

◆ Product Description

The MPAR-265400S43 is a 26.5-40GHz, 20W solid state high gain broadband high power amplifier system with state-of-art GaN design technology. Its built-in control and monitoring, with protection functions improve amplifier's reliability & usability. And it can adapt to a variety of different signal modes such as continuous wave, pulse, wide instantaneous bandwidth signal, high-order modulation signal and etc. It is designed for applications, such as 5G & Millimeter Test System.

◆ Features

Frequency Range: 26.5-40GHz	Solid-state Class AB broadband design
Output Power: 42dBm Min., 43dBm Typ.	Suitable for modulated signals test
Gain: 43dB Typ.	Suitable for pulse or CW applications
50 ohm input/output impedance	Small and light weight
Built-in control, monitoring and protection circuits	High reliability and ruggedness

◆ Electrical Specification (T=25°C ± 3°C, VAC =220V, CW, Load VSWR<1.2)

Description	Min	Typ	Max	Unit
Operating Frequency	26.5		40	GHz
Output Saturated Power CW*	42	43		dBm
Input Power for Output Saturated Power	-2	0	4	dBm
P1dB CW*	37	40		dBm
Gain @ Pin= 0dBm		43		dB
Gain Flatness @ Pin=0dBm		±3.5	±4.5	dB
Spurious Signals @ Pin=0dBm			-60	dBc
Small Signal Gain @ Pin= -30dBm		48		dB
Small Signal Flatness @ Pin= -30dBm		±4.5		dB
Input VSWR		2		/
Output VSWR		2.5		/
Supply Voltage (47~61Hz) /Single-Phase	180	220/50Hz	260	V
Power Consumption @ Pout =42~43dBm		450	550	W

Note*: Fundamental Power, Harmonics are excluded

◆ Environmental Specifications (Design Goal)

Operation Temperature*1	-10	45	°C
Storage Temperature Range	-25	75	°C
Relative-Humidity		95	%
Altitude*2	N/A		
Vibration/Shock*2	N/A		

Notes *1: Operation Temperature can be extended to -40~65°C, Contact Sales for update.

Notes *2: Altitude /Vibration are designed with considerations, but without tests and experiments. Contact Sales for experimentally verified.

◆ Limits

Pin<10 dBm(Input RF level without damage)	Load VSWR<1.5:1 (50 Ohm)
Pin=-5 dBm	Load open or short for up to 10 minutes.
Pin=0 dBm	Load VSWR<3:1 for continuous operation
Thermal Degradation	60°C

◆ DC Interface Connector (D-Sub 9-Pin, Male)

Pin #	Description	Specifications
1	GND	Ground
2	Shutdown	Amplifier Disable: TTL Logic High (3.3V) (Internally Pulled-Low)
3	Temperature Alarm	Abnormal: Logic High (3.3V) (Internally Pulled-Low)
4	Fan Alarm	Abnormal: Logic High (3.3V) (Internally Pulled-Low)
5	Power Amplifier Alarm	Abnormal: Logic High (3.3V) (Internally Pulled-Low)
6~9	N/C	No electrical connected, Reserved

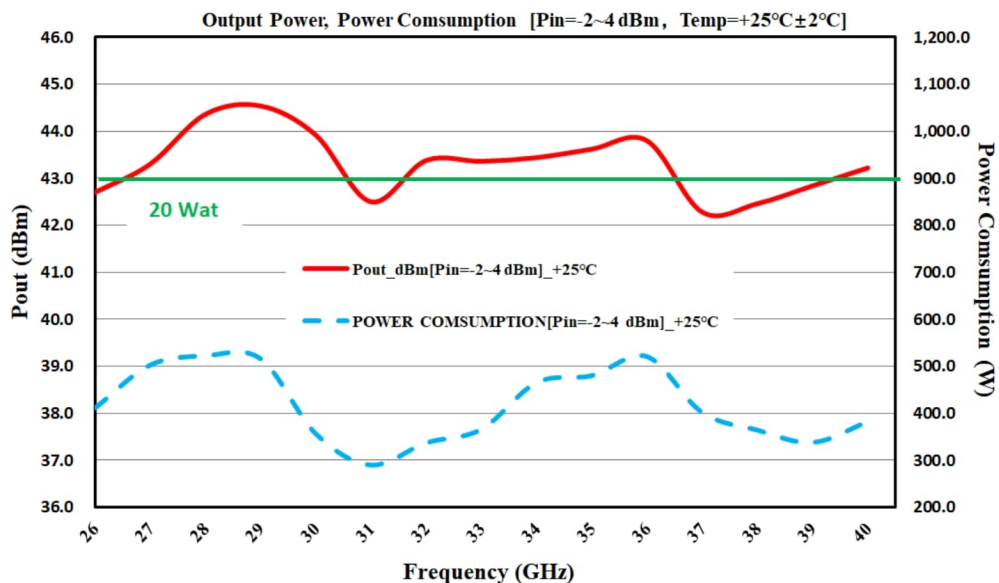
◆ Front Panel LED Indicators

Description	Specifications
RUN	GREEN: Internal DC supply turn on, Amplifier is awoken and ready to work.
TEMP	RED: Temperature is over-limited, Amplifier shutdown
FAN	RED: Fan is abnormal, Amplifier shutdown
ALARM	RED: Amplifier is abnormal, Amplifier shutdown, Connect D-Sub 9 to debug

