L704 30dBm Stamp LoRa Module

Product Specification

Version	Issue date	Changes	Remark
1.0	2022/09/20	Initial Version	

IMPORTANT

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L704 30dBm Stamp LoRa Module

1 Introduction

L704 is a stamp type 850~930MHz 30dBm LoRa Module. This module comprises an power amplifier, SX1262，TCXO and T/R switch. This module can also have an MCU(optional) that could convert data from SPI interface.

2 Features

- Stamp type
- MCU(optional) for LoRa converter application
- TCXO
- Receiver sensitivity: -140dBm
- Communication distance: 8000 meters typ.
- Maximum output power: 30dBm
- Frequency band: 850~930MHz

3 Product outlook

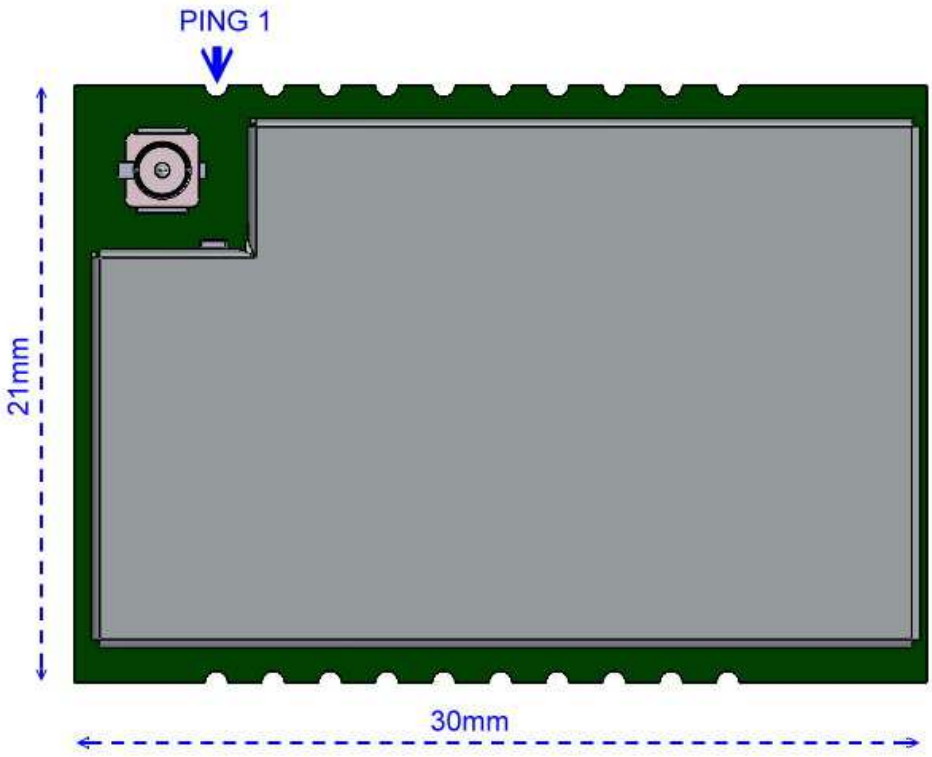

Figure 1 Product Top view

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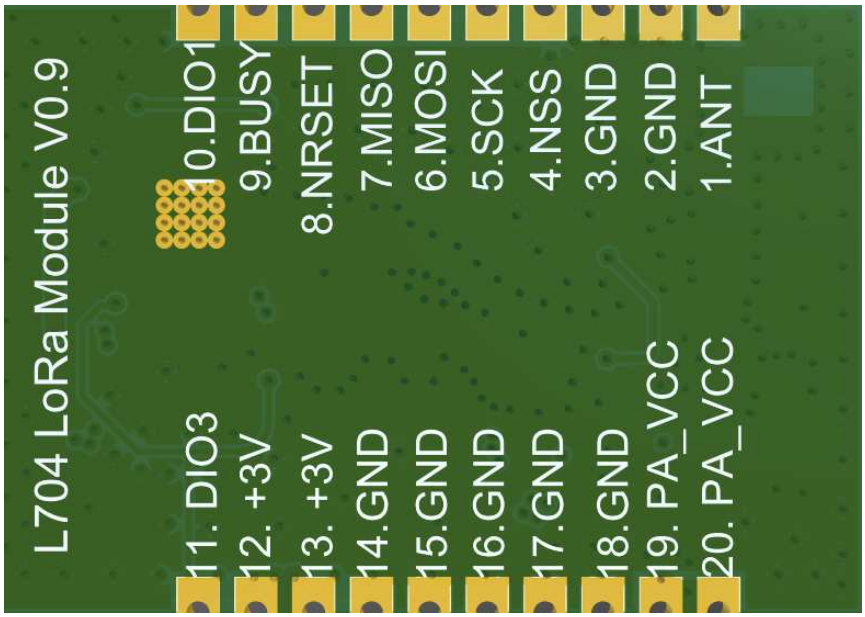
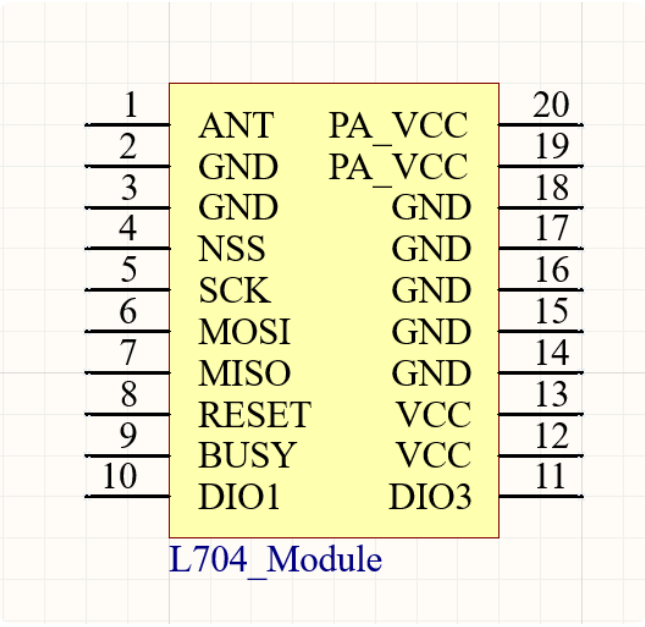


Figure 2 Product Bottom view

4 Specification

4.1 Pin definition

There is a 20 pins stamp pads for connecting to the host controller:



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Pin No.	Item	Direction	Comment
1	ANT		RF interface, stamp hole
