

Overview

Smart RF06 is an embedded Bluetooth wireless communication module which supports Bluetooth BLE 2.4G wireless communication protocol. It has the characteristics of low power consumption, small size and strong signal with compact size This module integrates a 32-bit low power MCU. Provides a variety of smart lighting control applications for various scenarios.

Features

- Integrated 32-bit low power MCU, enables various smart lighting control applications.
- SOC module firmware built-in, completely code free.
- Low-power consumption design, suitable for battery-powered device. (switch application).

RF features:

- Compatible with BLE 5.0
- RF data rates up to 2Mbps
- Transmit power up to +10dBm
- Receiving sensitivity up to -96dbm
- Supports onboard and external antennas
- Operating temperature range -40°C to 85°C

Module Specifications

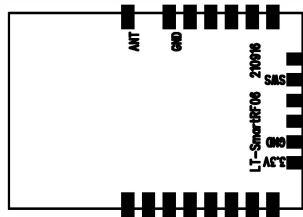
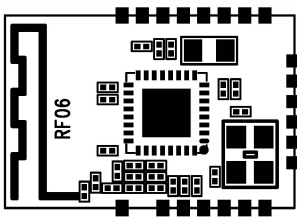
The Smart RF06 module interface is designed as stamp holes.

Pin spacing: 1.27mm (pin 1,2 spacing 2.54mm)

Size: 12mm (L) x18mm (W)

PCB thickness: 0.8mm

Outline Drawing



CXXX

Technical Specifications

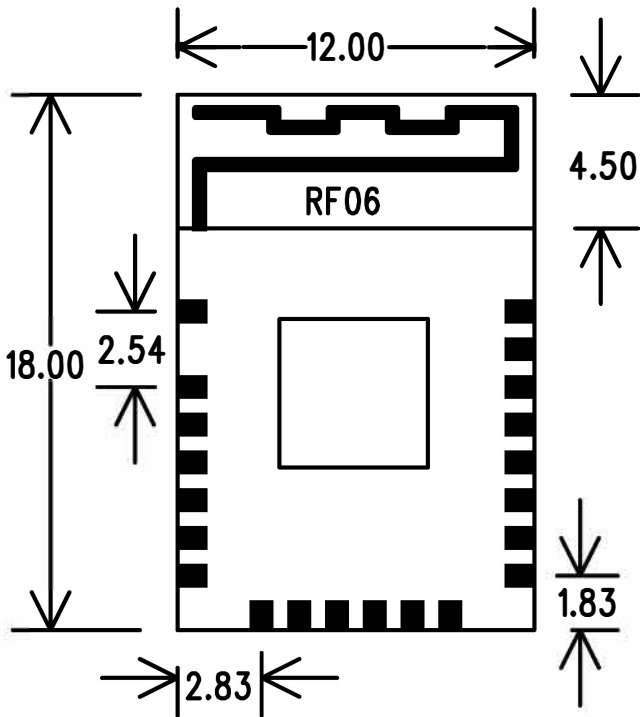
Electrical Parameters

Items	Minimum	Typical	Maximum	Unit
Operating voltage VDD	2.4	3.3	3.6	V
Operating temperature Ta	-40	-	85	°C
High-level input voltage VIH	0.7*VDD	-	VDD	V
Low-level input voltage VIL	VSS	-	0.3*VDD	V
High-level output voltage VOH	VDD-0.3	-	VDD	V
Low-level output voltage VOL	VSS	-	0.3	V

RF Parameters



Items	Specifications
Antenna	Onboard/External
Wireless standard	Bluetooth 5.0
Operating frequency	2402-2480MHz
Data transmission rate	1Mbps, 2Mbps
Maximum output power	+10dBm
Receiving sensitivity	-96dBm

Size and Package



Note: When using onboard antenna, please keep the antenna at least 15mm away from other metal components. No wire or copper around the antenna.

Model List

Picture	Model #	Description #
	C256	Bluetooth Module, 2KHz, Single Channel. Design for High Bay Sensor built-in.
	C259	Bluetooth Module, 2KHz, Single Channel. Design for Low Bay Sensor built-in.

Definition of pins

C256

No #	Name	Description	Function
1	ANT	Antenna output pin	For external antenna
2	GND	Power supply -	-
3	PWM	Dimming output pin	Frequency 2KHz
4,5,11,14,15,16,18	NA	-	-
6	RELAY	Relay control pin	3.3V high/low level voltage output
7	CCT	Color temperature control pin	Single channel:NC
			Dual channel:PWM color temperature control
8	SEL	Single/Dual channel output selection	NC: Dual; GND: single
9	SWS	Program burning pin	-
10	RESET	RESET pin	Connect to gnd for 3s to reset
12	GND	Power supply -	-
13	VCC	Power supply +	2.4-3.6V, 3.3V recommend
17	LED	LED indicator	-
19	PS_ANA	Analog light sensor signal input	Light sensor dimming
20	PIR_REF	PIR sampling reference voltage input	-
21	PIR_ANA	Analog motion sensor signal input	-

C259

No #	Name	Description	Function
1	ANT	Antenna output pin	For external antenna
2	GND	Power supply -	-
3	PMW	Dimming output pin	Frequency 2KHz
4,5,11,14,15,16,20,21	NA	-	-
6	RELAY	Relay control pin	3.3V high/low level voltage output
7	CCT	Color temperature control pin	Single channel:NC
			Dual channel:PWM color temperature control
8	SEL	Single/Dual channel output selection	NC: Dual; GND: single
9	SWS	Program burning pin	-
10	RESET	RESET pin	Connect to GND for 3s to reset
12	GND	Power supply -	-
13	VCC	Power supply +	2.8-3.6V, 3.3V recommended
17	LED	LED indicator	-
18	PIR_DIG	Digital motion sensor signal input	-
19	PS_ANA	Analog light sensor signal input	Light sensor dimming