

RF power amplifier board

The PCB board for the peripheral circuit of the power module, with MITSUBISHI RA or M series, S series module to Toshiba's normal work, the board is mainly for 1-5W handheld radios developed with automatic transceiver power conversion circuit, increasing the transmission power so that the walkie talkie walkie talkie with a car platform, make communication more like strangers. More clearly.

Technical parameter:

Input power: 1-5W

Output power: 10-80W (depending on module)

Input voltage: DC 10-13.8V

Operating frequency: 130-170, 400-470 (depending on module)

Insertion loss: -1.5DB

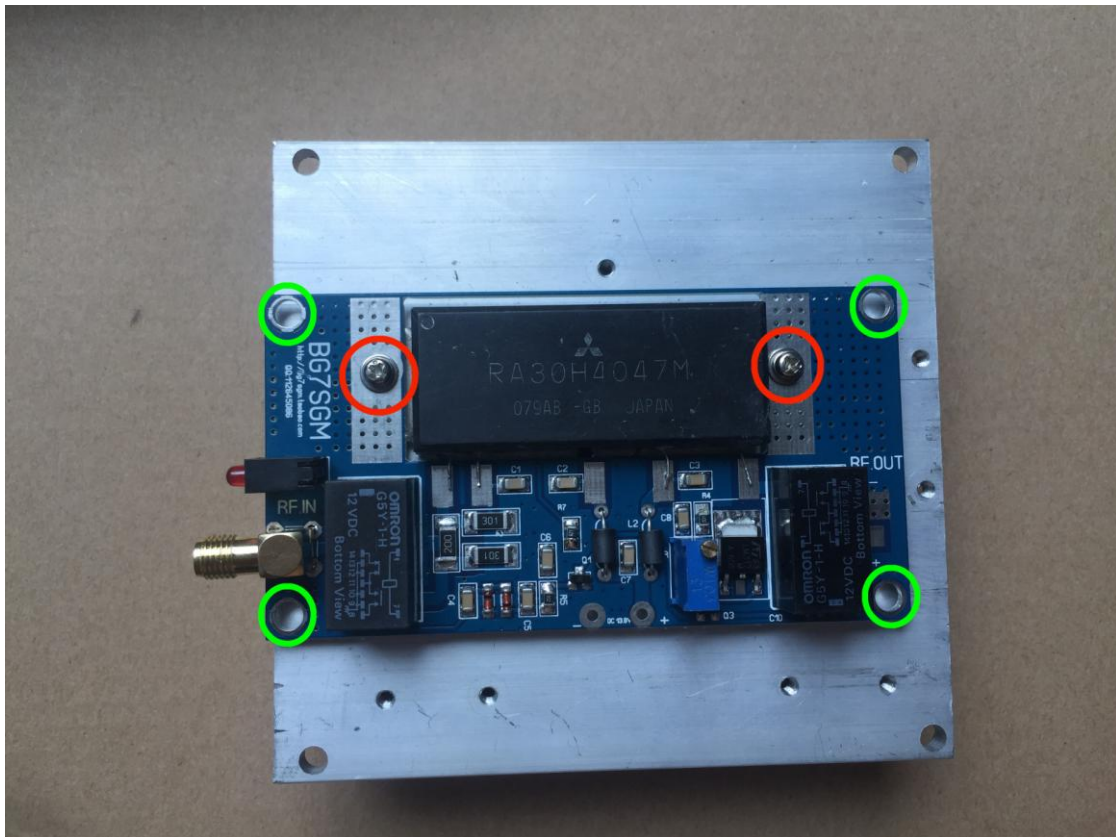
Bobbi: in less than 1.5

Appearance size: 94*50*1.6MM

Installation and commissioning methods:

Before installing, you should prepare a radiator larger than the PCB board. The thickness should be more than 25MM.

