

80-1000MHz/30Watts/Rack Mount

Model Number: MCW00810S45A

The MCW00810S45A is a rack-mountable unit incorporating a universal voltage power supply and a built in forced air-cooling system. This amplifier subsystem utilizes LDMOS power device that provides excellent power density, high efficiency, low distortion and wide dynamic range. Due to robust engineering and employment of advanced broadband RF matching networks, combining techniques and qualified components, the amplifier achieves consistent performance with field proven reliability.

FEATURES:

- Instantaneous ultra broadband
- Suitable for CW, AM, and FM modulation type
- Compact and robust design
- Standard front panel manual gain adjust
- Unconditional stability and ruggedness

ELECTRICAL SPECIFICATIONS @ 220VAC, 25°C, 50Ω System

Parameter	Symbol	Minimum	Typical	Maximum	Units
Operating Frequency	BW	80		1000	MHz
Output Power CW @1dB	P ₁	30			Watt
Power gain	P _G		45		dB
Input Power for Rated P _{SAT}	P _{IN}		0		dBm
Input Return Loss	S ₁₁			-10	dB
Harmonics @ P _{OUT} =15W	H		-12		dBc
Spurious Signals	Spur		-55		dBc
Output Power Adjustment Range (@P _{in} =0dBm) n=10,20.....100	P _{out}		n%* P _{sat}		Watt
Operating Voltage (1-phase)	VDC		220		Volt
Power Consumption @ 30W CW	P _D		350		Watt

MECHANICAL SPECIFICATIONS

Parameter	Value	Limits
Dimensions (W x H x D) – Bench Top / Rack Mount	482.6 x 88.1x 445 mm (2U)	Max
Weight	18 [kg]	Max
RF Connectors Input /Output	In: Type-N, Female; Output: Type-N, Female	
Cooling	Built-in internal forced air cooling system	

ENVIRONMENTAL CHARACTERISTICS (Design to Meet)

Parameter	Minimum	Typical	Maximum	Units	Notes
Operating Ambient Temperature	-10		40	°C	
Storage Temperature	-15		45	°C	
Relative Humidity (non-condensing)			95	%	

PROTECTIONS

Input RF drive level without	+5 dBm (Max)
VSWR protection@15W	@ 3:1- PA output power will degrade to a safe operation level, and system will still work. @ >3:1 protection will make system shutdown.
Thermal Overload	Power will Gracefully Degrade, when Ambient Temp >40°C

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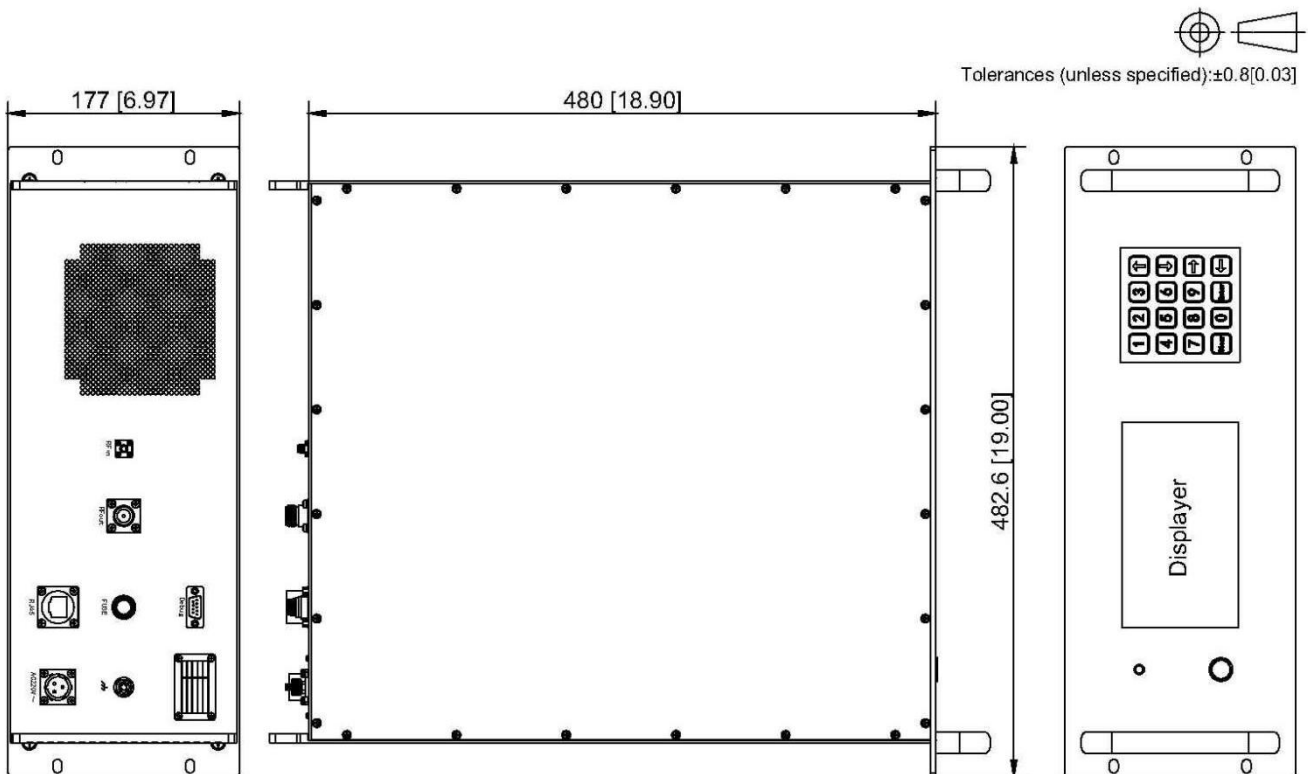
AVAILABLE OPTIONS (Selected options refer to the factory)

