

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

Electrical Characteristics:

Parameter		Min	Typ	Max	Units
Frequency range		2400	2450	2500	MHz
Frequency error			±50		ppm
Output Psat		65			dBm
Power stability@24h				±0.02	dB
ALC Range			30		dB
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		
Phase Adjustment Range			360		°
Phase Adjustment Step			5.625		°
Output VSWR			1.5		:1
Power Supply Voltage		Customer requirement			V
AC to RF Efficiency@Pout =65 dBm			55		%
Impedance		50			Ohms

Mechanical Specifications:

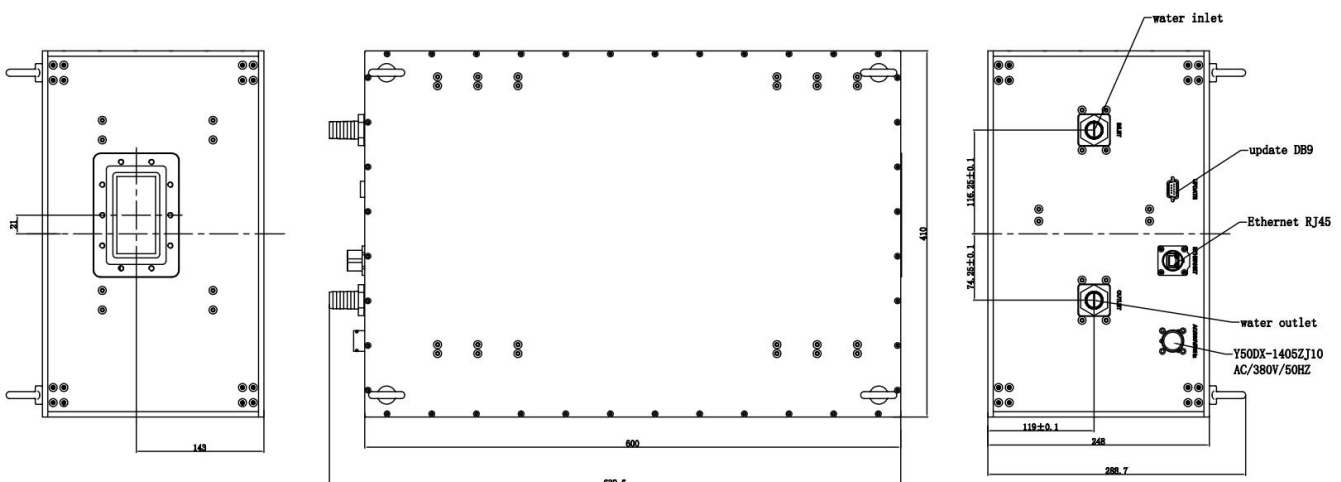
Parameter	Value	Units
Output Connector	WR340	
M&C connectors	RS422 Serial: DB9 Ethernet: RJ-45	
Power Supply Connector	TBD	
Liquid Interfaces	Inlet/outlet: ZFS-08	Coolant temp range: 15~30°C Pressure: 5 bar Liquid flow: 10L/min
Size	639.6*410*248	mm
Weight	≤40	g

Absolute Maximum Ratings:

Parameter	Value
Supply Bias Voltage	TBD
ESD sensitivity (HBM)	Class 0, passed 150V

Outline Drawing:

Unit:mm; Tolerance:±0.1mm



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

Key Features:

Parameter	Advantages
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
Remote control	RS422/LAN
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
Cooling system	Built in Cooling system,forced liquid cooling

Environmental Conditions:

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

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

Ordering Information:

Base Number	Description	Revision
TLPS2450M-3KW	Power Source 2400-2500MHz, P _{sat} :65dBm,Built in liquid cooling	Rev.1.0