Producet Name:2.4G wireless module
Model No.:TYD-ARF2498

OEM/Integrators Installations User Manual

(Note:The module is limited to OEM installation ONLY;The OEM integrator is responsible for ensuring that the end-user has no manual instructions to remove or install module)

1、General Description

TYD-ARF2498 2.4G Wireless module low power consumption ,Widely used in wireless mouse ,Smart Home and so on.

2、Characteristics

Working voltage . . . . . +1.9V～+3.6V

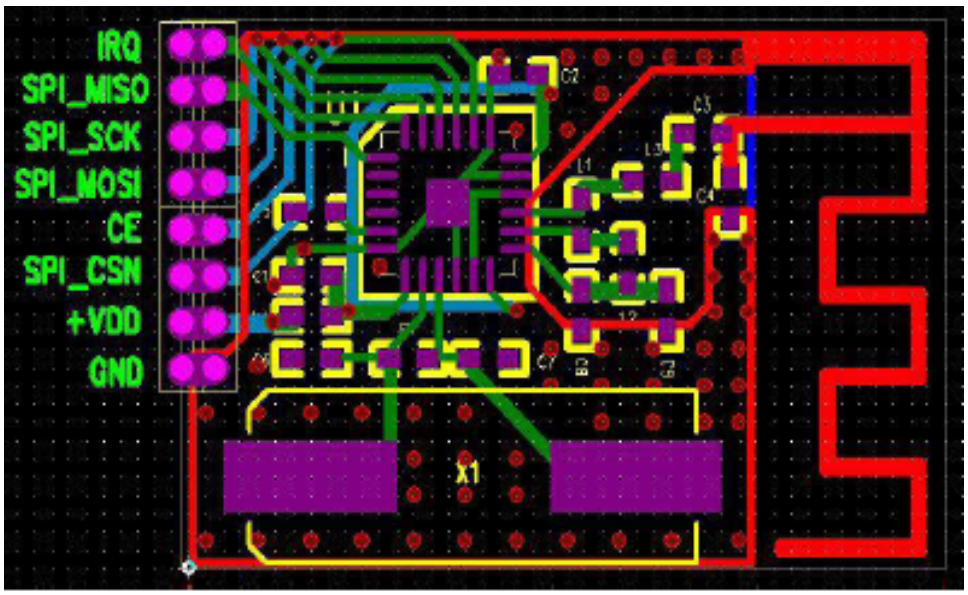
Storage Temperature . . . . . -40℃～+85℃

DC characteristics

Items	Description	MIN	TYP	MAX	单位 Unit
VCC	Supply Voltage	1.9		3.6	V
VIL	Test condition: VCC=3.3V Digital pin	0.4		0.8	V
VIH		0.7VCC		VCC+0.3	V
VOL			0.3		V
VOH		VCC-0.3			V
Current consumption	Power-down mode		900 nA		nA
	Power-saving mode		1		uA
	Stand-by mode		26		uA

	TX mode	0dBm		12		mA
		-5dBm		8.5		mA
		-10dBm		7		mA
		-20dBm		6.3		mA
	RX mode	-250kbps		14		mA
		-1Mbps		15		mA
Frequency deviation				±160		KHZ
Data Rate	Burst mode		＞0		1000	kbps
	Direct mode		250		1000	kbps
Channel spacing				1		MHz
Transmir output power				0		dBm
Receiver Sensitivity	0.1%BER@250kbps			-93		dBm
	0.1%BER@1Mbps			-85		dBm

3、Pin Assignment



22.5*15.5mm

4、Pin Description

1	MISO	Digital Output	SPI data Output
2	T01	Digital Input	Digital input test pin. Internal active pull high
3	T02	Digital Input	Digital input test pin. Internal active pull low.
4	T03	Digital Output	Digital output test pin.
5	VDDD	Power Output	Internal digital supply output(1.8V)for de-coupling purpose
6	GND	Power	Ground
7	VCC	Power Input	Power supply(+1.9Vdc～+3.6Vdc)
8	XC2	Analog Output	Crystal Pin 2
9	XC1	Analog Input	Crystal Pin 1
10	GND	Power	Ground
11	GND	Power	Ground
12	VCC	Power Input	Power supply(+1.9Vdc～+3.6Vdc)
13	VDDRF	Analog Output	Power supply output(+1.8Vdc)for the internal Power Amplifier.
14	ANT1	RF	Antenna interface pin 1
15	ANT2	RF	Antenna interface pin 2
16	GND	Power	Ground
17	GND	Power	Ground
18	VCC	Power Input	Power supply(+1.9Vdc～+3.6Vdc)
19	GND	Power	Ground
20	CSN	Digital Input	SPI Chip Select. Active low.
21	CE	Digital Input	Chip enable activates RX or TX mode. Active high.
22	MOSI	Digital Input	SPI data input
23	SCK	Digital Input	SPI clock input
24	IRQ	Digital Output	Interrupt pin. Active low(default). Could be programmable to active high by setting internal register(address:0x02).

5、Antenna Type ： PCB Printed antenna

FCC Warning:

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: 2AI4YTYDARF2498”
when the module is installed inside another device, the user manual of this device must contain below warning statements;

1、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.
(2) This device must accept any interference received, including interference that may cause undesired operation.

2、 Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

FCC statement:

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.

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

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.

That separate approval is required for all other operating configurations, including portable configurations with respect to Part 2.1093 and different antenna configurations.

This product is mounted inside of the end product only by professional installers OEM. They use this module with changing the power and control signal setting by software of end product within the scope of this application. End user can not change this setting.
The equipment complies with RF exposure limits. This module is limited to installation in mobile or fixed applications. The antenna used for this transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.
This equipment complies with the FCC RF radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20cm between the radiator and any part of your body.