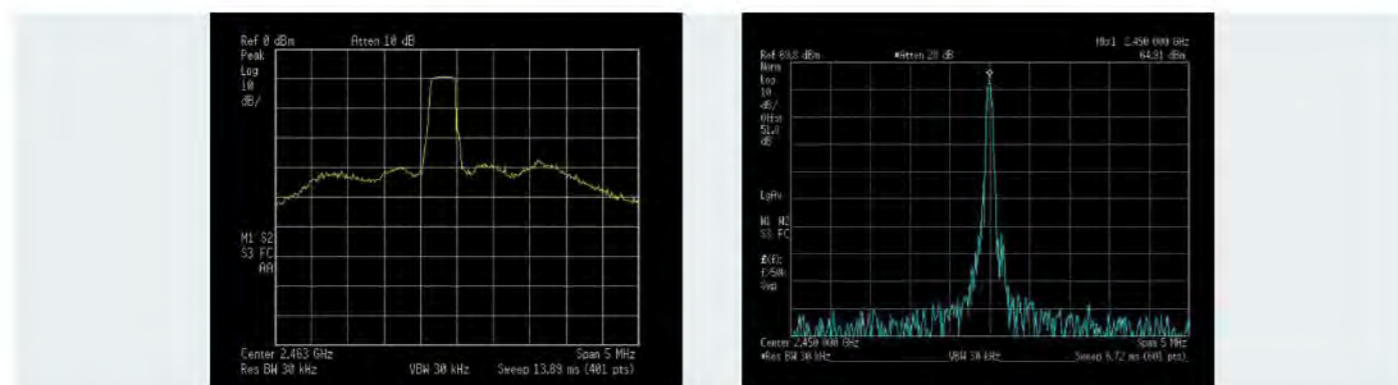
Spurious and harmonics are spikes of unwanted signals that are found at the output of amplifiers and generators. Magnetrons tend to have high amounts of unwanted signals which can cause an unstable source of plasma for CVD applications. Unlike magnetrons RFHIC's GaN Solid-State Generators provide a clear and precise signal replica of the input signal with a higher amplitude.

杂波和谐波是微波信号上是不必要的信号，磁控管方案会发出大量的杂波和谐波，会导致等离子状态不稳定，与此相反RFHIC的氮化镓固态方案的信号清晰而精确，因而功率高，等离子状态比较稳定。



