FSC-BT909

4.2 Dual Mode Bluetooth Module Data Sheet

(Class 11)

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Contact Us

Shenzhen Feasycom Technology Co.,LTD

Email: sales@feasycom.com

Address: Rm 508, Building A, Fenghuang Zhigu, No.50, Tiezai Road, Xixiang, Baoan District, Shenzhen, 518102, China
Tel: 86-755-27924639

Release Record

Version Number	Release Date	Comments
Revision 1.0	2016-12-08	First Release
Revision 1.1	2017-08-12	1, Modify the block diagram and some incorrect descriptions 2,Increase I2S application circuit diagram 3,Add FCC, CE,ROHS certificate number
Revision 1.2	2019-02-20	Bluetooth version updated to V4.2
Revision 1.3	2019-09-02	Remove the ROHS certificate
Revision 1.4	2019-10-18	Feature update
Revision 1.5	2020-04-30	Increase power consumption parameters
Revision 1.6	2021-01-27	Update model by applying circuit diagram codec
Revision 1.7	2024-05-06	Modify the working temperature to -30~85°C

1. INTRODUCTION

FSC-BT909 is a bluetooth 4.2 Smart Ready device (with BR/EDR & LE support simultaneously) . It is a small form factor, highly power and highly economic Bluetooth radio module that allows OEM to add wireless capability to their products. The module supports multiple interfaces that make it simple to integrate into fully certified embedded Bluetooth solutions.

With Feasycom's Bluetooth stack running on a host, designers can easily customize their applications to support different Bluetooth profiles, such GATT, OPP, DUN, SPP, and etc. The module supports Bluetooth® Enhanced Data Rate (EDR) and delivers up to 3 Mbps data rate for distances to 100M.

The module is an appropriate product for designers who want to add wireless capability to their products. The supported remote devices' OS are iOS, Android, and Windows.

External whip antenna, transmitting over 2000M.