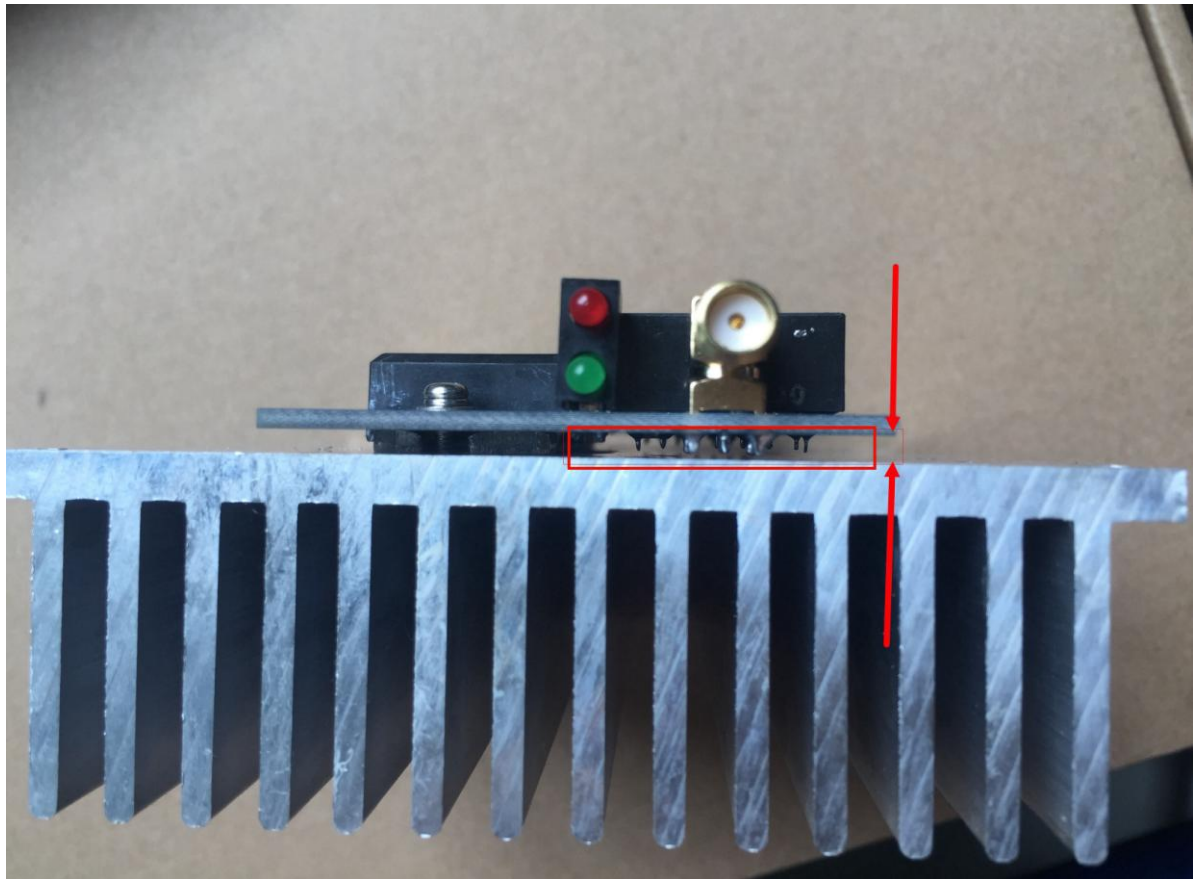
As follows: (1)



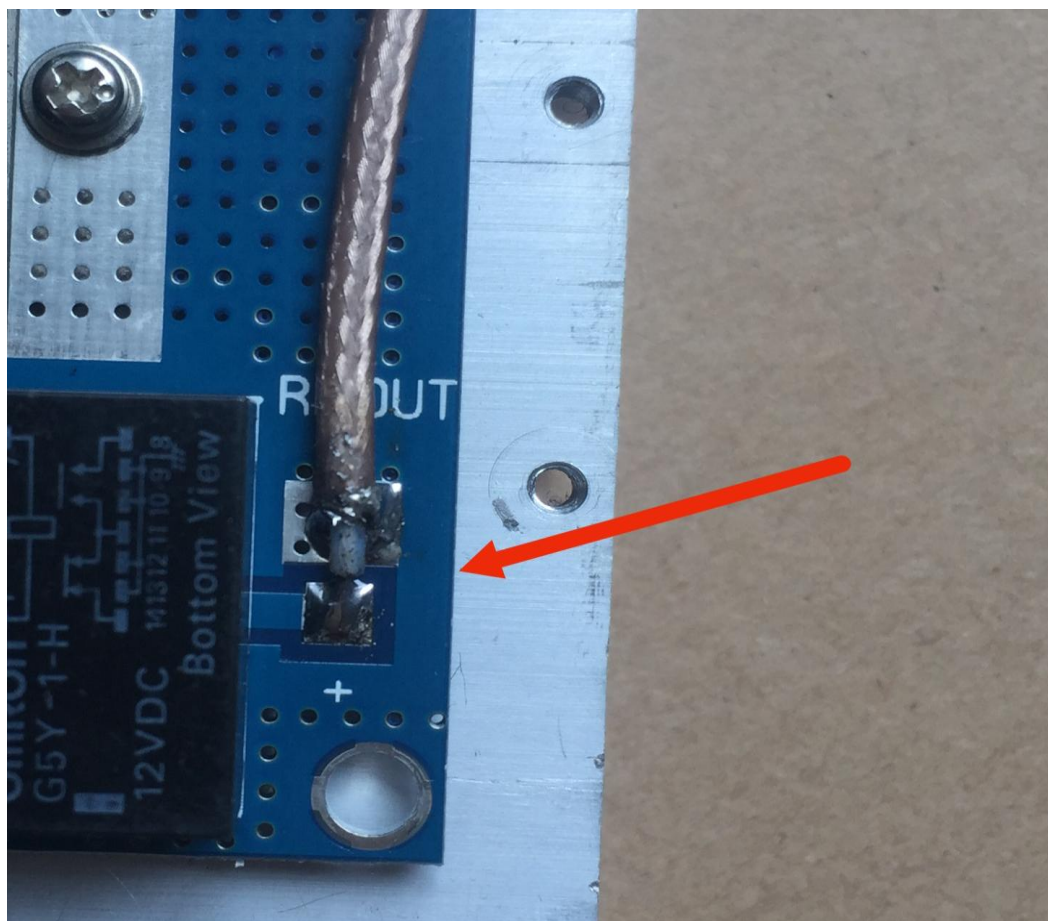
The red mark position is the two screw holes of the fixed power amplifier module and the PCB, as well as the negative pole of the module. It must be fixed with screws when installing, otherwise the module doesn't work.

