

YP06A Module Specification Document

V1.1
2025/11/5



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Document Preparation/Revision/Revocation Checklist

version number	Main changes	state	time	remarks
V1.1	first draft	first publish	2025/11/6	



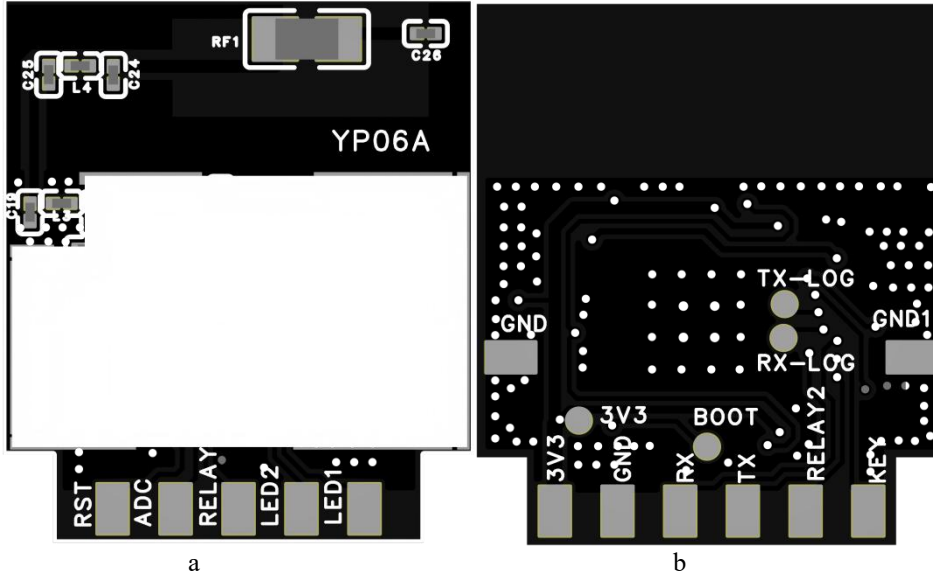
catalogue

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I. Overview

The YP06A module supports Zigbee 3.0 and BLE 5.0 protocols, featuring 132KB RAM, 192KB ROM, 1Kb eFuse, and a maximum clock frequency of 144MHz. Figure 1(a and b) below shows the module schematic diagram.



graph 1

2. Interface Description

(1) PIN interface

The 11PIN pad interface specifications are detailed in Table 1 below:

Table 1

Module Pin	Pin name	IO type	description
1	3V3	P	Module power input, typical application: 3.3V supply
2	LED1	I/O	Main chip GPIO30, PWM0
3	GND	P	Module power ground
4	LED2	I/O	Main chip GPIO29, PWM4
5	RX	I/O	Main chip GPIO18, UART RX
6	RELAY1	I/O	Main chip GPIO22
7	TX	I/O	Main chip GPIO17, UART TX
8	ADC	I/O	Main chip GPIO21
9	RELAY2	I/O	Main chip GPIO20
10	RST	/	Main chip PU_CHIP pin, internally pull-up module, high-
11	KEY	I/O	Main chip GPIO19

(2) Test points

As shown in Figure 1(b), the test points on the back of the module are used for product manufacturing testing and debugging purposes, as detailed in Table 2 below:

Table 2

order number	Pin name	description
1	3V3	VDD, powered by a 3.3V module.
2	GND/GND1	GND, module power ground.
3	RX-LOG	The main chip's GPIO15 (RX) is dedicated to flashing and debugging
4	TX-LOG	The main chip's GPIO14 (TX) is dedicated to programming and debugging
5	BOOT	Main chip GPIO31 (Boot): Upon power-on, the initial low-level signal initiates normal operation mode. The initial high voltage from the power supply activates Flash programming