1.1 Block Diagram

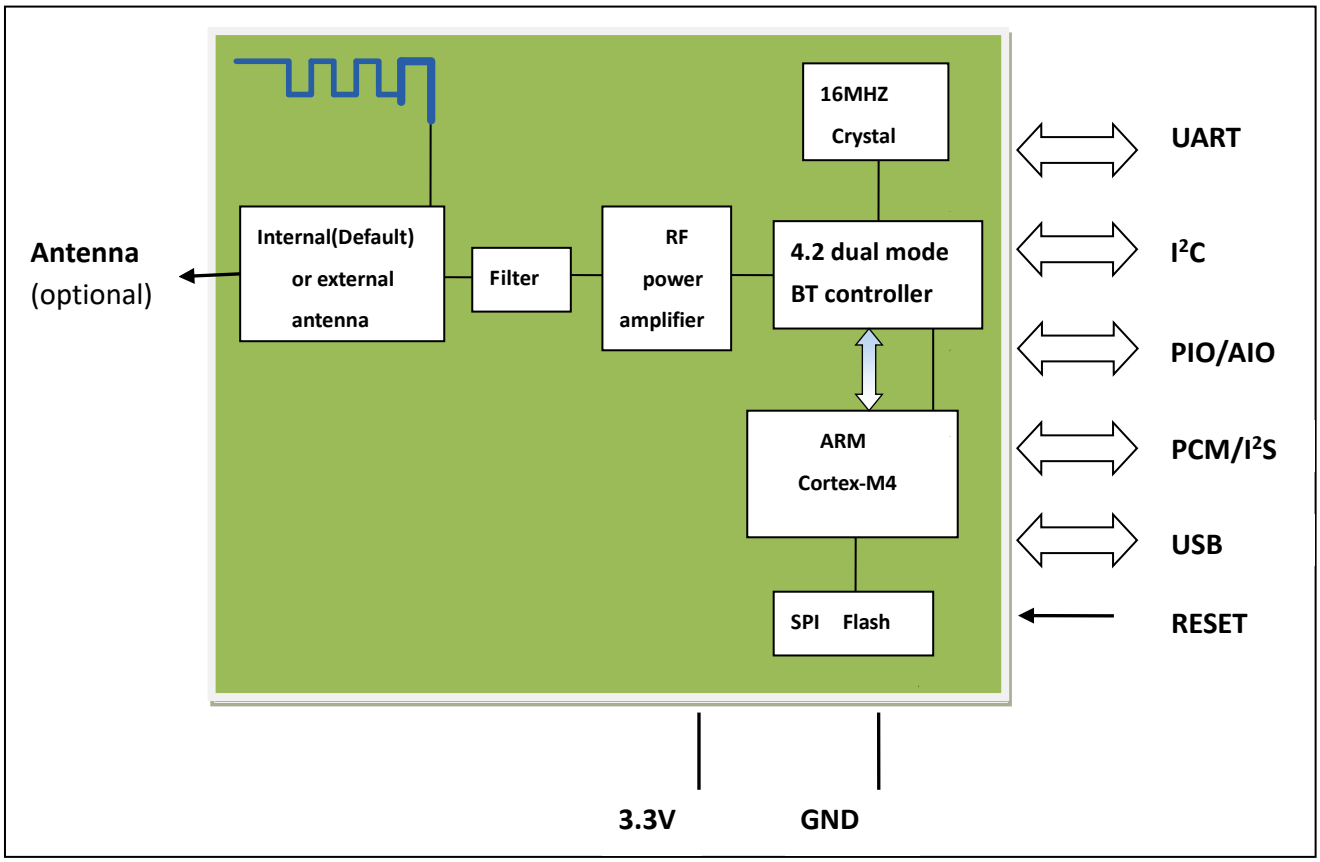


Figure 1-1-1

1.2 Feature

- Fully qualified Bluetooth 4.2/3.0/2.1/2.0/1.2/1.1
- Postage stamp sized form factor.
- Class 1 support (high output power).
- Integrated chip antenna, transmitting over 100m.
- The default UART Baud rate is 115.2Kbps and can support from 1200bps up to 921Kbps.
- UART, I^2C , PCM/I^2S data connection interfaces.
- Profiles including GATT, OPP, DUN, SPP, etc..
- USB 2.0 full-speed device/host/OTG controller.
- RoHS compliant.
- FCC, CE Certified.
- Power Consumption In Sleep Mode (VDD_3V3 at 3.3 V)
  - Discoverable：1.73mA
  - BR/EDR Connection：11.12mA
  - LE Connection：2.46mA
- Power Consumption In Working Mode (VDD_3V3 at 3.3 V)
  - Discoverable：11.56mA
  - BR/EDR Connection：20.95mA
  - LE Connection：12.08mA

1.3 Application

- Cable replacement
- Point-of-sales systems
- Barcode readers and pay terminals
- Telemetry devices
- Automotive inspection and measurement systems
- Industrial devices
- Barcode and RFID scanners
- Wireless speakers
- Analogue and USB Multimedia Dongles

2. GENERAL SPECIFICATION

Table 2-1:

General Specification	
Chipset	BT4.2 Dual Mode
Product ID	FSC-BT909
Dimension	13mm(W) x 26.9mm(L) x 2.4mm(H) (Tolerance: ±0.1mm)
Bluetooth Specification	Bluetooth V4.2 (Dual Mode)
Power Supply	3.3 Volt DC
Output Power	18.5 dBm (Class 1)
Sensitivity	-86dBm@0.1%BER
Frequency Band	2.402GHz -2.480GHz ISM band
Modulation	8DPSK,DQPSK
Baseband Crystal OSC	16MHz
Hopping & channels	1600hops/sec, 1MHz channel space, 79 Channels(BT 4.2 to 2MHz channel space)
RF Input Impedance	50 ohms
Antenna	Multilayer Ceramic Antenna (Set aside an external antenna interface)
Interface	Data: UART (Standard), I^2C Audio: PCM/I^2S Others: PIO, AIO, Touch sensor, PWM. USB 2.0
Profile	SPP, GATT(BLE Standard) Airsync, ANCS, iBeacon, HID
Temperature	-30ºC to +85ºC
Humidity	10%~95% Non-Condensing
Environmental	RoHS Compliant
MSL grade:	MSL 3
ESD grade	Human Body Model: Class-2 Machine Model: Class-B

3. PHYSICAL CHARACTERISTIC

- Dimension : 13mm(W) x 26.9mm(L) x 2.4mm(H) Tolerance: ±0.1mm
- Module size: 13mm X 26.9mm Tolerance: ±0.2mm
- Pad size: 1mmX0.8mm Tolerance: ±0.2mm
- Pad pitch: 1.5mm Tolerance: ±0.1mm