	Description	LCD
Status Monitor	LCD	Including FWD/REV Power indication (dBm or Watt scale), ALC On/Off, Standby mode, Fault indication
WAN(standard Ethernet)	Serial management of device	Internet access
RS-232	Serial management of device /local operator access	D-Sub 9-position Male
Gain Adjustment	Controller, Front Panel	Gain Adjustment

I/O CONNECTOR-Monitor Display or RS-232

Pin#	Description	Specifications	LCD
1	Shutdown	Amplifier Disable: TTL Logic Low(<0.7V)	
2	TEMP SENSE	Analog voltage relative to temperature@10mV /°C	
3	Current Monitor	Analog voltage relative to IDD @ 100mV per Ampere	
4	GND	GND	
5	RS-232(-)	Transmit data-R xD	
6	RS-232(+)	Transmit data-T xD	
7	GND	GND	
8	Reserved	Reserved	
9	Reserved	Reserved	

OUTLINE DRAWING (All dimensions in mm)

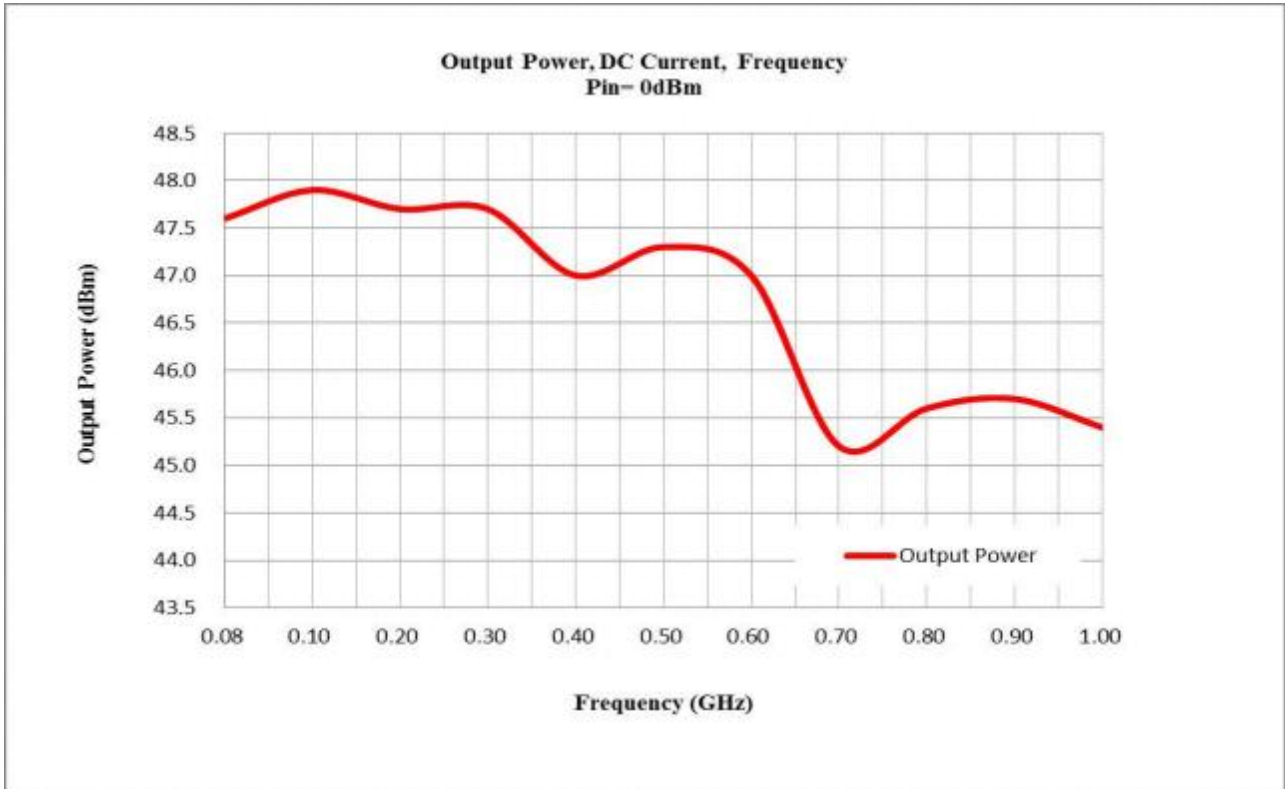


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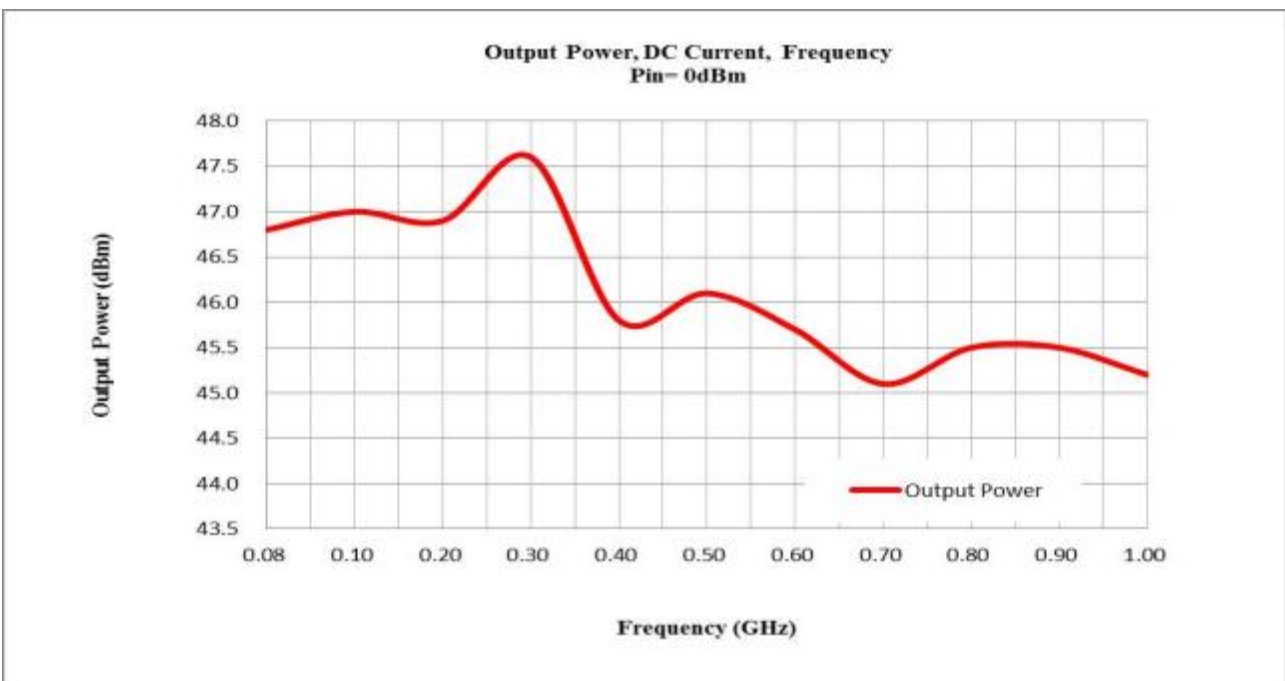
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TYPICAL PERFORMANCE PLOTS (For reference only)