III. Key Parameters

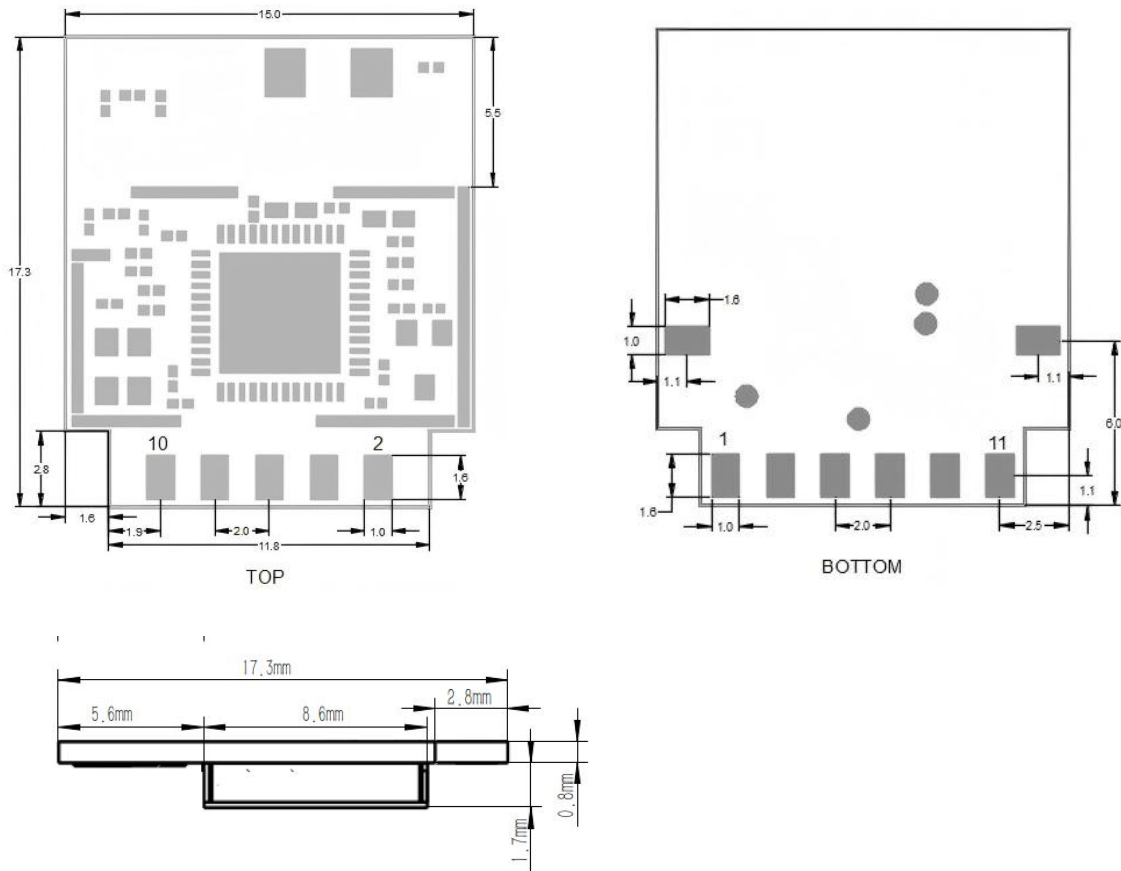
See Table 3 below for the main parameters of the module.

Table 3

characteristic	parameter	least value	representative value	crest value	test condition
supply voltage	VDD	2.7V	3.3V	3.5V	T=25°C The main chip is equipped with built-in Flash memory, with a
operating temperature range	T _{opr}	-20°C	25°C	85°C	VDD=3.3V
Output voltage high	V _{OH}		0.9VDD		VDD=3.3V, T=25°C
Output voltage low	V _{OL}		0.1VDD		VDD=3.3V, T=25°C
Input voltage high	V _{IH}	0.7VDD			VDD=3.3V, T=25°C
Input voltage low	V _{IL}			0.3VDD	VDD=3.3V, T=25°C
RF TX	mA		45		VDD=3.3V, T=25°C, 14dBm
RF RX	mA		3.5		

IV. Mechanical Dimensions

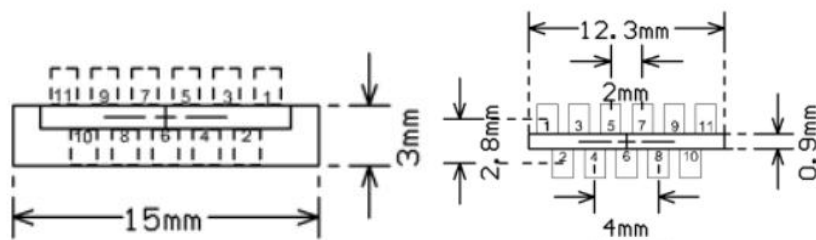
Refer to Figure 2 below for the module's mechanical dimensions.



graph 2

V. Packaging

Refer to Figure 3 below for details. PCB encapsulation is recommended.



(a) Double-sided PCB Top clearance zone (b) Double-sided PCB Bottom (mirror image) (a) Double-sided PCB Top clearance zone (b) Double-sided PCB Bottom (mirror image)
graph 3

VI. Antenna

(1) Antenna type

The YP06A module is a surface-mount ceramic antenna.