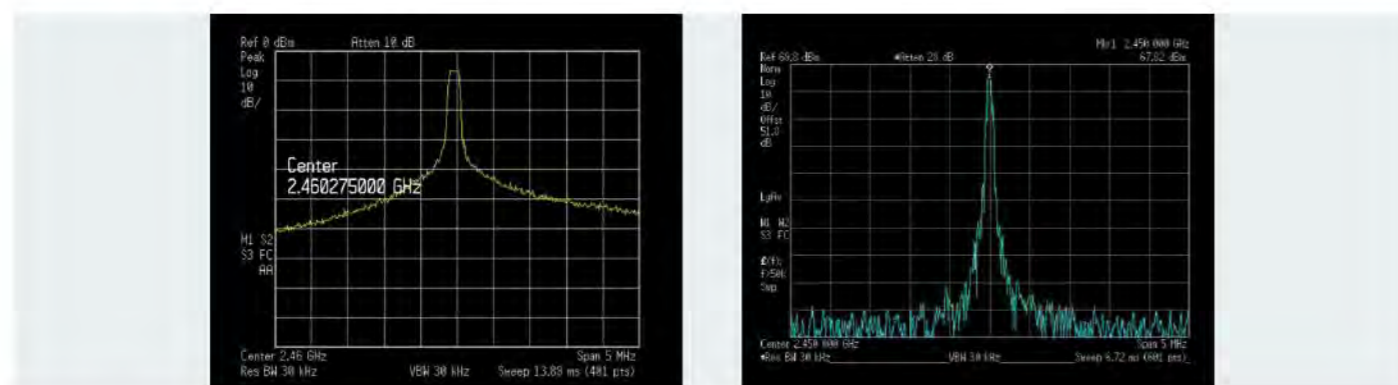
1kW Magnetron

1kW SSPA



3kW Magnetron

3kW SSPA



6kW Magnetron

6kW SSPA

3kw, 2.45GHz, GaN SSMG

RIU243KO-40TG



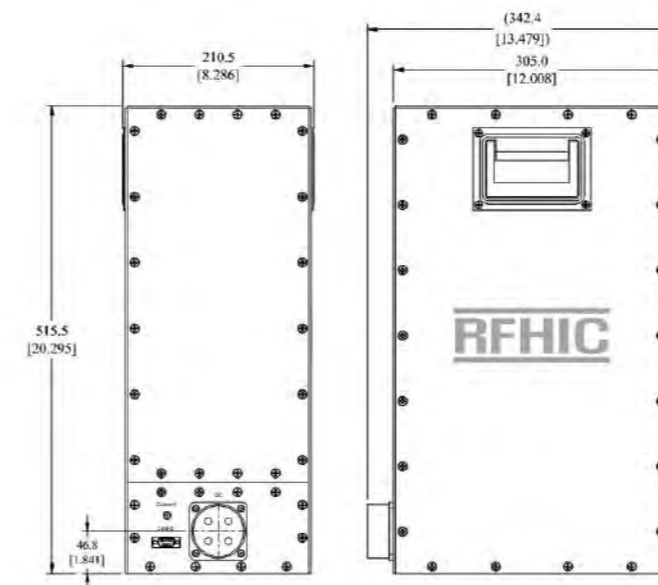
Datasheet Download

RFHIC's RIU243KO-40TG is a 3kW, gallium-nitride (GaN) solid-state microwave generator designed ideally for heating/drying and plasma generation applications. The RIU243KO-40TG provides continuous wave (CW) output power adjustable from 30W to 3kW at frequencies ranging between 2,400MHz and 2,500MHz.

RFHIC的RIU243KO-40TG是发射3KW功率，可用于加热/烘烤/等离子状态应用的氮化镓(GaN)固态微波发生器。RIU243KO-40TG，在带宽2,400兆赫到2,500兆赫上使用连续波(CW)信号，可调30W到3kW功率输出。



RIU243KO-40TG SSMG Head



Power Supply Unit

Specifications

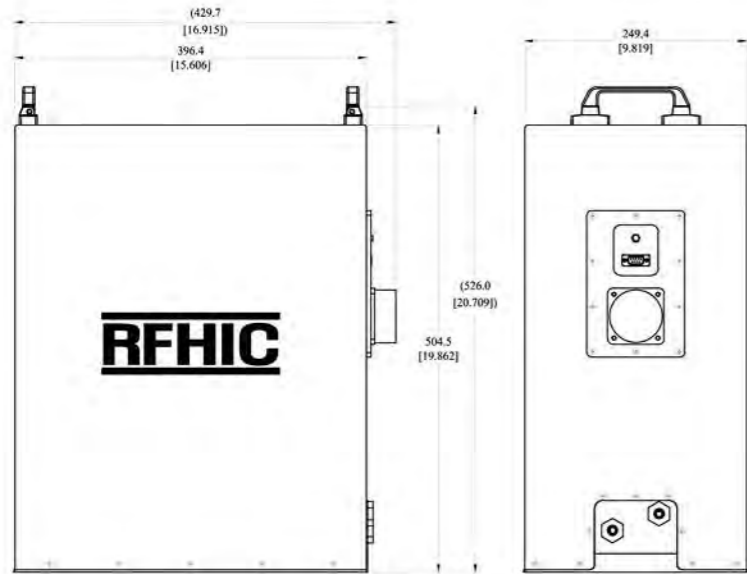
Frequency	2,450MHz Central Frequency, Adjustable in full 2,400-2,500MHz band in 0.1MHz Increments
Output Power Range	30W to 3kW (Adjustable with 10W step) Precision ±1%
Output Ripple	3% at Full Power
Output Waveguide	WR340
Efficiency	58%
Power Supply Specification	380 ~ 415VAC, 45 ~ 66Hz, 3-phase 4-Wire
Dimensions (mm)	Head 305 (W) × 211 (D) × 515.5 (H) / PSU 482 (W) × 445 (D) × 89 (H)
Weight (kg)	31
Cooling Type	De-ionized water must be used to prevent system damage

3kw, 915MHz, GaN SSMG

RIU093K0-40TG

The RIU093K0-40TG provides continuous wave (CW) output power adjustable from 30W to 3kW at frequencies ranging between 900MHz and 930MHz.

