

Power Source

2400-2500MHz/65dBm Psat

Model: TLPS2450M-3KW

TLPS2450M-3KW is a power source with a minimum Psat of 65 dBm across the frequency range of 2400 to 2500 MHz. The power supply voltage for the power source is customized according to customer requirement. The output port configuration offers WR340 waveguide.

Features:

- Frequency range: 2400-2500 MHz
- Output Power Psat: 65dBm Min
- Protection: Over TEM, over voltage, under voltage, load VSWR, chip damage protection
- 50 Ohm Matched Input / Output

Applications:

- Cellular
- PCN
- GSM
- ISM
- Lab Test

电气特性 Electrical Characteristics:

参数 Parameter		Min	Typ	Max	单位 Units
频率范围 Frequency range		2400	2450	2500	MHz
频率误差 Frequency error			±50		ppm
饱和输出功率 Output Psat		65			dBm
功率稳定度 Power stability@24h				±0.02	dB
ALC范围 ALC Range			30		dB
ALC步进 ALC Step	@1~10W range		0.5		W
	@10~50W range		1		
	@50~300W range		2.5		
	@0.3~1KW range		5		
	@1~5KW range		10		
相位调节范围 Phase Adjustment Range			360		°
相位调节步进 Phase Adjustment Step			5.625		°
输出驻波 Output VSWR			1.5		:1
供电电压 Power Supply Voltage		Customer requirement			V
效率 Efficiency@Pout =65 dBm			55		%
阻抗 Impedance		50			Ohms

机械特性 Mechanical Specifications:

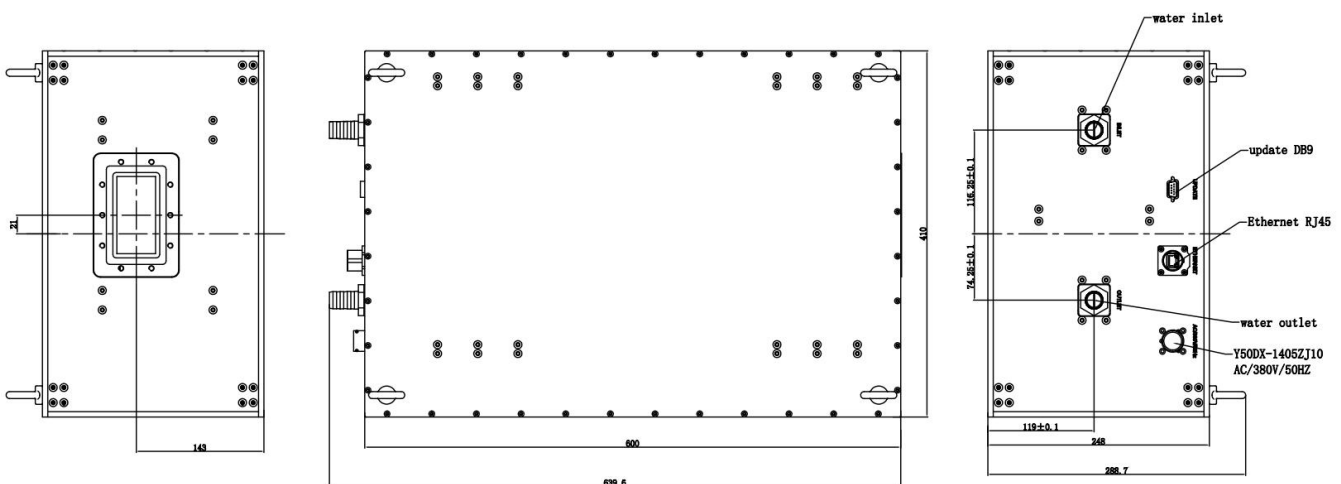
参数 Parameter	指标 Value	单位 Units
输出接口 Output Connector	WR340	
控制接口 M&C connectors	RS422 Serial: DB9 Ethernet: RJ-45	
供电接口 Power Supply Connector	TBD	
液冷接口 Liquid Interfaces	Inlet/outlet: ZFS-08	Coolant temp range: 15~30°C Pressure: 5 bar Liquid flow: 10L/min
尺寸 Size	639.6*410*248	mm
重量 Weight	≤40	g

绝对最大值 Absolute Maximum Ratings:

参数 Parameter	指标 Value
供电偏置电压 Supply Bias Voltage	TBD
ESD灵敏度 ESD sensitivity (HBm)	Class 0, passed 150V

外形图 Outline Drawing:

Unit:mm; Tolerance:±0.1mm



ESD Protection: Strictly adhere to ESD precautions to prevent electrostatic damage.

主要功能 Key Features:

参数 Parameter	特点 Advantages
内置保护功能 Protection functions	1, Over TEM: $\geq +80^{\circ}\text{C}$ case temp –shutdown $\geq +55^{\circ}\text{C}$ environment temp –shutdown $\geq +40^{\circ}\text{C}$ Coolant temp –shutdown 2, Over voltage: $\geq 110\%$ DC voltage supply-shutdown 3, Under voltage: $\leq 90\%$ DC voltage supply-shutdown 4, Load VSWR protection: The unit disables RF when reverse power exceeds the safe level of 3:1 VSWR or reduces power by 6dB. 5, Chip damage: ≤ 2 pieces warning (without short-circuit) ≥ 3 pieces or short-circuit–shutdown
远控功能 Remote control	RS422/LAN
控制&监测功能 Control&monitor functions	1, Chip-level: status of each chip(gate voltage, drain current, output power, case-temp); 2, System-level: output power, reverse power, load VSWR, DC voltage, DC current, environment temp, Coolant temp, PLL status 3, PLL, open loop gain/power control, closed loop power control, Phase control
冷却系统 Cooling system	Built in Cooling system,forced liquid cooling

温度环境 Environmental Conditions:

参数 Parameter	Min	Typ	Max	单位 Units
操作温度 Operating Temperature*	0		+50	$^{\circ}\text{C}$
存储温度 Non-operating Temperature*	-20		+70	$^{\circ}\text{C}$
相对湿度 Relative humidity			95	%
海拔 Altitude	3,000			feet
震动 Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis			
冲击 Shock(non operating)	20G for 11msc half sin wave,3 axis both directions			

*Note: For a wider temperature range, please consult the manufacturer.

订货信息 Ordering Information:

标准型号 Base Number	描述 Description	版本号 Revision
TLPS2450M-3KW	Power Source 2400-2500MHz, Psat:65dBm,Built in liquid cooling	Rev.1.0