

2.45GHz 300W Oscillator

SMPO2425-302V

Description

The SMPO2425-302V is a 300W, GaN RF Power oscillator, designed for Industrial, Scientific, Medical(ISM) , RF Cooking and Plasma Lighting application at 2450MHz. This industry leading high efficiency rugged oscillator is targeted to replace Industrial magnetrons and other vacuum tubes currently powering industrial heating, drying, plasma lighting and medical systems, in highly compact 88*50mm. **Isolator integrated for mismatch protection**

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Product Features

Operate Frequency: 2450MHz

Typical >300W CW Psat@50V

Typical >350W CW Psat@55V

Typical Psat Efficiency:70%

Excellent Ruggedness with isolator protection

Excellent Thermal Stability

Applications

Industrial Heating and Drying

Scientific

Medical

Plasma Lighting

RF Cooking

Typical performance at room temperature

Freq(MHz)	Vdd (V)	Pout(W)	EFF(%)
2450	45	279	71%
	50	338	70.3%
	55	396	70%

Electrical Specifications in production test						
PARAMETER	Condition	UNIT	MIN	TYP	MAX	SYMBOL
Operating Frequency		MHz		2450		fo
Psat	Vdd = 50V, Vgs=-3.5V	W		300		Pout
Efficiency	Vdd = 50V, Vgs=-3.5V	%		70		Eff

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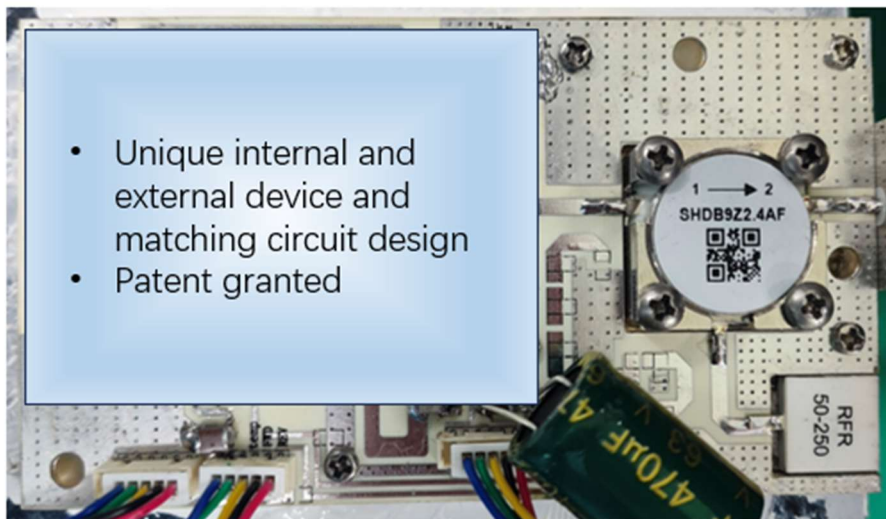
Environmental Characteristics

PARAMETER	UNIT	MIN	TYP	MAX	SYMBOL
Operating Case Temperature	°C	-55	-	150	Ta
Storage Temperature	°C	-65		150	Tstg
Relative humidity w/o condensation	%	-	-	85	RH

Mechanical Specifications

PARAMETER	UNIT	VALUE
Dimensions(L × W × H)	mm	88×50×10 (Excluding components height)
Weight	g	TBD
RF Output Connector	-	N(Female)
Power Supply Connector	-	TBD

Product picture



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Revision History

Document revision history

Date	Revision	Datasheet Status
2023/12/13	Rev 1.0	Preliminary Datasheet

Application data based on LSM-23-37

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