

## 2.45GHz 50W Oscillator

## SMPO2425-50H

### Description

The SMPO2425-50H is a 50W, 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 size **with isolator included**

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### Product Features

Operate Frequency: 2450MHz

Typical >50W CW Psat@28V

Typical >60W CW Psat@32V

Typical Psat Efficiency:70%(including isolator)

Excellent Ruggedness

Excellent Thermal Stability

### Applications

Industrial Heating and Drying

Scientific

Medical

Plasma Lighting

RF Cooking

### Typical performance at room temperature

Vds=28V,Vgs=-3.05V

Freq (MHz)	Pout (dBm)	Pout (W)	I (A)	EFF (%)
2450	47.14	51.76	2.6	70

Electrical Specifications in production test						
PARAMETER	Condition	UNIT	MIN	TYP	MAX	SYMBOL
Operating Frequency		MHz	2400	2450	2450	fo
Pout	Vdd = 28V,Vgs=-3.05V	W		50		Pout
Efficiency	Vdd= 28V, Vgs=-2.05V	%	68	70		Eff

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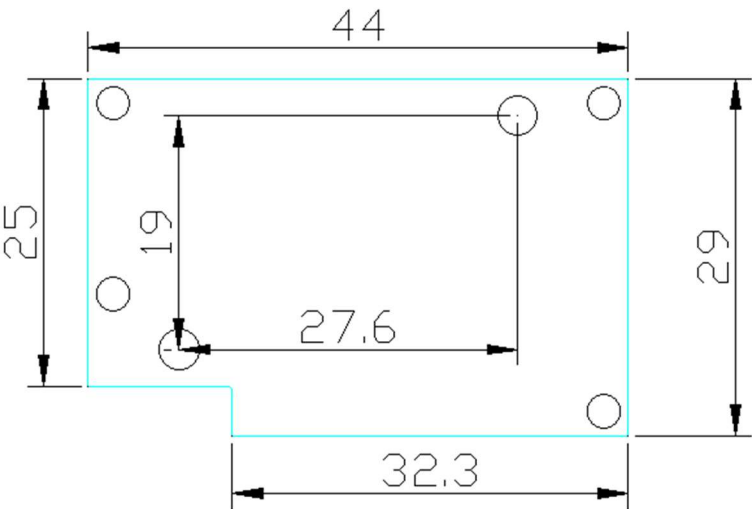
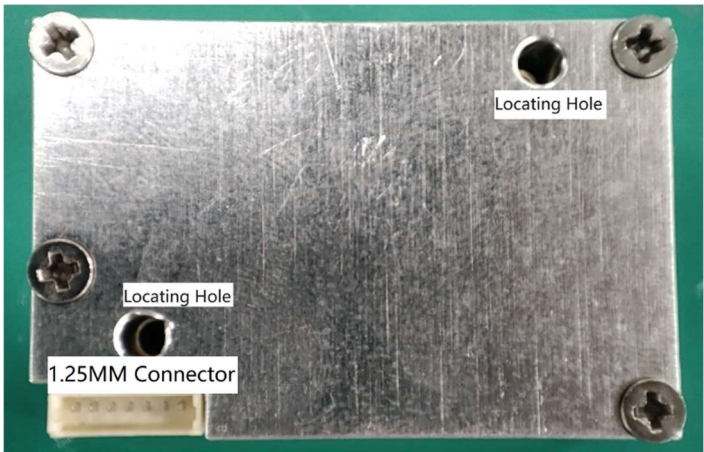
Environmental Characteristics

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	44×29×17
Weight	g	TBD
RF Output Connector	-	SMA(Female)
Power Supply Connector	-	1.25mm 5 pins

Product picture



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Figure 1 Side view of Power supply connector

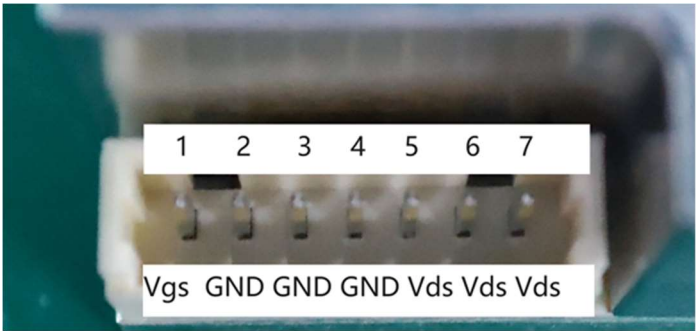
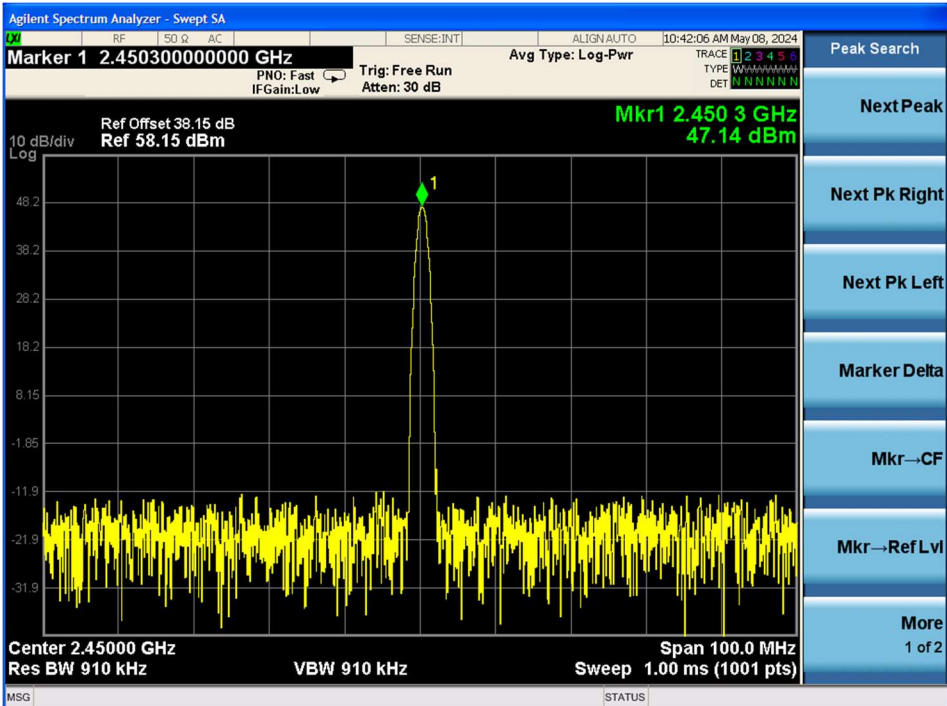


Figure 2: Output spectrum



## Revision History

### Document revision history

Date	Revision	Datasheet Status
2024/5/8	Rev 1.0	Preliminary Datasheet
2024/7/17	Rev 2.0	Modification of power supply connector from 5 pins to 7 pins

### Application data based on LWH-24-17

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