MTPA20218343432

Broadband Power Amplifier

1. Product Description

MTPA20218343432 is an air-cooled, broadband, solid state amplifier. This rack mount amplifier is based on Gan technology. It provides high gain, high output power, high dynamic range, and good linearity. The front panel gain control permits the operator to conveniently set the desired output level. The LCD display shows operation status including internal temperature, current and etc. Self-protection functions including thermal overload protection, excessive current flow protection and fan detection are implemented. This unit is suitable for Test & Measurement, SATCOM, EW

CAUTION

The amplifier is ESD sensitive. Follow the procedure for handling ESD sensitive devices when assemble the amplifier into customer's chassis.

Use caution when handle the amplifier. Do not apply excessive force to the input and output connectors.

WARNING

The amplifier has a maximum input power level of +5 dBm. Use caution to avoid overdriving the amplifier.
When powered on, the amplifier is capable of supplying microwave power levels that can cause injury. Assure that all cables, attenuators, terminations and equipment connected to the output of the amplifier are not damaged or impaired.

2. Specification

GENERAL SPECIFICATION

Parameter	Unit	Min.	Typical	Max.
Frequency	GHz	2		18
Power Gain (@Psat)	dB	-	43	-
Gain Adjustment	dB	-	20	-
Gain Flatness	+/-dB		5	
Psat	dBm	-	43	-
INPUT Return Loss	dB	-	-	-10
OUTPUT Return Loss	dB	-	-10	-
Maximum input power	dBm	-	0	5
Harmonic	dBc	-	-15	-
Spur	dBc	-	-60	-

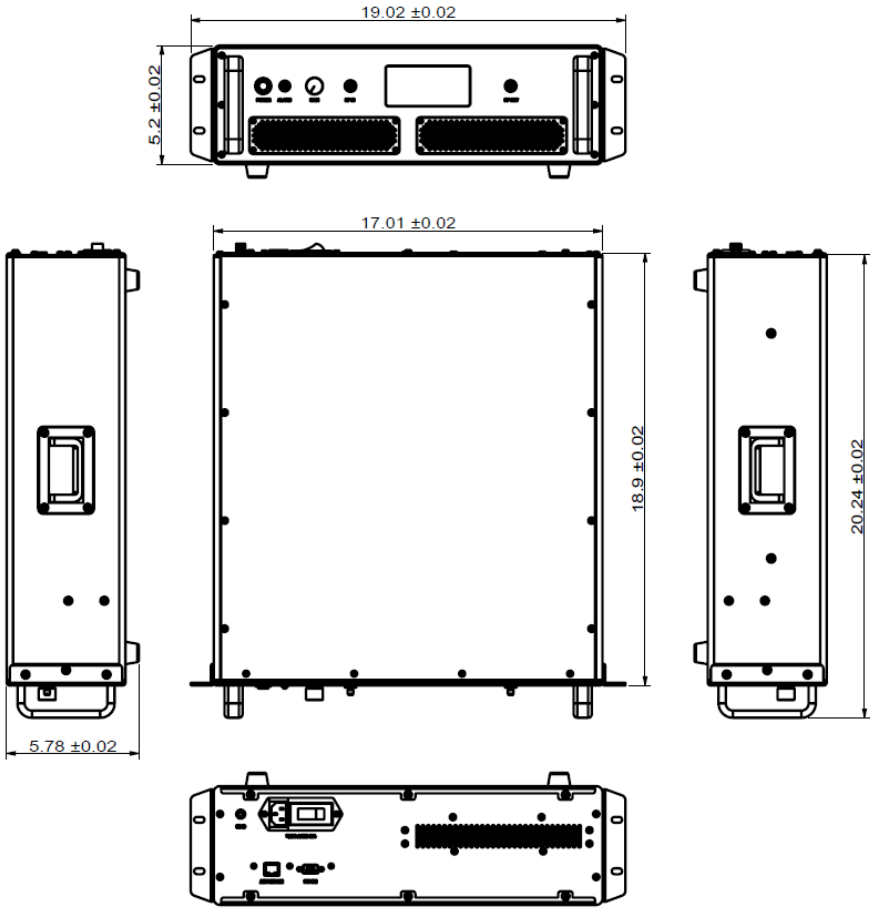
ENVIRONMENTAL SPECIFICATIONS

Parameter	Unit	Min	Typical	Max
Voltage	V(AC)	110	220	240
Current	A	-	1.2	-
Operating Temperature	℃	0	-	50
Non-Operating Temperature	℃	-20	-	65