RIU093K0-40TG,在带宽900兆赫到930兆赫上使用连续波(CW)信号,可调30W到3kW功率输出。



RIU093K0-40TG SSMG Head * Built-In Internal Waveguide



Power Supply Unit

Specifications

Frequency	915MHz Central Frequency, Adjustable in full 900-930MHz band in 0.1MHz Increments
Output Power Range	30W to 3kW (Adjustable with 10W step) Precision ±1%
Output Ripple	3% at Full Power
Output Waveguide	WR975
Efficiency	65%
Power Supply Specification	380 ~ 415VAC, 45 ~ 66Hz, 3-phase 4-Wire
Dimensions (mm)	Head 400 (W) × 252 (D) × 505 (H) / PSU 482 (W) × 445 (D) × 89 (H)
Weight (kg)	43
Cooling Type	De-ionized water must be used to prevent system damage

6kw, 2.45GHz, GaN SSMG

RIU256K0-40TG

The RIU256K0-40TG provides continuous wave (CW) output power adjustable from 300W to 6kW at frequencies ranging between 2,400MHz and 2,500MHz.

RIU256K0-40TG,在带宽2,400兆赫到2,500兆赫上使用连续波(CW)信号,可调300W到6KW功率输出。



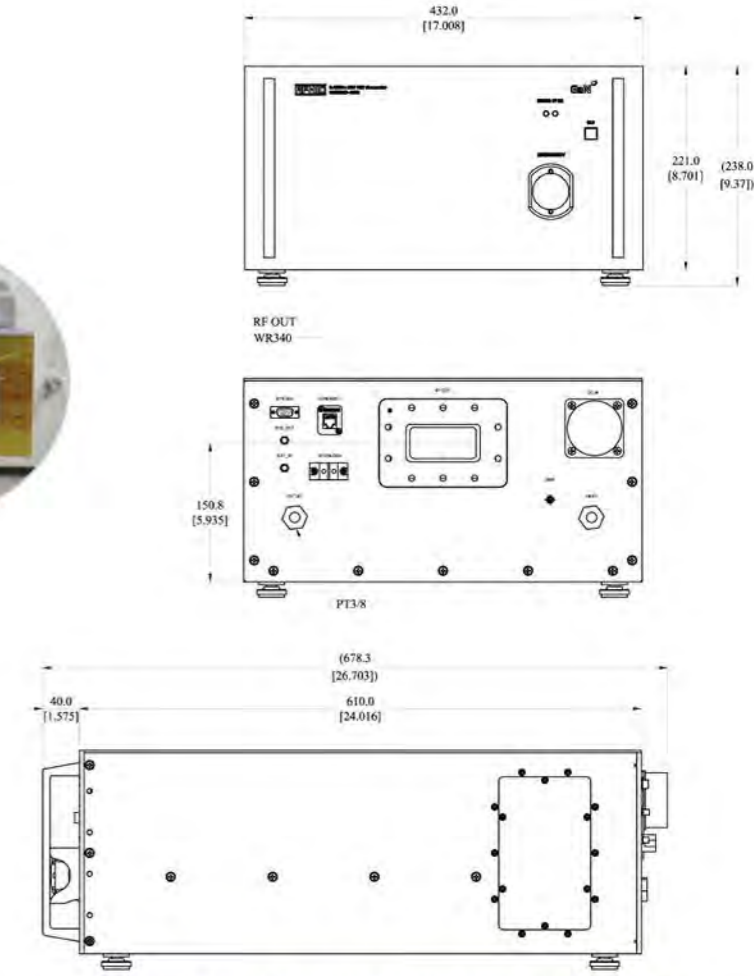
RIU256K0-40TG SSMG Head



Power Supply Unit

Specifications