2	GND		Ground, connect to power reference ground
3	GND		Ground, connect to power reference ground
4	NSS	Input	The module chip selection pin is used to start a SPI communication
5	SCK	Input	SPI clock input pin
6	MOSI	Input	SPI data input pin
7	MISO	Output	SPI data output pin
8	RESET	Input	The module reset pin, low active.
9	BUSY	Output	Busy indicator.
10	DIO1	Output	General configure as INT output.(see sx1262 datasheet for details)
11	DIO3	Output	General configure as internal automatically control TXCO. (see sx1262 datasheet for details)
12	VCC		VCC, +3.3V. logic supply power.
13	VCC		VCC, +3.3V. logic supply power.
14	GND		Ground, connect to power reference ground
15	GND		Ground, connect to power reference ground
16	GND		Ground, connect to power reference ground
17	GND		Ground, connect to power reference ground
18	GND		Ground, connect to power reference ground
19	PA VCC		Power supply for amplifier.(3.6V ~ 4.8V)
20	PA VCC		Power supply for amplifier.(3.6V ~ 4.8V)

4.2 Electric specification

Absolute Maximum Ratings

Parameter	Symbol	Minimum	Maximum	Units
Logic supply	VCC	-0.5	3.9	V
Amplifier	PA VCC	-0.3	5.5	V
SX1262 TX limit *1	-	0	+10 dBm	dBm