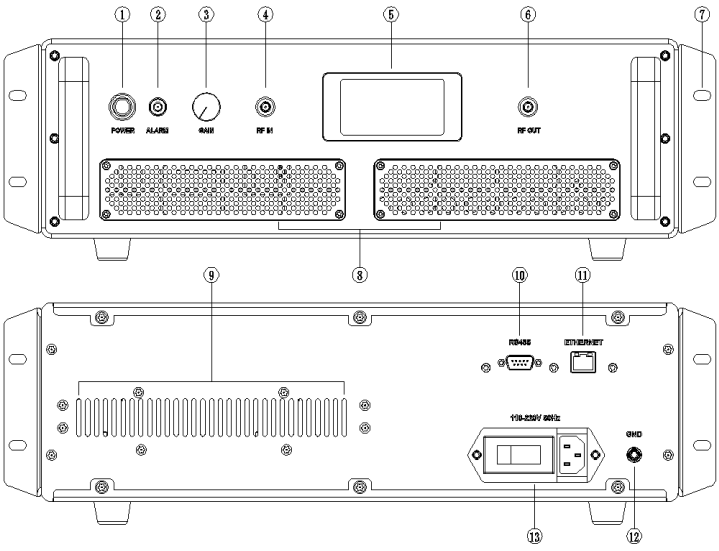
MECHANICAL SPECIFICATIONS:

Parameter	Unit	Min	Typical	Max
Dimensions LxWxH	inch		18.90× 19 ×5.20	
Weight	Kg	-	12	-
RF Input&Output		SMA-F		

MODEL APPEARANCE (inch)



PANEL LAYOUT



FUNCTION DESCRIPTION

① Main power switch

After connecting the amplifier input and output cables properly, turn on the main power switch and the amplifier will start working

② Alarm indicator

Red light indicates that the amplifier is in fault and should be shutdown.

③ Gain control knob

Turn the knob clockwise, internal attenuation will decrease and gain will increase.

④ RF input signal connector（SMA-F）

Amplifier input, connecting with the input signal.

⑤ LCD

Display the amplifier's working status and alarm information in real time.

⑥ RF output signal connector（SMA-F）

Amplifier output, before connecting, must make sure that the output is properly loaded.

⑦ Front panel mounting bracket

⑧ Cooling fan inlet

⑨ Cooling fan outlet

⑩ RS-485 interface

⑪ ETHERNENT interface

⑫ Chassis ground post

⑬ AC power supply port、fuse and switch

3. Operational Instructions

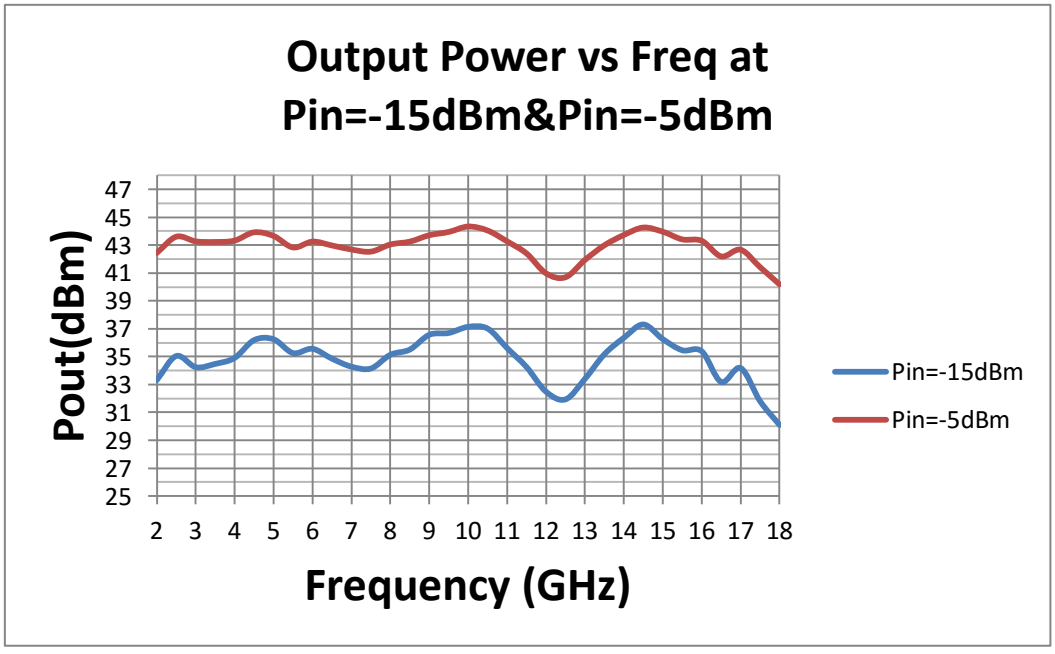
3.1. Turn on the amplifier

Connect the input and output of the amplifier with DUT, test instruments or accessories properly.

