HZX-S02A-V0.1

Datasheet

Shenzhen Huachuang Hengda Technology Ltd

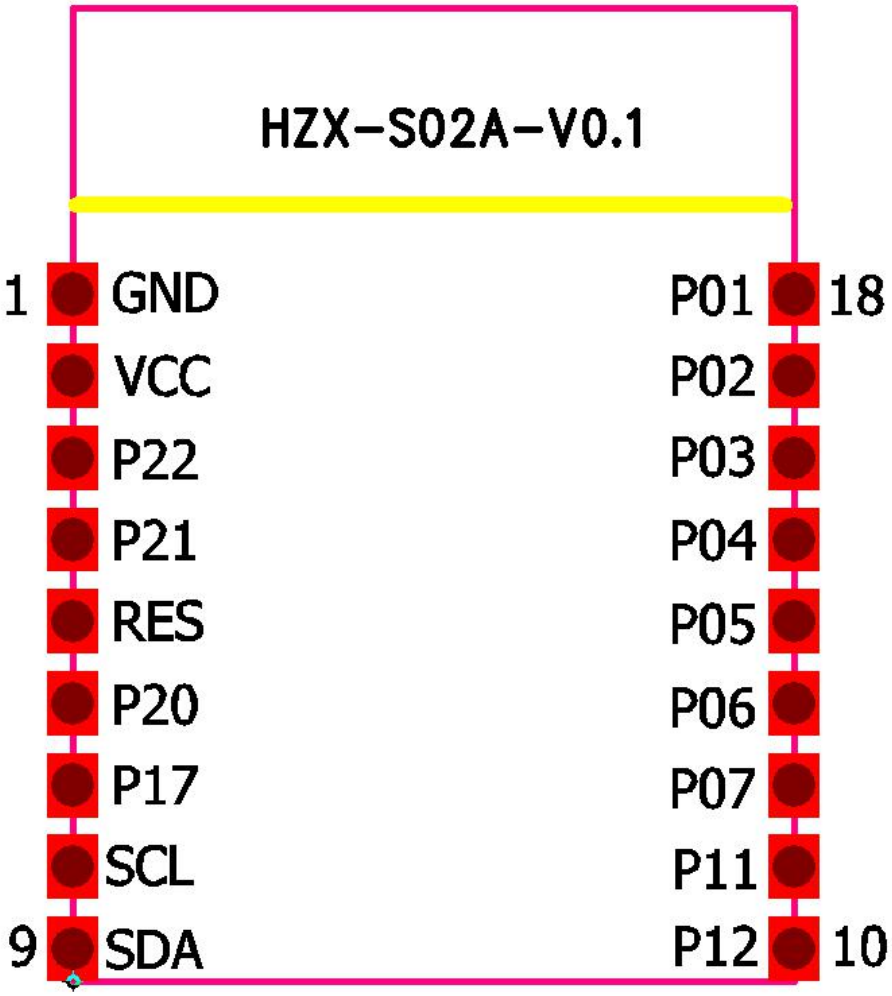
Parameters of Module

Referencing TI designing TA=25℃， VDD=3V and Fc=2440MHz；

•Woking Voltage：	2.0V～3.6V
•Operating Frequency：	2400～2483.5MHz
•The max dBm：	0dBm(-23dBm～0dBm，programmable)
•Receiver Sensitivity：	-87dbm（Low Gain Moding）
•Receiver Sensitivity：	-93dbm（High Gain Moding）
•Frequency Tolerance：	±20kHz
•Working Temperature：	-20℃～+60℃
•Storage Temperature：	-55℃～+85℃
•Reiceiver Current RX：	17.9mA
•Emission Current TX（0dBm）：	18.2mA
•Power Mode 1（4μs Wake-Up）：	270μA
•power Mode 2（SleepTimerOn）：	1μA
•Power Mode 3（External Interrupts）：	0.5μA