Frequency	2,450MHz Central Frequency, Adjustable in full 2,400-2,500MHz band in 500kHz increments
Output Power Range	300W to 6kW (Adjustable with 100w step)
Output Ripple	3% at Full Power
Output Waveguide	WR340
Efficiency	58%
Power Supply Specification	380 ~ 415VAC, 45 ~ 66Hz, 3-Phase 4-Wire
Dimensions (mm)	Head 432 (W) × 610 (D) × 221 (H) / 432 (W) × 636 (D) × 221 (H) (w/ isolator) PSU 483 (W) × 432 (D) × 177 (H)
Weight (kg)	48.7 / 54.2 (w/ isolator)
Cooling Type	De-ionized water must be used to prevent system damage



* Note: External isolator is additional and can be provided upon request.

12kw, 2.45GHz, GaN SSMG

RIK2512K-40TG_H

The RIK2512K-40TG_H provides continuous wave (CW) and pulse output power adjustable from 600W to 12kW at frequencies ranging between 2,400MHz and 2,500MHz.

RIK2512K-40TG_H, 在带宽2,400兆赫到2,500兆赫上使用连续波(CW)信号, 可调600W到12KW功率输出。



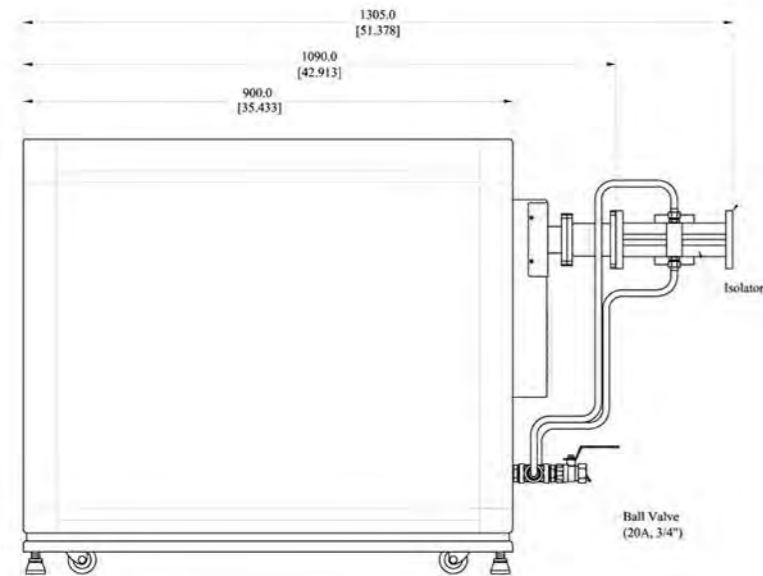
* Note:
Built in WR340 adapter & WR430 external isolator