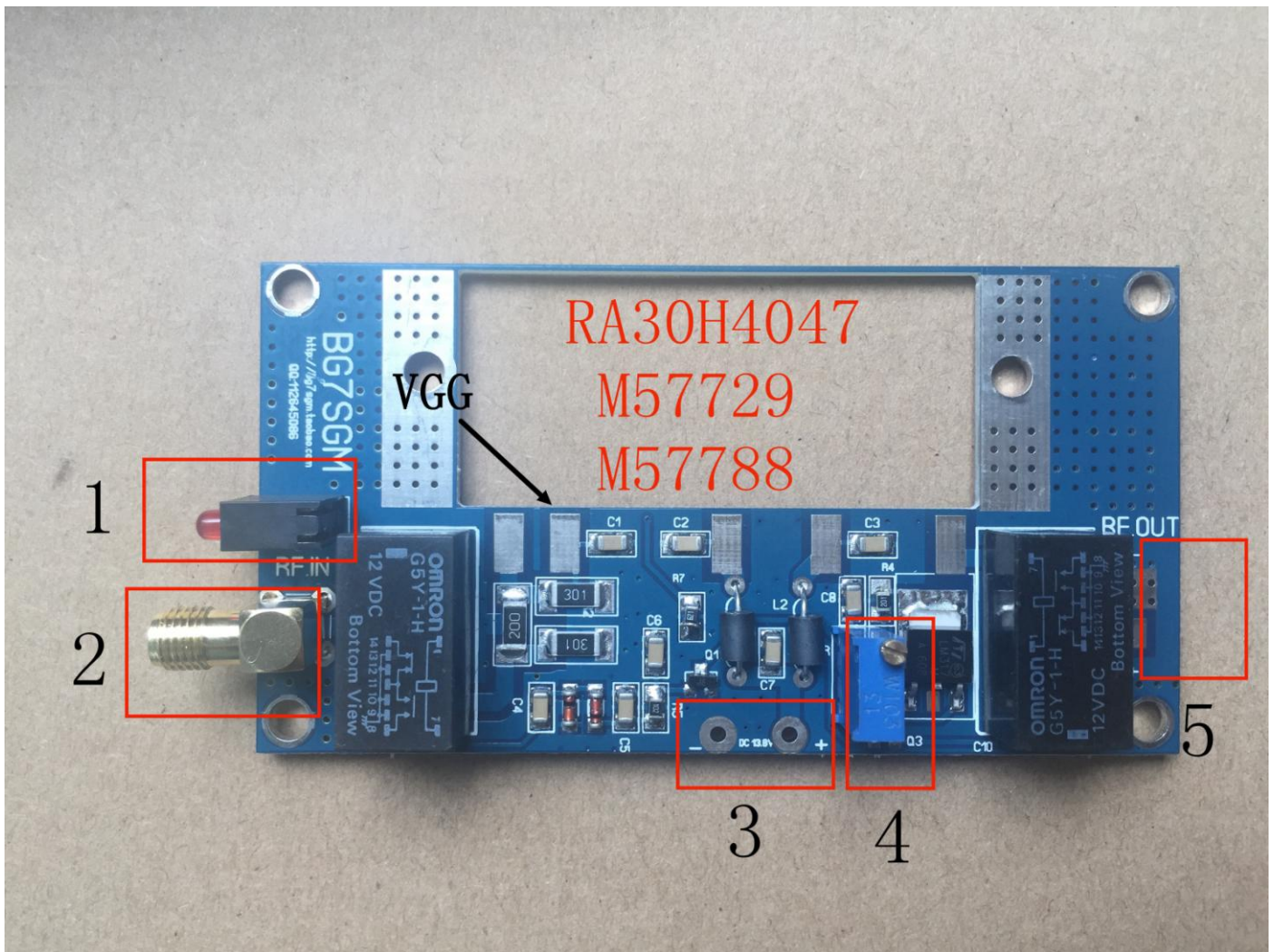
The green mark is the screw hole of the fixed PCB board, also is the GND of the PCB board, the high frequency circuit is easy to self excitation, and in order to prevent the self excitation, the proposal is fixed on the radiator with a screw, and the PCB board is added to the ground, thereby reducing the phenomenon of self excitation.