Definition for Module pins

Picture for module pins like picture 1, Definition for each pin in sheet 1



Picture1: Pin Data

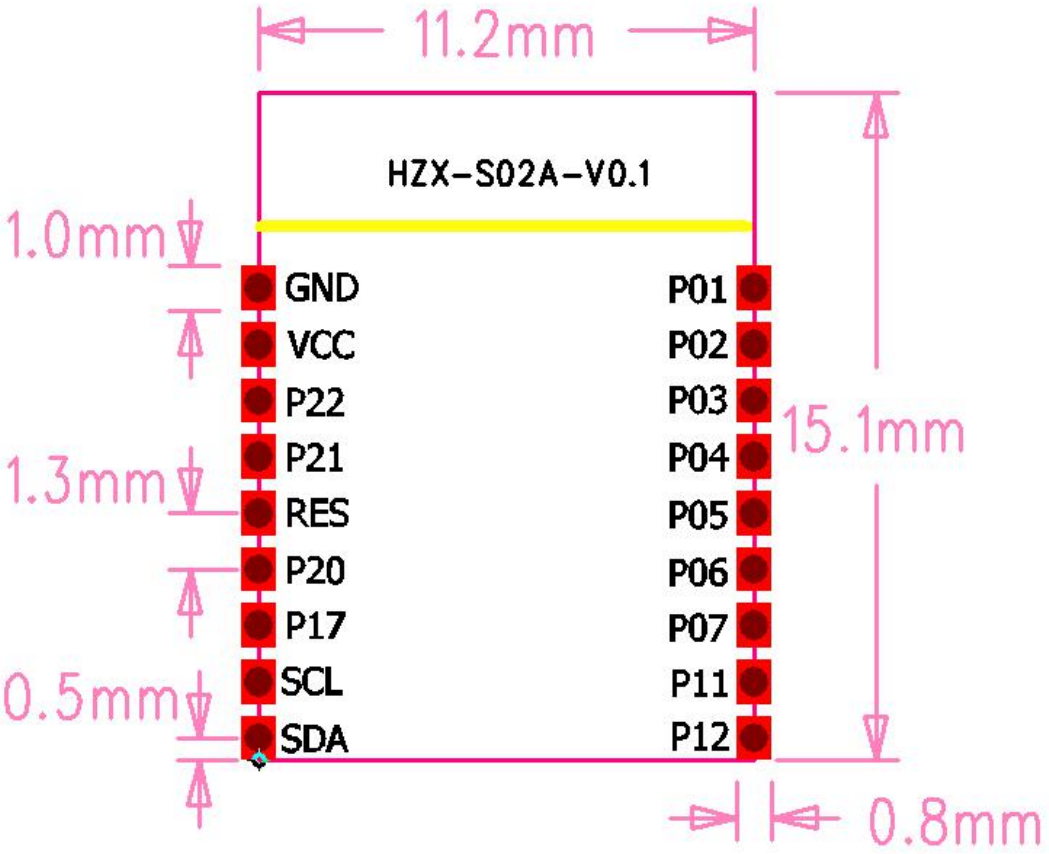
Sheet1: Pin definition

Pin	Name	Function	Remark
Pin1	GND	Module GND	Module GND
Pin2	VCC	Power input: Positive	Module Power Supply，2V-3.6V
Pin3	P22	I/O	
Pin4	P21	I/O	
Pin5	RESET	Reset pin	
Pin6	P20	I/O	
Pin7	P17	I/O	
Pin8	I2C_SCL	I2C SCL	CC2541 chip Supports I2C_SCL
Pin9	I2C_SDA	I2C SDA	CC2541 Chip Supports I2C_SDA
Pin10	P12	I/O	
Pin11	P11	I/O	
Pin12	P07	I/O	
Pin13	P06	I/O	
Pin14	P05	I/O	
Pin15	P04	I/O	
Pin16	P03	I/O	
Pin17	P02	I/O	
Pin18	P01	I/O	

*Note: This module mainly for someone like small size, some IO didn’t show it

PCB Package Size(4-layer)

