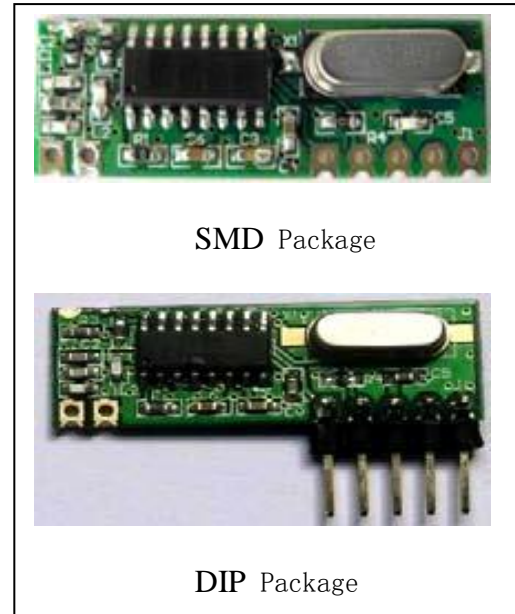


RFM83 Series ASK/OOK Super-heterodyne receiver module

1. General Description

RFM83 series module are low cost super-heterodyne receiver module based on RF83 chip, working at frequency 315Mhz and 433.92Mhz(We can customize other frequency 300Mhz and 440Mhz). The operating voltage is 2.1V-3.6V(RFM83L) and 3.6V-5.5V(RFM83). The module can be widely applied to various types of data transmission system. It provides two additional functional pins: (1)Enable pin: allow the module to switch between work status and sleep status in order to reduce overall power consumption. (2)wake-up output: when RF signal input, it provides and output signs.

(This datasheet only describes the basic functions and Electrical Characteristics of the module. For more details , please refer to the RF83 chip datasheet .)



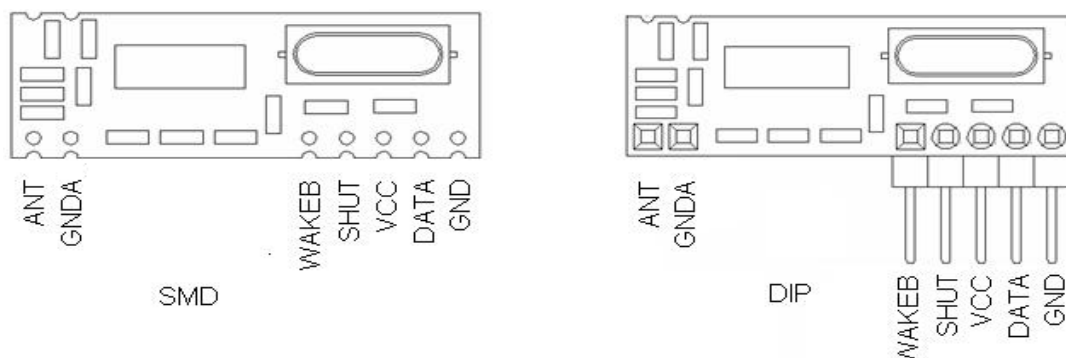
2. Main Features

- Low cost, low power consumption, Cost-effective
- Transmission Data Rate: 0.3-2.5KHz (factory default)
Data Rate can be set to Max.10khz based on customer requirements
- The operating voltage: RFM83 :3.6V-5.5V
RFM83L:2.1V-3.6V
- The operating current: 3mA@RFM83 315MHz
- Sleep current: ≤0.9uA
- Sensibility:-108dBm
- The operating frequency:315MHZ, 433.92MHZ
- SMD and DIP Package

3. Applications

- Wireless data transmission
- Home Automation
- Remote Alarm System

4. Pin Definition



Pin Name	Pin definition
ANT	RF signal input pin, connect antenna
GNDA	unconnected or connect with negative
WAKEB	Wake-up output pin
SHUT	Enable pin, when low logic level, the module work, when high logic level, the module sleep.
VCC	Connect with power supply
DATA	Data output pin
GND	connect with negative

