



NiceRF Wireless Technology Co., Ltd.

## Product Datasheet V2.0

50mW High-power  
Low cost low harmony ASK Transmitter Module

### **STX882**



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### Note: Revision History

Revision	Date	Comment
V1.0	2014-6-9	First release
V2.0	2015-8-15	part of parameter revised

## 1. Overview

STX882 is a small size, high power, low cost and low harmony ASK transmitter module, which has high stability and price performance. Its power is up to 50mW under 3.6V voltage. STX882 is the highest transmitted power ASK module compared other ASK transmitter in the market under 3.6V voltage. It is easy to use and can be connected to the micro-controller directly

## 2. Features

- Frequency Range: 433 / 315MHz
- ASK modulation
- Wide voltage range
- High stability in varies environment
- Comply with ROHS, FCC, ETSI,CE
- Super power interface

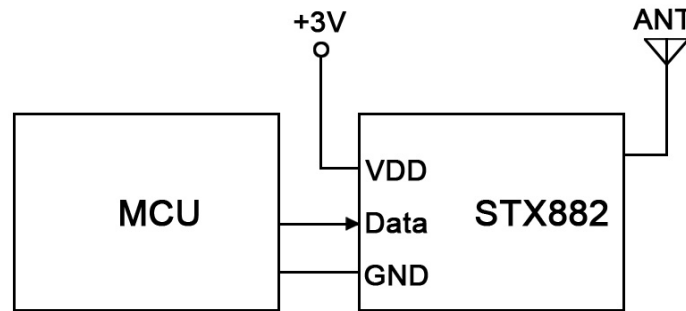
## 3. Application

- Wireless Door Bell
- Wireless security alarm
- Wireless industrial control
- Wireless data transmission

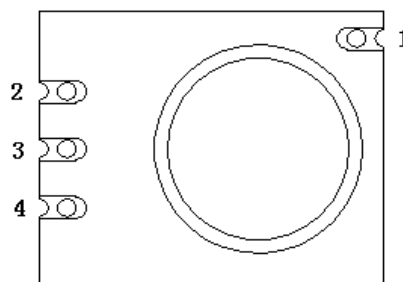
## 4. Electrical Characteristics

Parameter	Min	Typ.	Max.	Unit	Condition
Operation condition					
Working voltage	1.2	3.0	6	V	
Temperature range	-20	25	70	°C	
Current consumption					
TX current		34		mA	@3.3V,15dBm
Sleep Current		≤0.01		uA	@DATA As Low level
RF parameters					
Frequency Range	433.82	433.92	434.02	MHZ	@433MHZ
	314.9	315	315.1	MHZ	@315MHZ
RF power	12	13	13.5	dBm	@2.4V
	14	15	15.5	dBm	@3V
	19	20	20.5	dBm	@5V
Air rate	0.1		9.6	Kbps	

## 5. Application schematic



## 6. Pin Definition

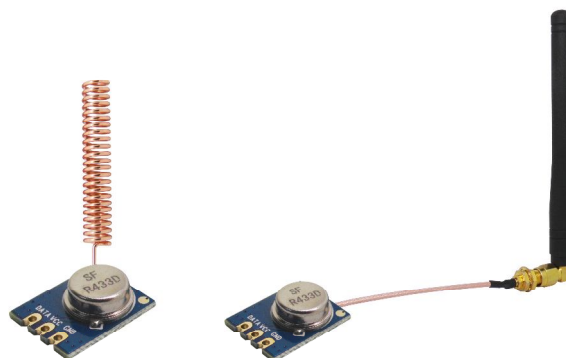


Pin Number	Pin Definitions	Description
1	ANT	Connect with 50 ohm coaxial antenna
2	DATA	Data input
3	VCC	Positive power supply
4	GND	Connected to power ground

## 7. Accessories

### 1) Antenna

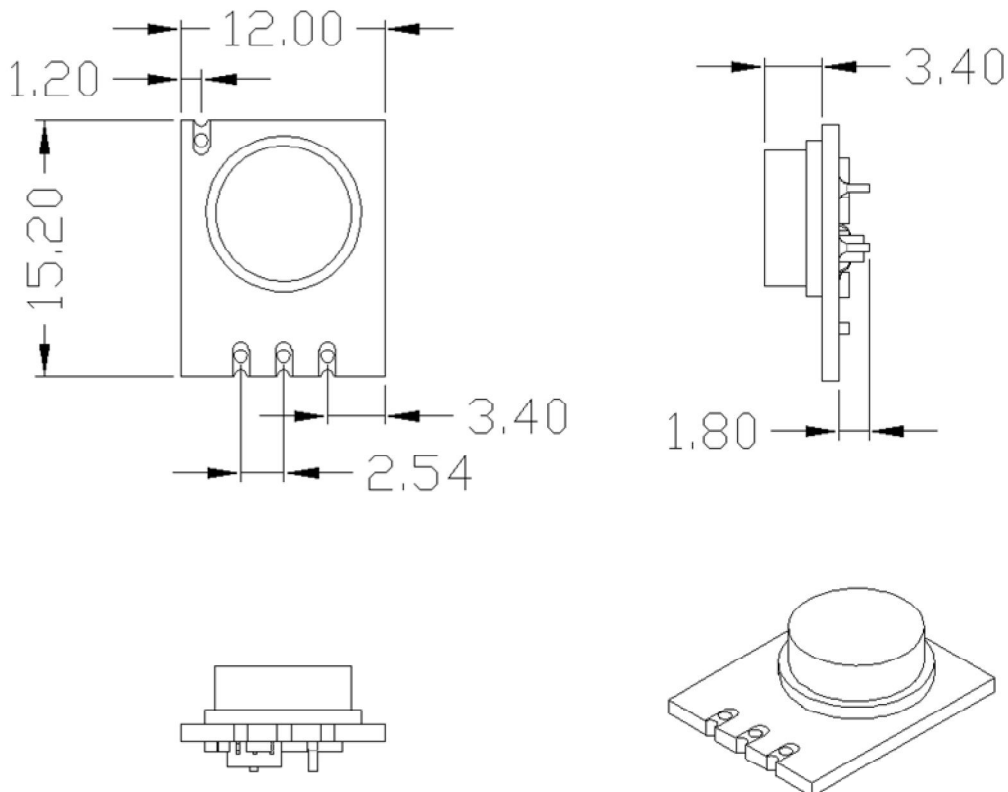
antenna is very important for RF communication, its performance will affect the communication directly. Module needs antenna in 50ohm. Common antenna has rubber straight/ elbow/ foldable rod and sucker antenna and etc. Users can order accordingly. To ensure module in the best performance, we suggest to use the our antenna.