Note: To avoid damage to the DUT, please connect a proper attenuator at the output of the amplifier. Carefully calculate the attenuation value based on the power handling capability of the device, which is connected to the output of the amplifier.

Turn on the amplifier following the suggested steps:

(1)Connect the AC power line into the AC socket in the back panel
(2) Switch on the back panel AC power
(3) Switch on the front panel main power
(4) The LCD screen will startup and display the amplifier status.
(5) The amplifier will be ready for operation.
(6)The MAX input power is +5dBm when the attenuation is minimum. The amplifier could rate out the maximum power at 0dBm input except serval freq. near 12GHz and 18GHz.



3.2. Set the gain attenuation of amplifier

Follow the steps below:

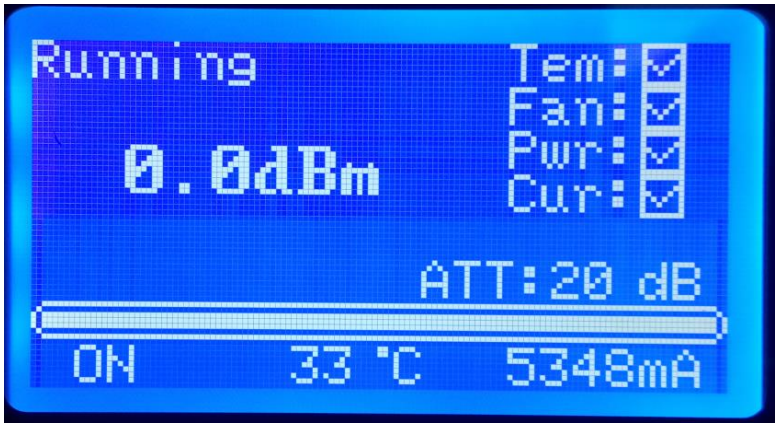
(1) After the amplifier is turned on normally and the LCD displays correct status information, rotate the gain control knob counter-clockwise to increase the attenuation value of the amplifier.

(2) Rotate gain control knob clockwise to decrease the attenuation value of the amplifier.

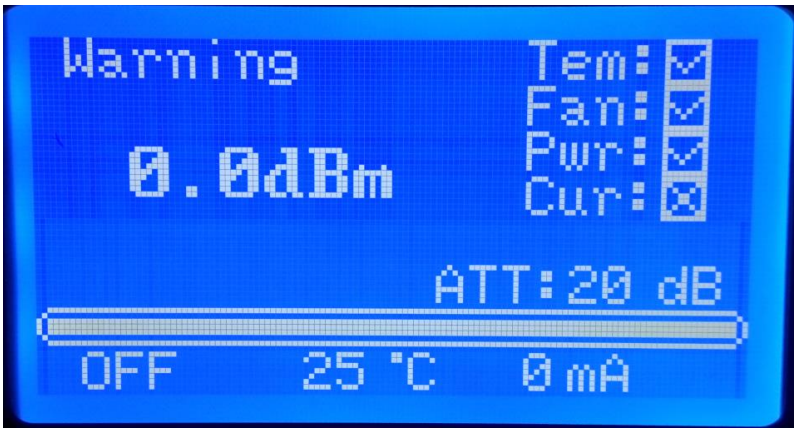
Note: The attenuation of the amplifier is adjustable between 0 ~ 20dB.

3.3. The amplifier protection function Description

MTPA20218343432 amplifier has self-protection capabilities. When the amplifier works properly, LCD will display ‘Running’ on the left corner.



In the event of over-temperature, over-current and/or fan failure, the amplifier will be locked in the protection mode and alarm information will be displayed on the LCD (see below image).



Notes：

Temperature warning: *please check the environment temperature, make sure it doesn't exceed the suggested operational temperature.*

Power warning: *please check whether the output is mismatch or opened, make sure the output port is properly connected in a good load.*

Current warning: *please check the input power to ensure it is within the maximum. If the warning sign remain after the amplifier restarts, please turn off the machine and send it back to the manufacturer.*

Fan warning: *please switch off the amplifier and check the fan condition. Ensure it is unblocked. If the warning sign remain after the amplifier restarts, please shutdown the amplifier and send it back to the manufacturer.*