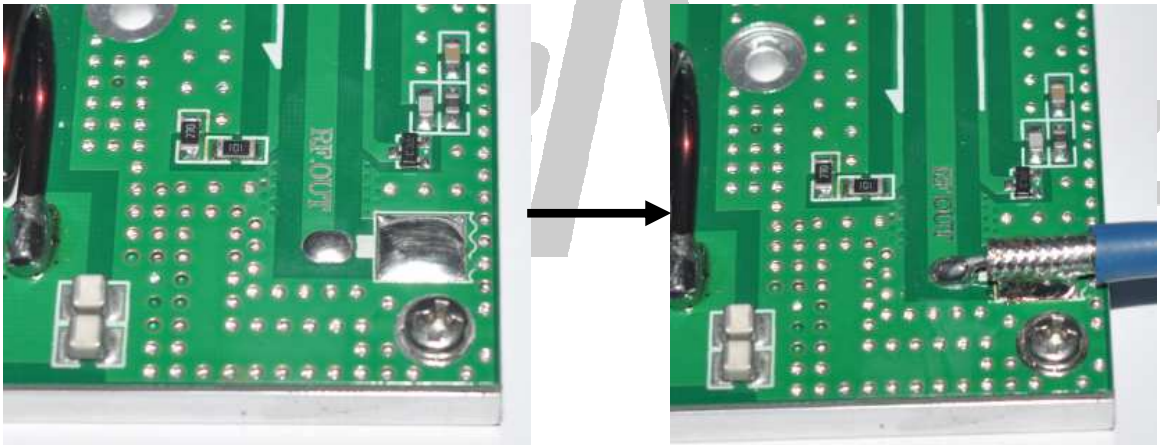
Application Note

How to connect the amplifier board with antenna?

- A short coaxial cable is needed, which one end is N type connector, the other end is coaxial cable with 50 Ohms impedance (Fig 1).

(Fig 1)

- One end to be soldered to **RF OUT** on amplifier board. The other end to connect with the antenna. (Fig 2)



(Fig 2)

How to use heatsink?

- Heatsink is required for a all amplifier boards of this series. The material should be made of aluminum or alloy. Please note the heatsink should be,
  (1) Large enough.
  (2) Reasonable structure.
  (3) Be smooth enough of contact surface with the pallet, which to ensure good contaction.
  (4) Set the cooling fan on it.

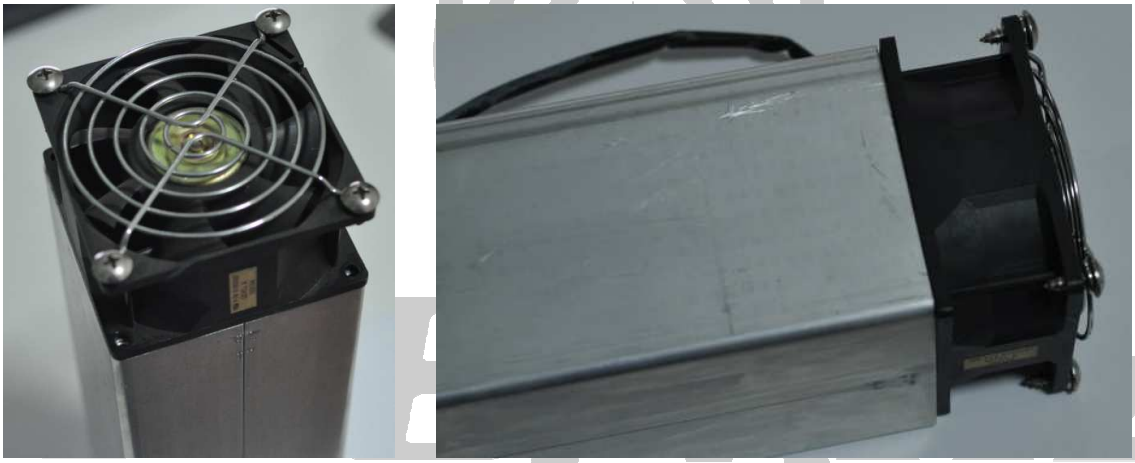
Above all are important points to ensure the temperature of the amplifier board is under control, otherwise the control board will give alarm of high temperature, thus result in automatically turn off.