Package for module like picture 2, Module thickness is 1.65mm



Picture 2 :Package size

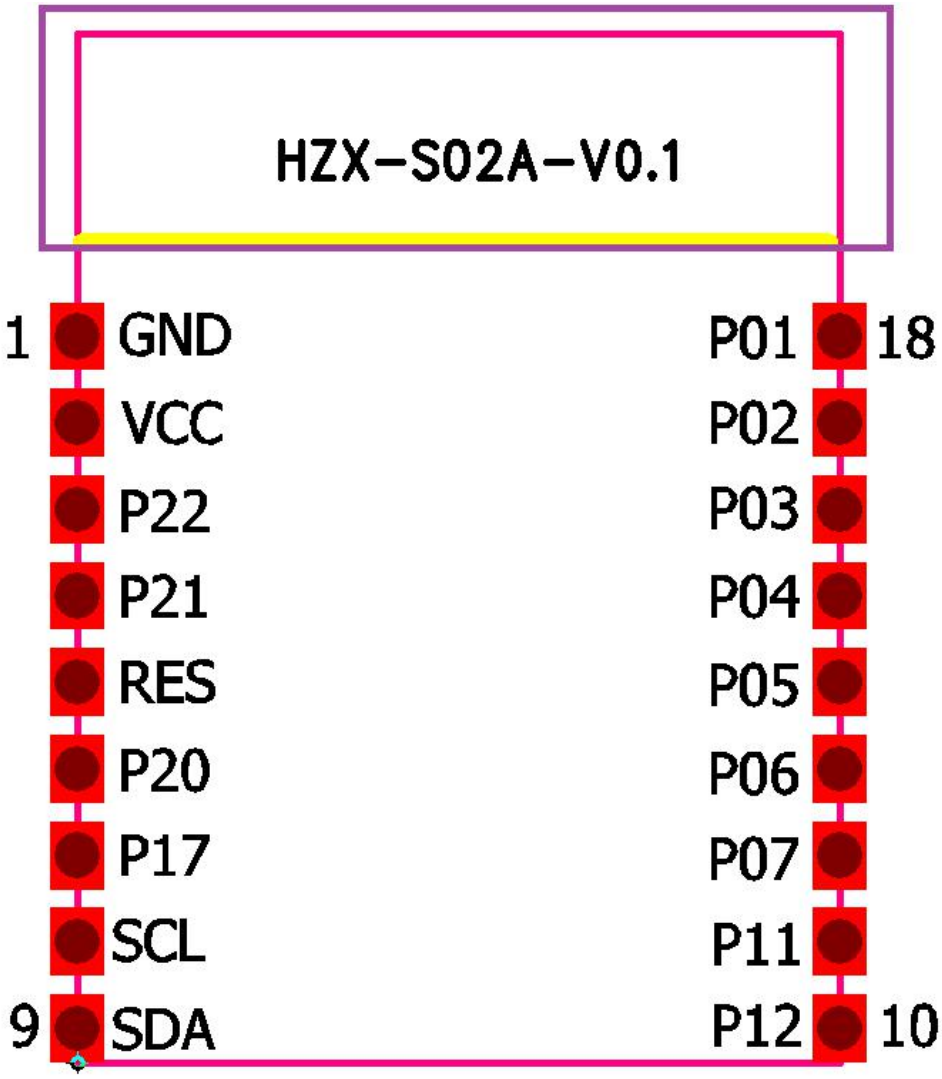
Layout suggestion

Serpentine antenna in PCB mainly for free space electromagnetic radiation. The position and layout range of Antenna are increase the data rate and transmitter range. Then we have some suggestion for the position of antenna and router layout as following

(1)Putting Antenna in the edge or corner of PCB

(2)Assuming that each layer hasn't signal wires or cooper under the Antenna

(3)The best that cut-out the purple part to avoide the S11 has small influence



Picture 3

Suggest Operating Condition

Function Operationg couldn't sure the module performance if we are operating it beyond the value as following sheet. If operat it beyong this limit value, it will influence the reliable of module. Pls pay attention to following two points:

(1)Operating Temperature will be limited by the Crystal Frequency

(2) To confirm the performance of radio freqency, the power supply ripple wave must less than 300mV

Identification	Conditions	The Min Value	Typical Value	The Max Value	Units
Power supply and IO	Battery moding	1.8	3.3	3.8	V
Operatingtemperature	/	-40	25	85	℃
Environment		-20		20	℃/分钟