RIK2512K-40TG_H SSMG Head



Power Supply Unit



Datasheet Download

Specifications

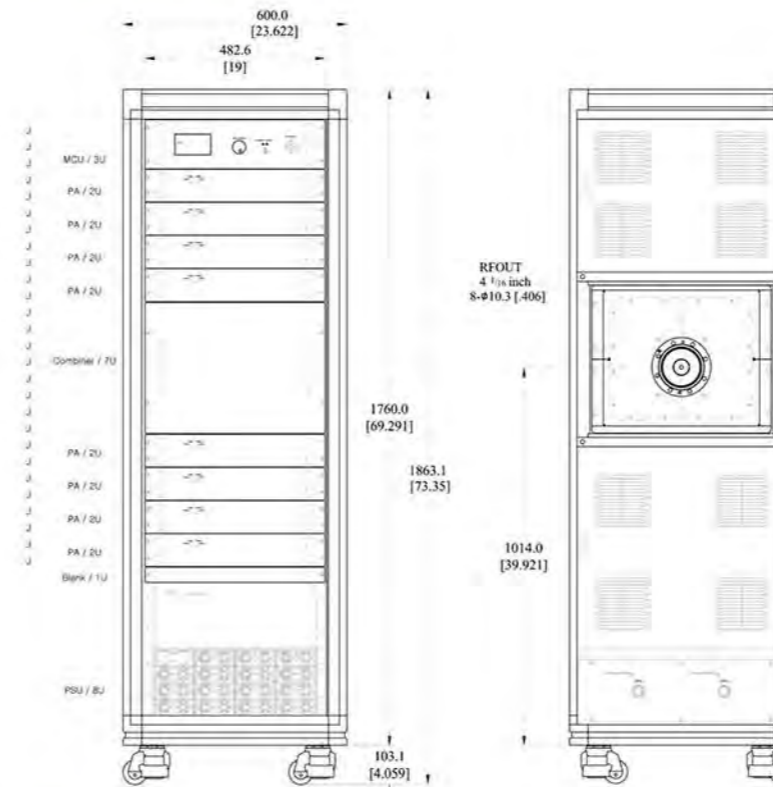
Frequency	2,450MHz Central Frequency, Adjustable in full 2,400-2,500MHz band in 0.5MHz increments
Output Power Range	600W to 12kW (Adjustable with 0.1kW step)
Output Ripple	3% at Full Power
Output Waveguide	WR430
Efficiency	54%
Power Supply Specification	380 ~ 415VAC, 45 ~ 66Hz, 3-Phase 4-Wire
Dimensions (mm)	Head 600 (W) x 1232 (D) x 760 (H) with External Isolator / PSU 483 (W) x 427 (D) x 400 (H)
Weight (kg)	175
Cooling Type	De-ionized water must be used to prevent system damage

15kw, 915MHz, GaN SSMG

RIK0915K-40TG

The RIK0915K-40TG provides continuous wave (CW) and pulse output power adjustable from 1kW to 15kW at frequencies ranging between 900MHz and 930MHz.

RIK0915K-40TG, 在带宽900兆赫到930兆赫上使用连续波(CW)信号, 可调1kW到15kW功率输出。



Datasheet Download

Specifications

Frequency	915MHz Central Frequency, Adjustable in full 900-930MHz band in 500kHz increments
Output Power Range	1kW to 15kW (Adjustable with 100W step)
Output Ripple	3% at Full Power
Output Waveguide	WR975 or 4 1/16 inch EIA Connector
Efficiency	65%
Power Supply Specification	380 ~ 415VAC, 45 ~ 66Hz, 3-Phase 4-Wire
Dimensions (mm)	600 (W) x 900 (D) x 1760 (H)
Weight (kg)	480
Cooling Type	De-ionized water must be used to prevent system damage