5. Electrical Characteristics

Parameter	Condition	Min.	Typical	Max.	Unit
Operating Voltage (DC)	RFM83	3.6	5	5.5	V
	RFM83L	2.1	3	3.6	V
Operating Current	RFM83/5V/315MHz		3	4	mA
	RFM83/5V/433.92MHz		5	6	mA
	RFM83L/3V/315MHz		2.2	3.2	mA
	RFM83L/3V/433.92MHz		3.2	4.2	mA
Sleep current			3		uA
Operating Frequency	RFM83-315		315		MHz
	RFM83L-315				
	RFM83-433		433.92		MHz
	RFM83L-433				
Sensitivity	315MHz Data rate 1K		-108		dBm
	433.92MHz Data rate 1K		-108		dBm
Receive bandwidth			300		KHz
Data rate		0.3		2.5	KHz
Operating temperature		-20		+70	°C

6. Mechanical Dimension (Unit: mm)

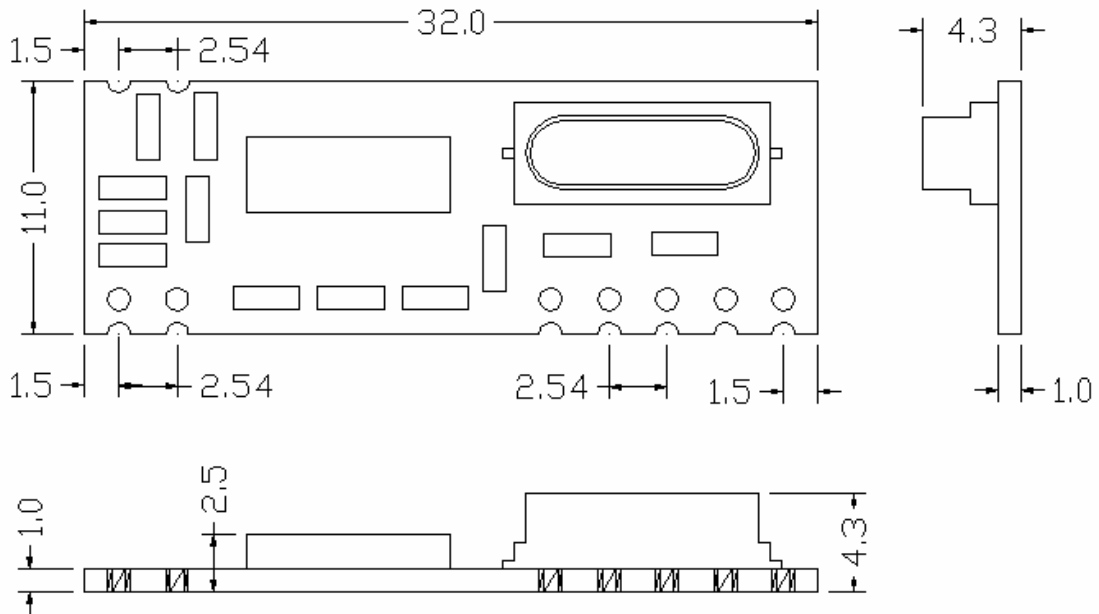


Figure 1 **SMD Mechanical Dimension**

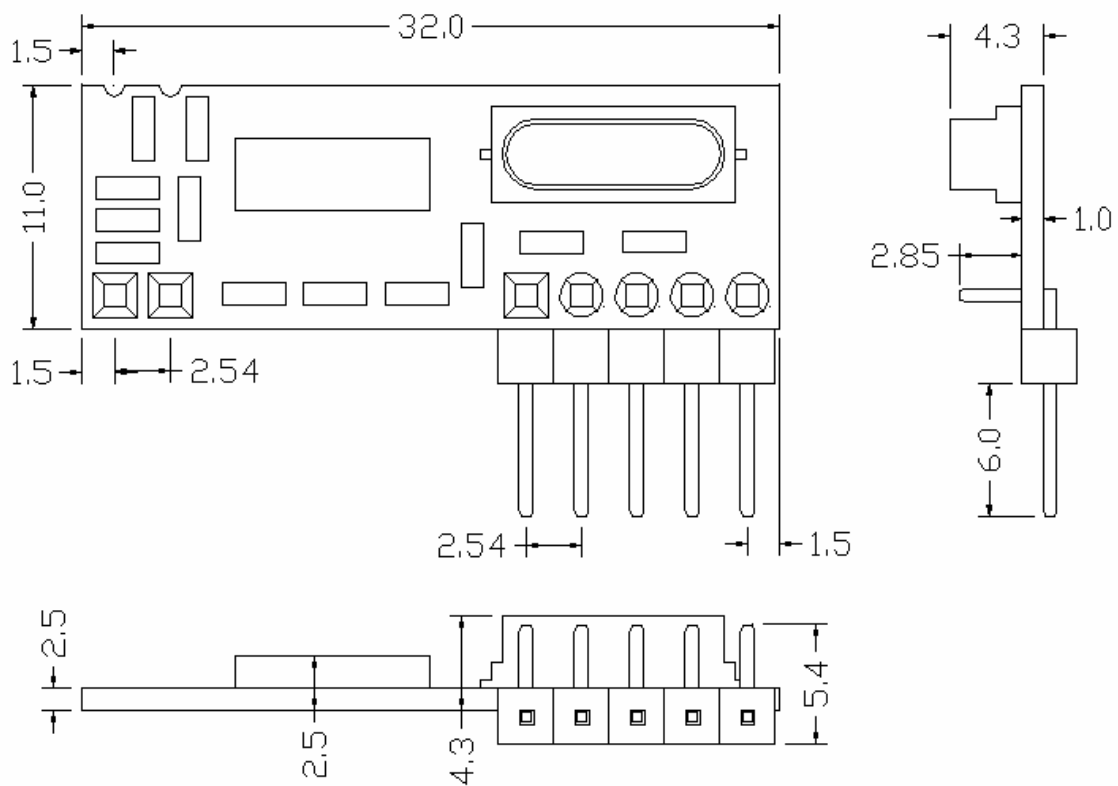