Graph 1: Output Power (Low temp. $-10\pm 3^{\circ}\text{C}$)



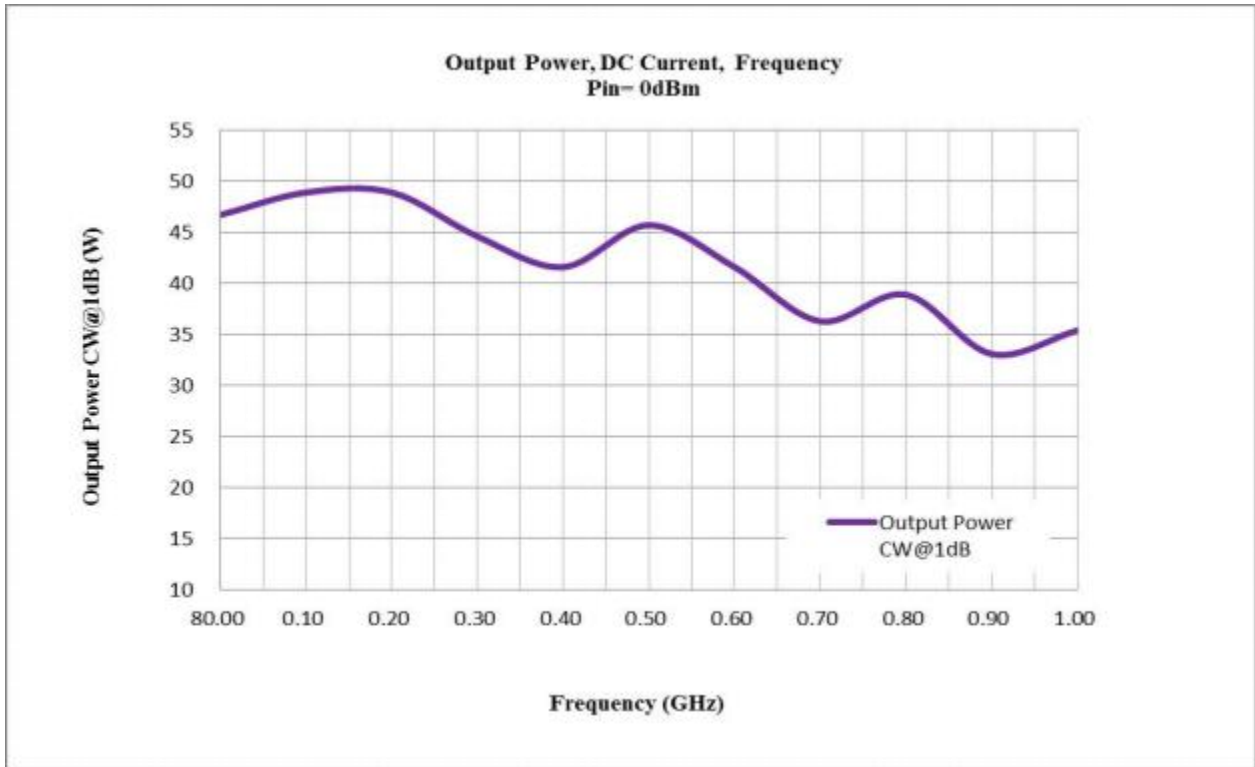
Graph 2: Output Power (High temp. $+40\pm 3^{\circ}\text{C}$)



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Graph 3: Output Power (Normal temp. +25±3°C)



Power Gain:



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Input Return Loss:



Important Note:

This product will be developed upon contract/order. All the above specs are for reference only. Actual product may be different. Please check with Chengdu Microwave Technology Co., Ltd sales team or E-mail to info@cdmicrowave.com if you have any more questions.

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