When screws are screwed, pay attention to the distance between the bottom element pin and the radiator, so that the component pin can not touch the radiator to avoid short circuit (Figure two below)



The following figure (three) is the welding of the feeders at the power output (feeders are supplied by themselves)





- 1: electric indicator (green) emission indicator light (red)
- 2: 1-5W power input (external stud hole SMA)
- 3: DC-12-13.8V power interface
- 4: module, second pin (VGG) voltage and power adjustment, clockwise voltage rise, counterclockwise decrease
- 5: power output interface (upper, lower, right), refer to figure three

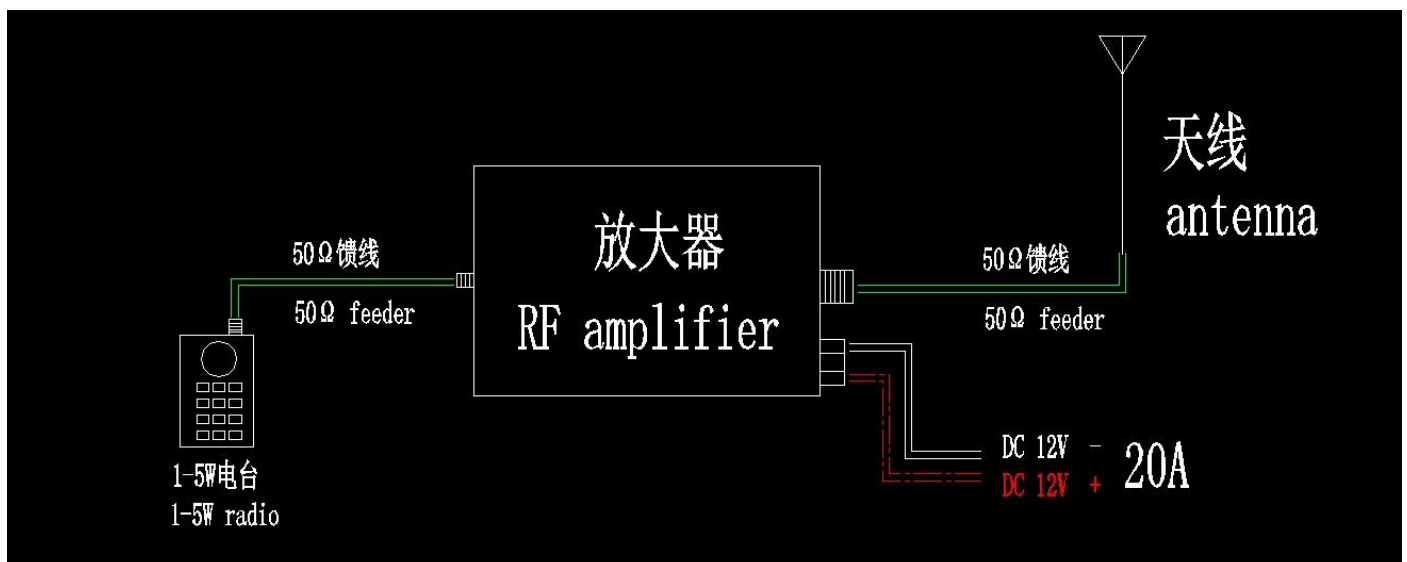
Debug:

RA series modules must be removed from the PCB board before debugging, and all the pins can be welded until the voltage is adjusted.

The RA module is second from the left foot (VGG) working voltage is between 2.3-3.3V (the

higher the voltage output power is larger), debugging before the walkie talkie and PCB board connected, then ready multimeter, the multimeter to DC voltage, then the red pen is connected to the PCB board module second feet (VGG), a black pen is connected to the anode, and then press the launch button interphone, and then adjust the board of the blue potentiometer (clockwise becomes larger and smaller) can be read by the value of the voltage meter million.

M or S module, the working voltage is 10-14V, can be directly mounted to the module PCB board, adjusted to 10-12V can.



The working principle is shown above (five)