- Example

(1) Heatsink (Fig 3)

(Fig 3)

(2) To set cooling fan on the heatsink. (Fig 4)



(Fig 4)

(3) When the contact surface is flat and smooth enough, coat a layer of heat conduction silicon grease on it. (Fig 5)

(Fig 5)

(4) Put the amplifier board on the heatsink carefully, makes sure they are in good contaction, and then use

screws to lock them tightly. (Fig 6)

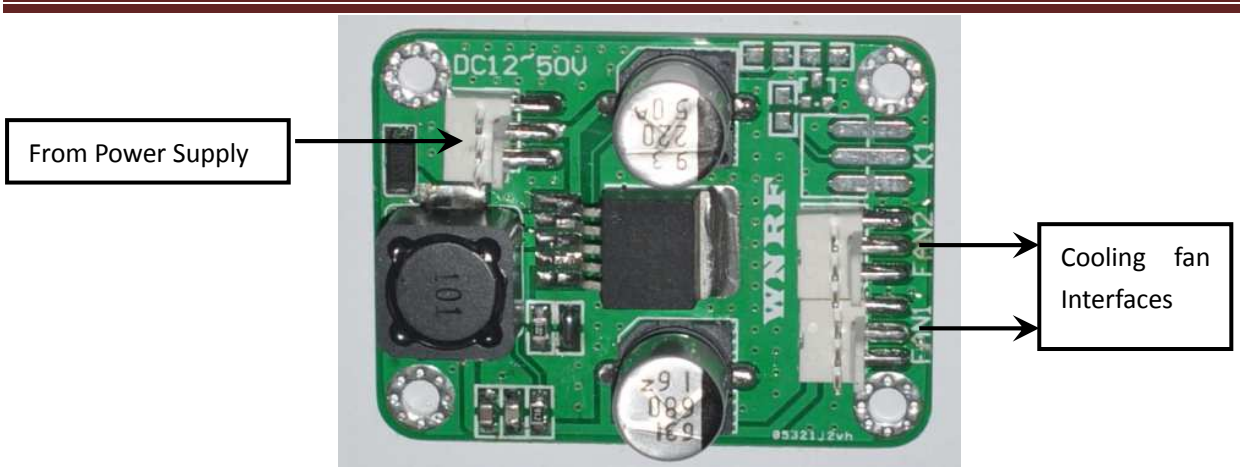
(Fig 6)

How to use cooling fan?

- The cooling fan is also required while using the heatsink. (Fig7)

(Fig 7)

- Cooling fan interfaces are available on the control board. The input voltage of fan is DC 12V and the current should be no more than 1A, otherwise an expand flow circuit board is needed to enlarge the current. Check our board for reference. (Fig 8)



(Fig 8)

- Illustration when finished. (Fig 9)

(Fig 9)

Safety Attentions

Please be aware that high power radio transmitting devices threaten safety risk on human while testing/operating. Make sure that one is capable of relative knowledge and skills to prepare for any emergency. Whether its power supply part or RF output part, all can cause harm to one's body, even one's life. Before POWERING ON the unit, please ensure that,

(1) One is capable of relative skills and experiences.
(2) Known aware that high power radio devices may disturb other electronic equipments and some kind of disturbing may cause server results. Please inquire your local radio administration to abide the regulations.
(3) Antenna/dummy is in good condition and make sure they are connected correctly with the transmitting devices.
(4) There is no remnant or other mental parts on the board.
(5) Keep independent personnel away from the testing spot, especially the children.

Our advices

(1) Use a dummy load to test before using the antenna.
(2) Set at low power to test, and then increase the power level gradually.
(3) While operating at high power, note to check if the antenna, coaxial cable are matched with the power.
(4) If SWR is too high, the first thing one can try is to adjust operating frequency and check if frequency and antenna are better matched.