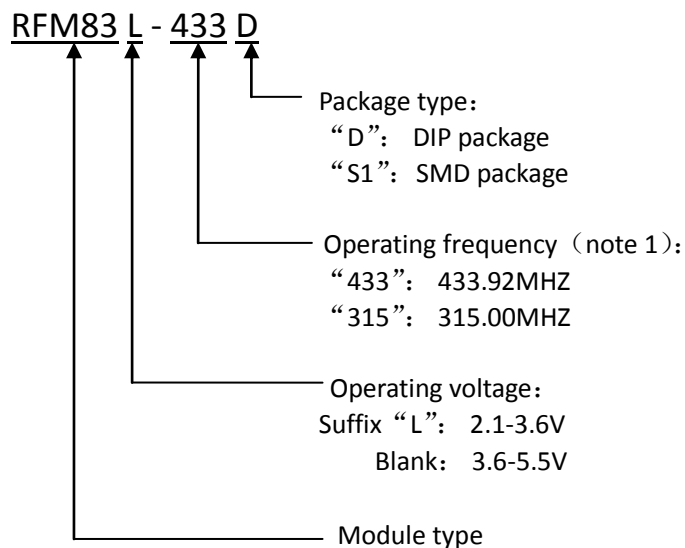


Figure 2 **DIP Mechanical Dimension**

7. Part Number Ordering information



Note 1: Besides 315MHz and 433.92MHz, we can customize the frequencies between 300Mhz and 440Mhz.

P/N comparison table:

Module P/N	Chip type	Operating voltage (V)	Operating current (MHz)	Enable (SHUT) and Wake-up (WAKEB) function	Package type
RFM83-315S1	RF83	3.6-5.5	315	Yes	SMD
RFM83-433S1	RF83	3.6-5.5	433.92	Yes	SMD
RFM83L-315S1	RF83L	2.1-3.6	315	Yes	SMD
RFM83L-433S1	RF83L	2.1-3.6	433.92	Yes	SMD
RFM83-315D	RF83	3.6-5.5	315	Yes	DI
RFM83-433D	RF83	3.6-5.5	433.92	Yes	DI
RFM83L-315D	RF83L	2.1-3.6	315	Yes	DI
RFM83L-433D	RF83L	2.1-3.6	433.92	Yes	DI

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