★To ensure modules get the best performance, user must obey the following principles when using the antennas:

- Put the antenna away from the ground and obstacles as possible as you could;
- If you choose the sucker antenna, pull straight the lead wire as possible as it can be, the sucker under arches should be attached on the metal object.

### 8. Mechanical Dimensions(mm)



### 9. Order information:

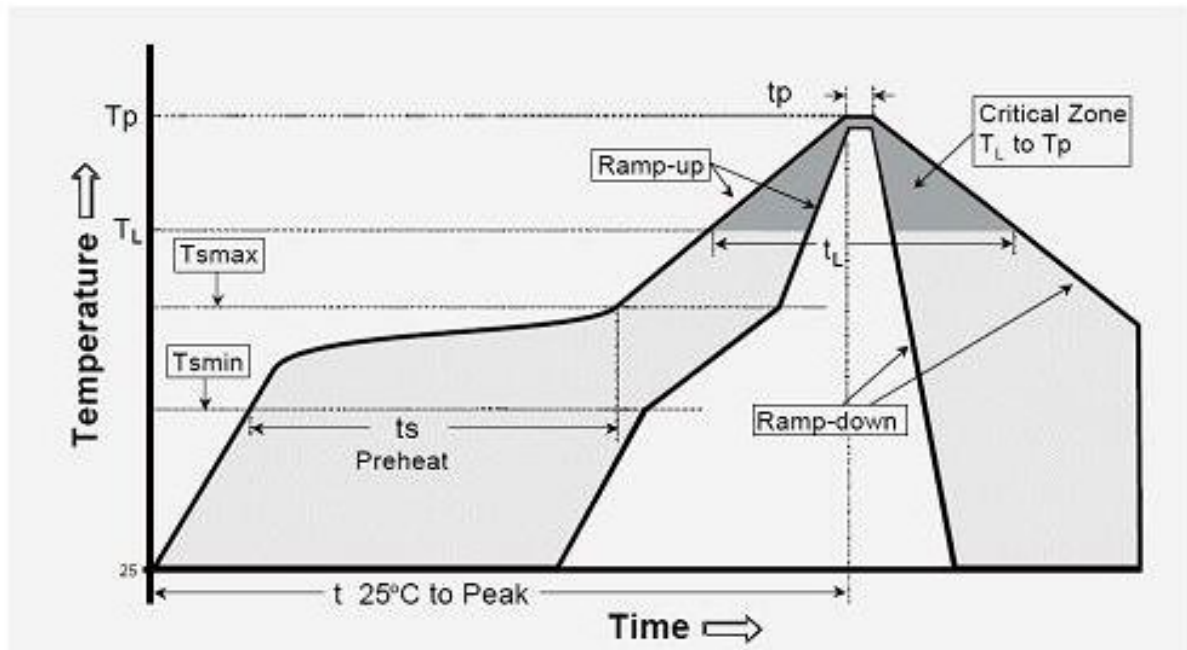
For example: If the customer needs 433MHz Frequency, the order no. shall be : STX882-433

Here are the product types :

Product Name	Description
STX882-315	Working frequency 315 MHZ
STX882-433	Working frequency 433 MHZ

**10. FAQ:**

- a) Why module can not communicate properly?
  - 1) Check if there is power connection error;
  - 2) Check if the module is enabled (CS high)?
- b) Why transmission distance is not far as it should be?
  - 1) Power supply ripple is too large;
  - 2) The antenna types do not match, or not properly installed;
  - 3) The surrounding environment is harsh, strong interference sources.

**Appendix 1: SMD Reflow Chart**


IPC/JEDEC J-STD-020B the condition for lead-free reflow soldering	big size components (thickness $\geq 2.5\text{mm}$ )
The ramp-up rate (T <sub>L</sub> to T <sub>p</sub> )	3°C/s (max.)
preheat temperature	
- Temperature minimum (T <sub>smin</sub> )	150°C
- Temperature maximum (T <sub>smax</sub> )	200°C
- preheat time (t <sub>s</sub> )	60~180s
Average ramp-up rate(T <sub>smax</sub> to T <sub>p</sub> )	3°C/s (Max.)
- Liquidous temperature(T <sub>L</sub> )	217°C
- Time at liquidous(t <sub>L</sub> )	60~150 second
peak temperature(T <sub>p</sub> )	245+/-5°C