F-9698 datasheet

产品名称：蓝牙数据模块

产品型号：F-9698

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一、Product overview:

F-9698 is a BLE single-mode data transfer module,the main chip uses highly integrated Bluetooth 4.2 chip BK3435,built in high performance transceiver,with powerful baseband processor, and built-in FLASH program memory for custom applications for better protection of applications. Security (suitable for small data very low power transmission, does not support voice, mainly used for control), now our company gives the customer sample module as serial port data transmission module.

二、Main features:

1.Perfect solution for Android (Android 4.4 is perfectly compatible, 4.3 system only supports one-way)IOS system and two-way transmission with BK3435 Bluetooth module.

2.The user interface uses a universal serial port design with full duplex two-way communication.

3.Support AT command

三、Parameters:

P/N	F-9698
Bluetooth version	BluetoothV4.2
Service voltage	2.0-3.6V
Support V4.2 Bluetooth protocol stack	ATT,GATT,SMP,L2CAP,GAP
Working Current	≤10mA(Simple application 20uA~1mA)
Standy Current	< 5uA
Temperature range	-20ºCto+80ºC
Wireless transmission range	0~100 meters
Transmission power	Maximum 4dBm,Standard specification is used by default 0dBm
Sensitivity	-93dBm<0.1%BER
Frequency range	2.402GHz-2.480GHz
The external interface	IO,UART,SPI,PWM,ADC,IIC
Module size	15.00mm*12.00mm*1.8mm

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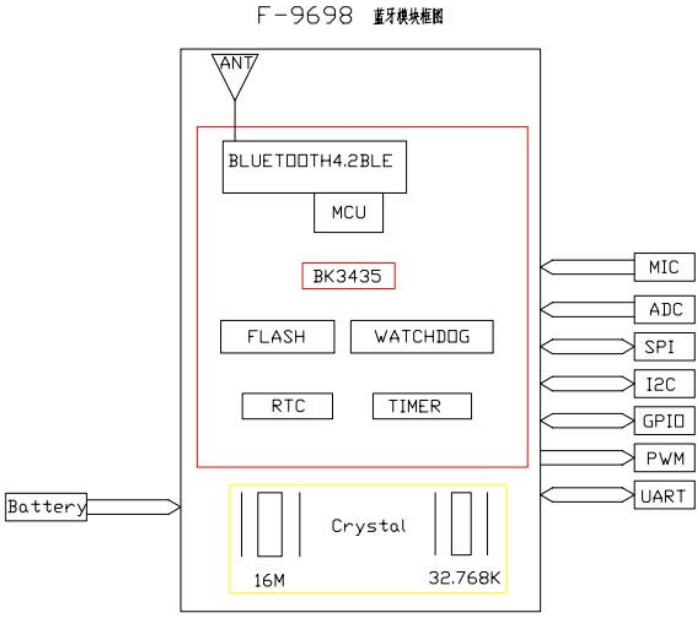
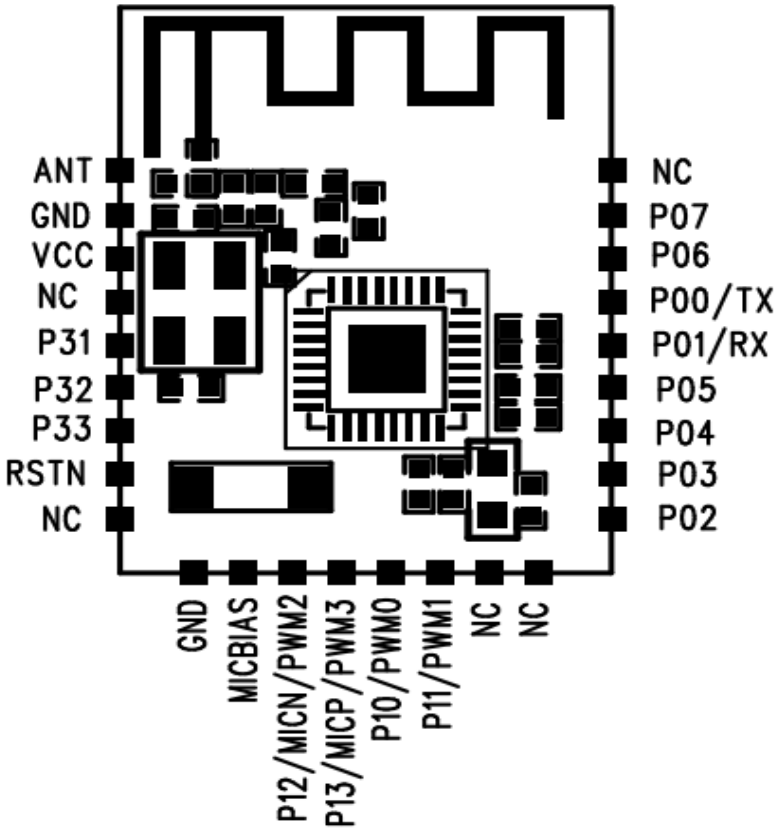
四、Module block diagram:

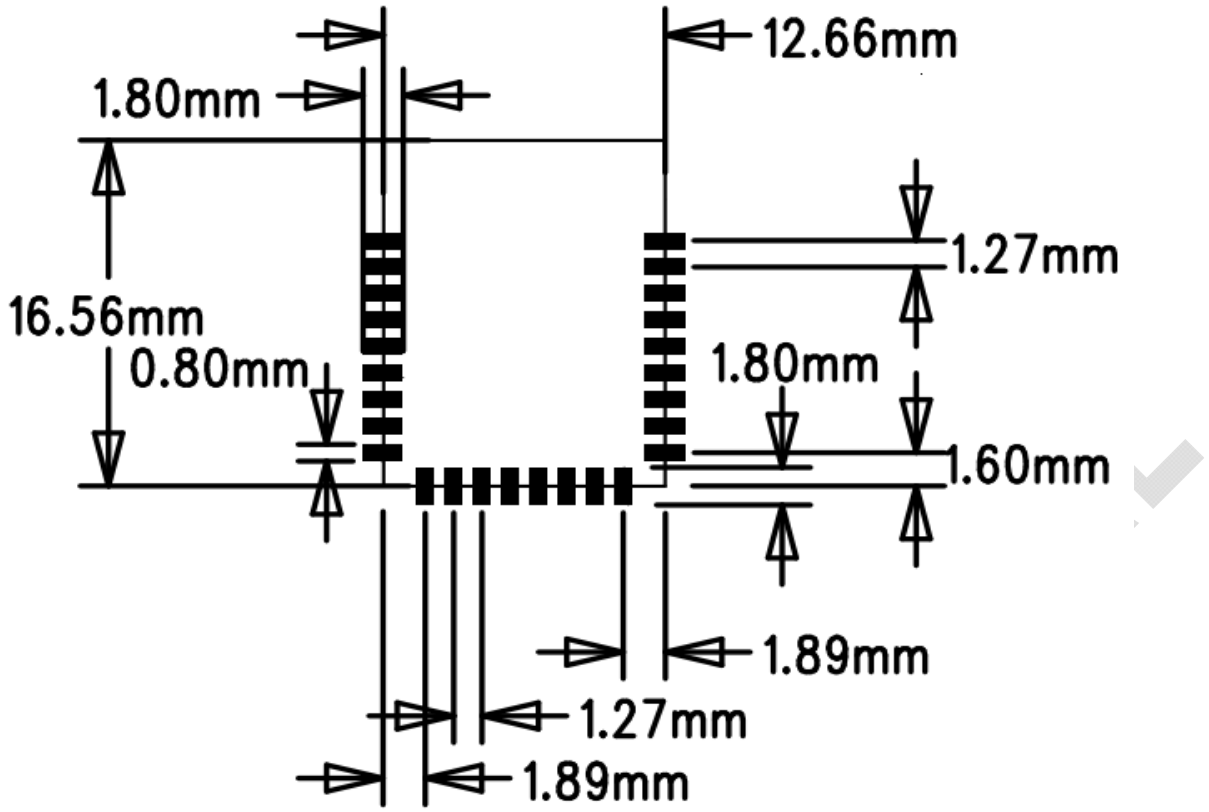


五、Module dimension and pinout diagram:

1、pinout diagram



2、Module dimension



六、Pin difinition：

Pin number	Pin name	Function 1	Function 2	Remark
1	ANT	-	-	-
2	GND	-	-	-
3	VCC	-	-	-
4	NC	-	-	-
5	P31	I/O	ADC1	-
6	P32	I/O	ADC2	-
7	P33	I/O	ADC3	-
8	RST	-	-	Reset pin (low reset)
9	NC	-	-	-
10	GND	-	-	-
11	MICBIAS	-	-	-
12	P12	I/O	PWM2/MIC_N	-
13	P13	I/O	PWM3/MIC_P	-
14	P10	I/O	PWM0	
15	P11	I/O	PWM1	
16	NC	-	-	
17	NC	-	-	
18	P02	I/O	-	Programing interface
19	P03	I/O	-	Programing interface
20	P04	I/O		Programing interface
21	P05	I/O		Programing interface

22	P01	I/O	UART_RX	
23	P00	I/O	UART_TX	
24	P06	I/O		烧录口
25	P07	I/O		烧录口
26	NC			

七、Function Description:

7.1 Serial port TX is P00, RX is P01, and the baud rate is 9600.

7.2 Hardware reset function, reset pin is RST, low level reset

7.3 Serial AT command function

八、AT command description:

8.1 The function is implemented by inputting a specific string to the serial port.

8.2 Command list

Command	Response data	Function description
AT+GVER\r\n	GVER:version number\r\n	get version number
AT+REST\r\n	REST\r\n	Module reset
AT+SNAM+bluetooth name\r\n	SNAM:bluetooth name\r\n	set bluetooth name
AT+GNAM\r\n	GNAM:bluetooth name\r\n	get bluetooth name
AT+GAVI\r\n	GAVI:Broadcast interval\r\n	get Broadcast interval
AT+SAVI+Broadcast interval\r\n	SAVI:Broadcast interval\r\n	set Broadcast interval
AT+GCPU\r\n	GCPU:Connection update parameter\r\n	get Connection update parameter
AT+SCPU+Connection update parameter\r\n	SCPU:Connection update parameter\r\n	set Connection update parameter
AT+GURT\r\n	GURT:Baud rate\r\n	get Baud rate
AT+SURT+Baud rate\r\n	SURT:Baud rate\r\n	set Baud rate
AT+GADD \r\n	ADD:bluetooth address\r\n	get bluetooth address
AT+RSET\r\n	RSET\r\n	Restore default configuration

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8.3 Command detailed instructions

8.3.1 AT+GVER\r\n

get version number

8.3.2 AT+ GADD \r\n

Get the Bluetooth address, the module's Bluetooth address length is 6 bytes, and the response data of this command is the hexadecimal string of the Bluetooth address.

8.3.3 AT+SNAM+bluetooth name\r\n

Set the Bluetooth name. The Bluetooth name can contain numbers, English alphabet, underscore, space, etc. The characters in the ascall code table. If you set Chinese characters, you need the APP to implement the Chinese character library support, and the maximum length of the Bluetooth name is 20 bytes.

Command example: "AT+SNAM+Hello\r\n", set bluetooth name to Hello。

8.3.4 AT+ GNAM\r\n

Obtain the Bluetooth name. For the response data of this command, please refer to the instruction to set the Bluetooth name.

8.3.5 AT+ SAVI+Broadcast interval\r\n

Set the broadcast interval. There are two parameters for the broadcast interval, which are the maximum broadcast interval and the minimum broadcast interval. So the format of the directive is:

AT+ SAVI +Maximum broadcast interval, minimum broadcast interval\r\n

The maximum broadcast interval ranges from 16 to 4800, and the time unit for this parameter is 0.625 milliseconds. The minimum broadcast interval ranges from 16 to 4800, and the time unit for this parameter is 0.625 milliseconds. The value of the parameter in the instruction must also meet the following conditions:

(1) Maximum broadcast interval >= Minimum broadcast interval.

Command example: "AT+SAVI+160,160\r\n", set broadcast interval to 100 milliseconds

8.3.6 AT+ GAVI\r\n

Obtain the broadcast interval. For the response data of this command, please refer to the instruction to set the broadcast interval.

8.3.7 AT+ SCPU+Connection update parameter\r\n

Set the connection update parameters, there are 5 parameters for connection update, which are update enable, maximum connection interval, minimum connection interval, slave latency, and connection timeout. So the format of the directive is:

AT+SCPU+ update time, maximum connection interval, minimum connection interval, slave latency, connection timeout\r\n

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The range of values that can be updated is 0 or 1, 0 means no connection update is performed, and 1 means connection is executed. The maximum connection interval ranges from 6 to 1600, and the time unit for this parameter is 1.25 milliseconds.

The minimum connection interval ranges from 6 to 1600, and the time unit for this parameter is 1.25 milliseconds.

Slave latency ranges from 0 to 10

The connection timeout range is from 1 to 600. The time unit for this parameter is 10 milliseconds.

The value of the parameter in the instruction must also meet the following conditions:

(1) Maximum connection interval - Minimum connection interval >= 16
(2) Maximum connection interval* (slave latency +1)*1.25 <connection timeout*10

Command example: "AT+SCPU+1,24,8,0,500\r\n", set the connection update parameter to update enable, the maximum connection interval is 30 milliseconds, the minimum connection interval is 10 milliseconds, and the slave latency is 0. The connection timeout is 5 seconds.

8.3.8 AT+ GCPU\r\n

Get the connection update parameter. For the response data of the instruction, please refer to the instruction to set the connection update parameter.

8.3.9 AT+ SURT+Baud rate\r\n

Set the serial port baud rate, the serial port baud rate has a total of 7 values, which are 2400,4800,9600,19200,38400,57600,115200

8.3.10 AT+ GURT\r\n

Obtain the serial port baud rate. For the response data of this command, please refer to the instruction to set the serial port baud rate.

8.3.1 1 AT+REST\r\n

The module is reset and the reset successful module responds with "REST\r\n".

8.3.1 2 AT+ RSET\r\n

Restore the default configuration, the recovery success module responds with "RSET\r\n".

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