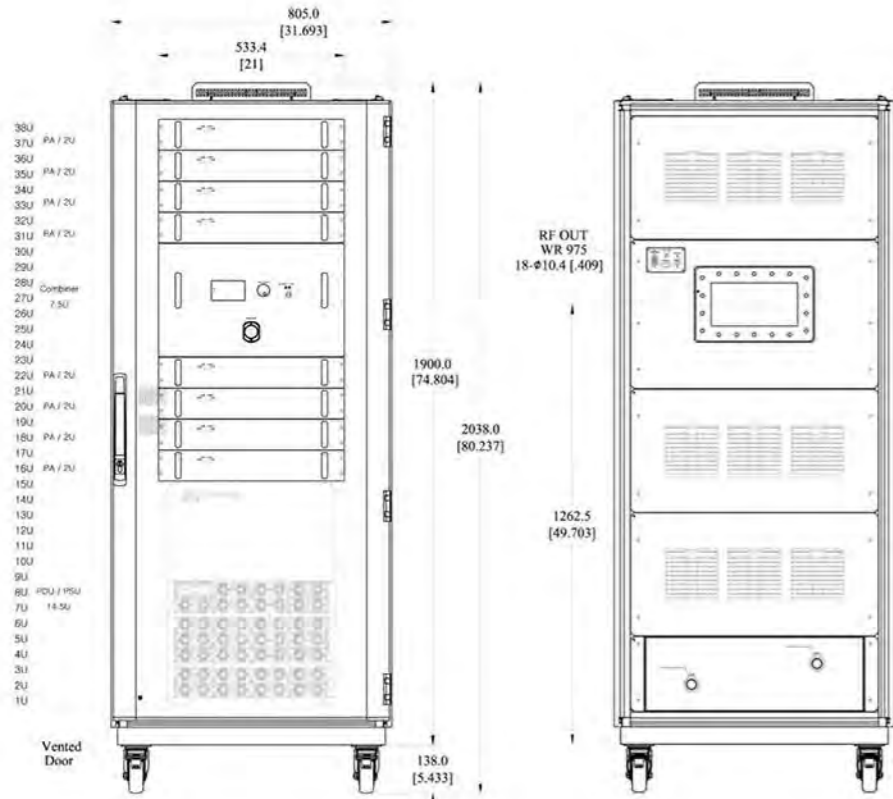
30kw, 915MHz, GaN SSMG

RIK0930K-40TG



The RIK0930K-40TG provides continuous wave (CW) output power adjustable from 1kW to 30kW at frequencies ranging between 900MHz and 930MHz.

RIK0930K-40TG, 在带宽900兆赫到930兆赫上使用连续波(CW)信号, 可调1kW到30kW功率输出。



Specifications

Frequency	915MHz Central Frequency, Adjustable in full 900-930MHz band in 500kHz increments
Output Power Range	1kW to 30kW (Adjustable with 100W step)
Output Ripple	3% at Full power
Output Waveguide	WR975
Efficiency	65%
Power Supply Specification	380 ~ 415VAC, 45 ~ 66Hz, 3-Phase 4-Wire
Dimensions (mm)	793 (W) x 1017(D) x 1900 (H)
Weight (kg)	590
Cooling Type	De-ionized water must be used to prevent system damage

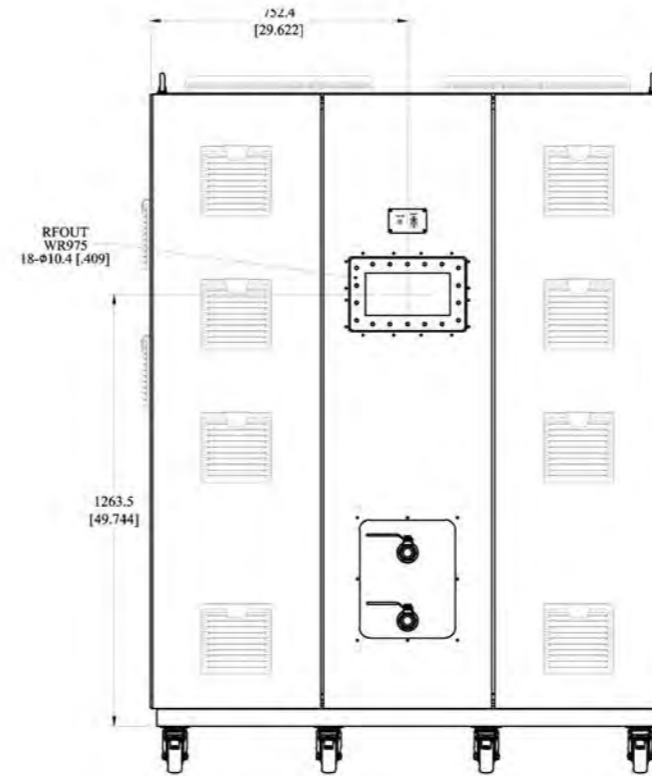
60kw, 915MHz, GaN SSMG

RIK0960K-40TG



The RIK0960K-40TG provides continuous wave (CW) output power adjustable from 1kW to 60kW at frequencies ranging between 900MHz and 930MHz.

RIK0960K-40TG, 在带宽900兆赫到930兆赫上使用连续波(CW)信号, 可调1kW到60kW功率输出。



Specifications

Frequency	915MHz Central Frequency, Adjustable in full 900-930MHz band in 500kHz increments
Output Power Range	1kW to 60kW (Adjustable with 100W step), Pulse Operation
Output Ripple	3% at Full power
Output Waveguide	WR975
Efficiency	65%
Power Supply Specification	380 ~ 415VAC, 45 ~ 66Hz, 3-Phase 4-Wire
Dimensions (mm)	1556 (W) x 1006(D) x 2046 (H)
Weight (kg)	1,000
Cooling Type	De-ionized water must be used to prevent system damage