***1: **IMPORTANT** : Software limit SX1262 TX power below +10 dBm. Exceed the power limit will burn out the amplifier.**

Recommended Operating Conditions

Parameter	Symbol	Minimum	Typical	Maximum	Units
Logic supply	VCC	1.8	3.3	3.7	V
Amplifier	PA VCC	2.0	3.6	4.8	V

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Operating parameter

Main parameter		Performance			Remarks
		Min	Typical	Max	
Working temperature (℃)		-40		+85	Industrial Design
Operating frequency band (MHz)		850	868/915	930	Support ISM band
Power Consumption	TX current （mA		700		Instantaneous power consumption
	RX current （mA		14		
	Sleep current （μA		0.7		Software shutdown
Max TX power（dBm）		27.5	29/30	31.5	
Crystal frequency		32MHz			TCXO
Packaging method		SMD Stamp hole			The spacing is 2.0mm
Dimension		30*21mm			Including shield
RF interface		Stamp hole / IPEX			

Table 2 Configuration Parameters

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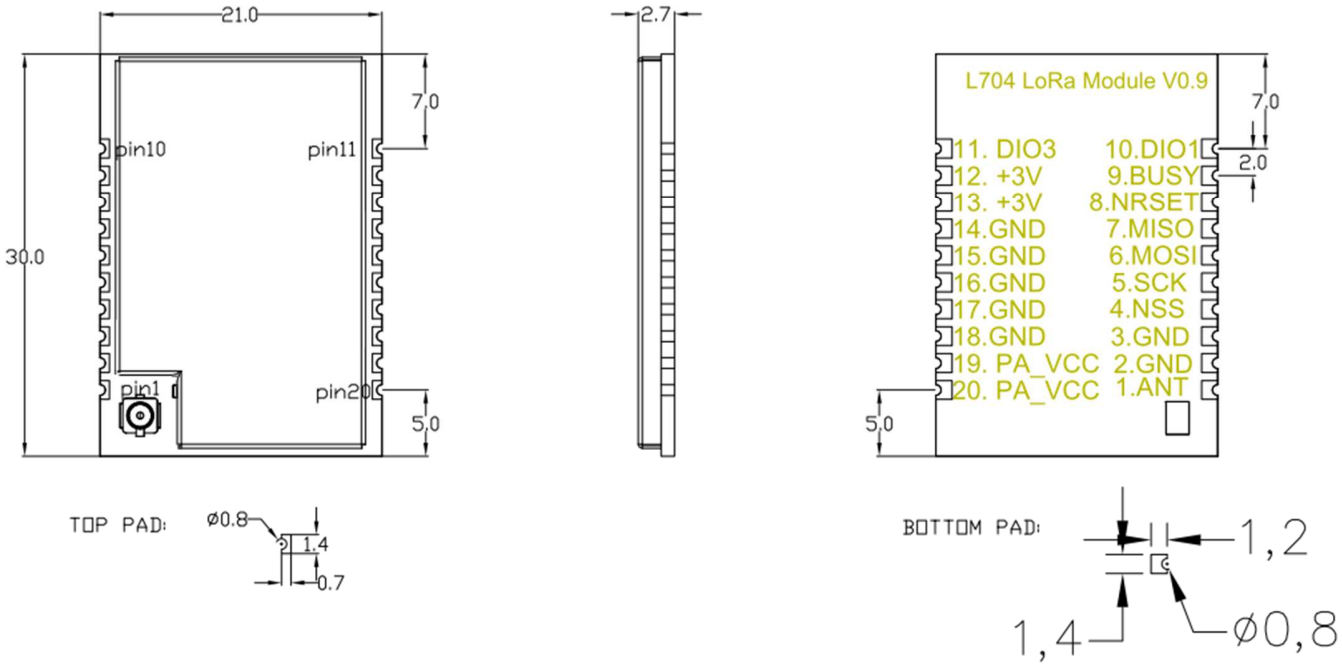
4.3 Mechanical dimension



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