◆ Plotted and other Data

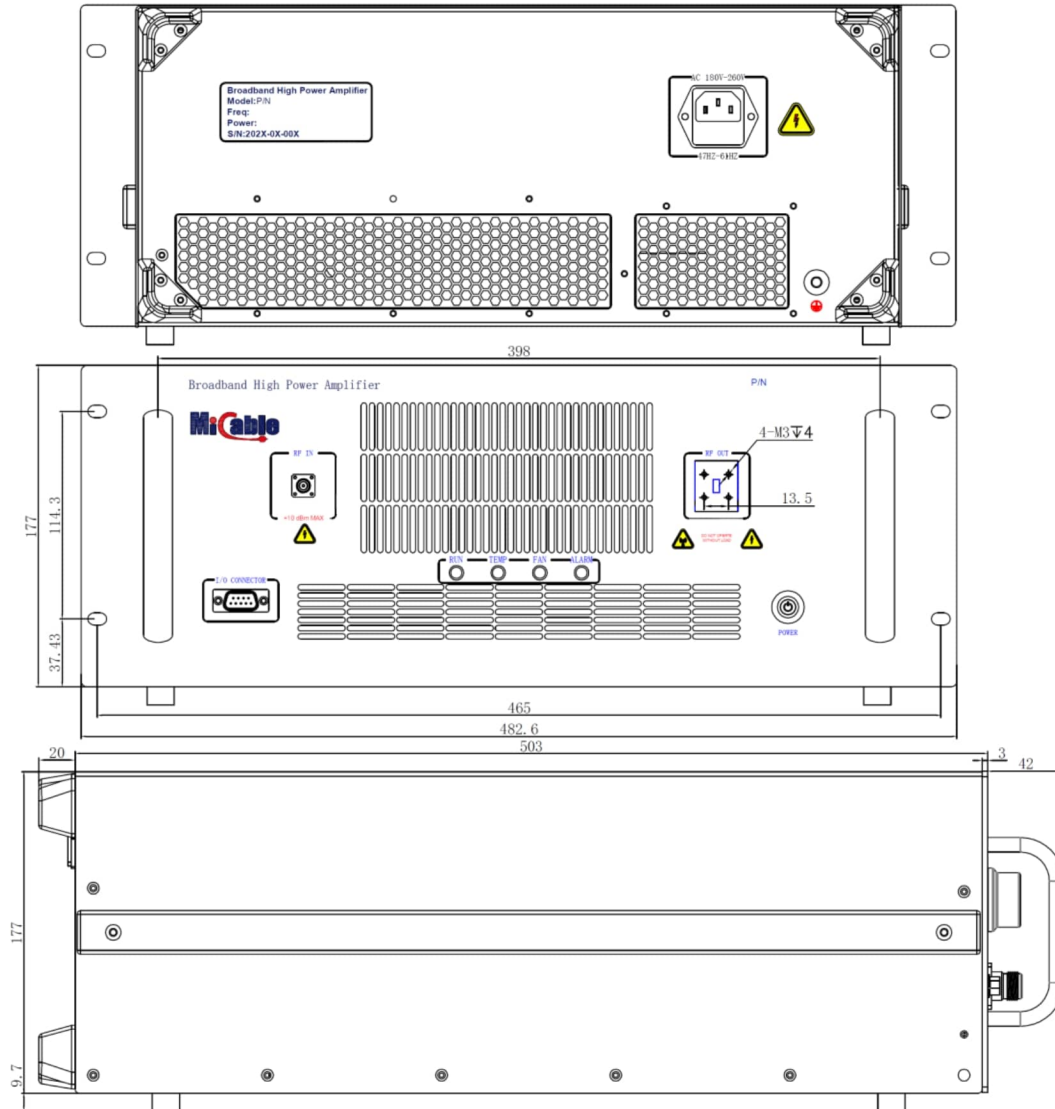
Notes:

1. All specifications are guaranteed at +25 °C case operating temperature.
2. Handle only in approved ESD Workstation.
3. Unit is cooled by air-forced condition.



Pout @ Pin=-2~4dBm (CW, Load VSWR≤1.2, 25°C), for Reference Only (Shipped Products)

◆ Outline Drawings (mm)



◆ Mechanical Definition

Dimensions (B,H,D) mm	482.6 x 177 x 503 (4U)
Weight (Kg)	25 (Max)
RF-Input (Front panel)*	2.4mm, Female
RF-Output (Front panel)*	WR-28 , Waveguide
DC Connector	Dsub-9 Male
AC Connector	3 WIRE A/C Power Entry

Note* Rear panel optional.