(2) Antenna Description

To maximize the radiation performance of the antenna, the following recommendations are advised:

① The spatial three-dimensional distance between the module antenna area and metal components of user products (such as housing positioning screws, power supply wires, signal conductors, hardware parts, etc.) must be at least 6–15 mm.

② The user's PCB board must not have traces or copper-clad layers in the 6mm area directly beneath the module antenna region and its surroundings.

③ The module is positioned at one corner or side of the product, with the antenna area facing outward toward the user.

7. Contact Us

Company website:
Business and Technical Support: 15996846172

8.The others information

FCC ID : 2BOSO-YP06A

IC ID : 33844-YP06A

HVIN : YP06A

FCC Statement

FCC standards: FCC CFR Title 47 Part 15 Subpart C Section 15.247

A: This device complies with part 15 of the FCC Rules. Operation is subject to the following two

conditions: (1) This device may not cause harmful interference, and (2) this device must accept any

interference received, including interference that may cause undesired operation.

B: Any Changes or modifications not expressly approved by the party responsible for compliance could

void the user's authority to operate the equipment.

C: Note: This equipment has been tested and found to comply with the limits for a Class B digital device,

pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against

harmful interference in a residential installation. This equipment generates, uses and can radiate radio

frequency energy and, if not installed and used in accordance with the instructions, may cause harmful

interference to radio communications. However, there is no guarantee that interference will not occur in a

particular installation. If this equipment does cause harmful interference to radio or television reception,

which can be determined by turning the equipment off and on, the user is encouraged to try to correct the

interference by one or more of the following measures:

—Reorient or relocate the receiving antenna.

—Increase the separation between the equipment and receiver.

— Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

—Consult the dealer or an experienced radio/TV technician for help.

FCC Radiation Exposure Statement

The modular can be installed or integrated in mobile or fix devices . This modular cannot be installed in any

portable device if without further certification such as C2PC with SAR. This modular complies with FCC

RF radiation exposure limits set forth for an uncontrolled environment. This transmitter must not be

co-located or operating in conjunction with any other antenna or transmitter. This modular must be installed

and operated with a minimum distance of 20 cm between the radiator and user body.

If the FCC identification number is not visible when the module is installed inside another device, then the

outside of the device into which the module is installed must also display a label referring to the enclosed

module. This exterior label can use wording such as the following: "Contains Transmitter Module FCC ID:

2BOSO-YP06A Or Contains FCC ID: 2BOSO-YP06A"

The devices must be installed and used in strict accordance with the manufacturer's instructions as described

in the user documentation that comes with the product.

Any company of the host device which install this modular with modular approval should perform the test of

radiated & conducted emission and spurious emission,etc. according to FCC part15B Class B requirement,

Only if the test result comply with FCC part 15B Class B requirement, then the host can be sold legally.

When the module is installed inside another device, the user manual of the host must contain above

Paragraphs A, B, and C warning statements.IC STATEMENT

A: This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation,

Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject

to the following two conditions:

- (1) This device may not cause interference.
- (2) This device must accept any interference, including interference that may cause undesired operation of the device

B: Cet appareil contient des émetteurs / récepteurs exemptés de licence conformes aux RSS (RSS)

d'Innovation, Sciences et Développement économique Canada. Le fonctionnement est soumis aux

deux conditions suivantes :

- (1) Cet appareil ne doit pas causer d'interférences.
- (2) Cet appareil doit accepter toutes les interférences, y compris celles susceptibles de

provoquer un fonctionnement indésirable de l'appareil.

IC Radiation Exposure Statement

This modular complies with IC RF radiation exposure limits set forth for an uncontrolled environment. This transmitter must not be co-located or operating in conjunction with any other

antenna or transmitter. This modular must be installed and operated with a minimum distance of 20

cm between the radiator and user body. Cette modulaire doit être installé et utilisé à une distance

minimum de 20 cm entre le radiateur et le corps de l'utilisateur.

If the IC number is not visible when the module is installed inside another device, then the outside

of the device into which the module is installed must also display a label referring to the enclosed

module. This exterior label can use wording such as the following:

“Contains IC: 33844-YP06A”

when the module is installed inside another device, the user manual of this device must contain

Above paragraph A&B warning statements .

The devices must be installed and used in strict accordance with the manufacturer's instructions as

described in the user documentation that comes with the product