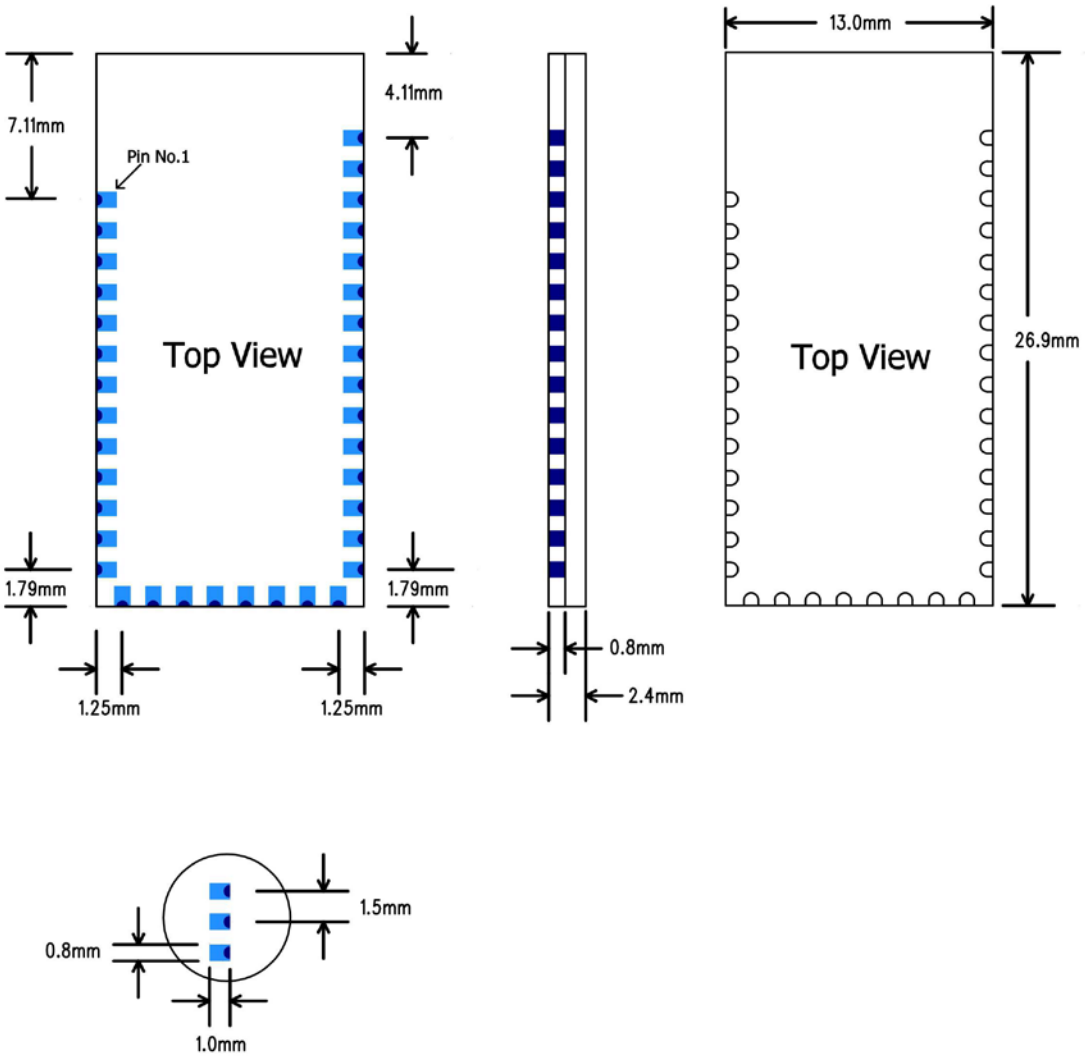


Figure 3-1

4. PIN DEFINITION DESCRIPTIONS

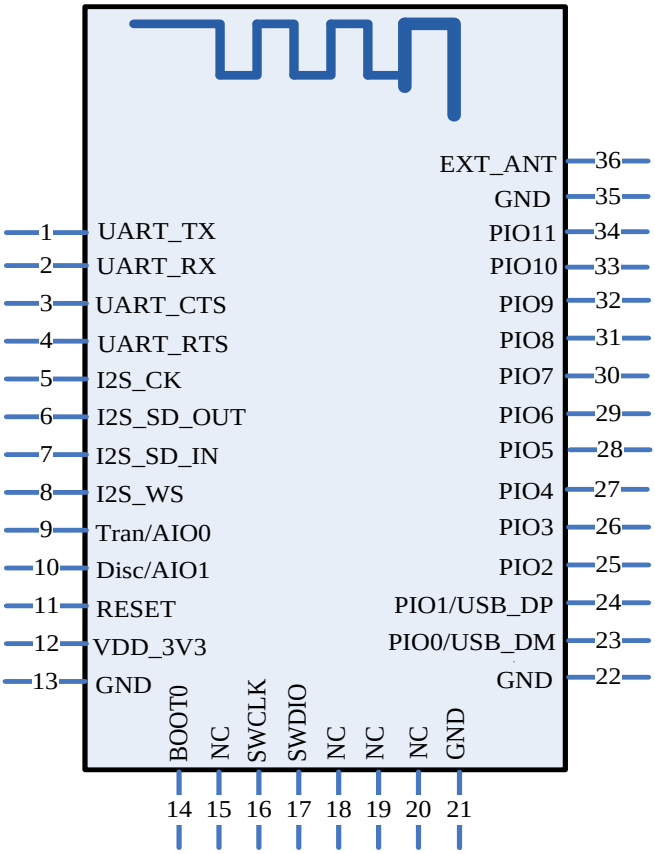


Figure 4-1: FSC-BT909 PIN Diagram

Table 4-1:

Pin NO.	Pin Name	Type	Pin Descriptions
1	UART_TX	CMOS output	UART data output
2	UART_RX	CMOS input	UART data input
3	UART_CTS	CMOS input Bi-directional	UART clear to send active low Alternative Function: Programmable input/output line
4	UART_RTS	CMOS output/ Bi-directional	UART request to send active low Alternative Function: Programmable input/output line
5	I2S_CK	Bi-directional	I²S CLK (BCLK)
6	I2S_SD_OUT	Bi-directional	I²S Data Output
7	I2S_SD_IN	Bi-directional	I²S Data Input
8	I2S_WS	Bi-directional	I²S Chip Select For Synchronous Serial Interface
9	Tran/AIO0	I/O	Programmable input/output line Alternative Function 1: Analogue programmable I/O line. Alternative Function 2: Host MCU change UART transmission mode.

10	Disc/AIO1	I/O	Programmable input/output line Alternative Function 1: Analogue programmable I/O line. Alternative Function 2: Host MCU disconnect bluetooth.
11	RESET	CMOS input	Reset if low. Input debounced so must be low for >5ms to cause a reset.
12	VDD_3V3	VDD	Power supply voltage 3.3V
13	GND	VSS	Power Ground
14	BOOT0	CMOS input	The default is low. (internal 10K resistance drop) When writing to MCU when using the serial port, this pin is connected with the high level.
15	NC	NC	NC
16	SWCLK	Bi-directional	Debugging through the clk line(Default)
17	SWDIO	Bi-directional	Debugging through the data line(Default)
18	NC	NC	NC
19	NC	NC	NC
20	NC	NC	NC
21	GND	VSS	Power Ground
22	GND	VSS	Power Ground
23	PIO0/USB_DM	Bi-directional	Programmable input/output line Alternative Function: USB_DM
24	PIO1/USB_DP	Bi-directional	Programmable input/output line Alternative Function: USB_DP
25	PIO2	Bi-directional	Programmable input/output line
26	PIO3	Bi-directional	Programmable input/output line
27	PIO4	Bi-directional	Programmable input/output line
28	PIO5	Bi-directional	Programmable input/output line
29	PIO6	Bi-directional	Programmable input/output line Alternative Function: I^2C Serial Clock input/output
30	PIO7	Bi-directional	Programmable input/output line Alternative Function:I^2C Serial Data input/output
31	PIO8	Bi-directional	Programmable input/output line
32	PIO9	Bi-directional	Programmable input/output line Alternative Function: LED(Default)

33	PIO10	Bi-directional	Programmable input/output line Alternative Function: BT Status(Default)
34	PIO11	Bi-directional	Programmable input/output line
35	GND	VSS	Power Ground
36	EXT_ANT	RF signal output	By default, this PIN is an empty feet. This PIN can connect to an external antenna to improve the Bluetooth signal coverage. If you need to use an external antenna, by modifying the module on the 0R resistance to block out the on-board antenna; Or contact Feasycom for modification.

5. Electrical Characteristics

5.1 Absolute Maximum Ratings

The module should not continuously run under extreme conditions. The absolute maximum ratings are summarized in Table below. Exposure to absolute maximum rating conditions for extended periods of time may affect reliability and cause permanent damage to the device.

Table 5-1-1:

Temperature/Voltage	Min	Max	Unit
Storage temperature	-40	85	°C
Operating temperature	-30	85	°C
Supply voltage	-0.3	3.6	V
Terminal voltages	VSS - 0.4	Vdd + 0.4	V

5.2 Recommended Operating Conditions

The recommended operating conditions are summarized in Table below..FSC-BT909 operates as low as 2.7 V supply voltage. However, to safely meet the USBspecification for minimum voltage for USB data lines, minimum of 3.1 V supply is required

Table 5-2-1:

Temperature/Voltage	Min	Typ	Max	Unit
Operating temperature	-30	20	85	°C
Supply voltage	2.7	3.3	3.6	V
Terminal voltages	0		Vdd	V

5.3 Terminal Characteristics

FSC-BT909's terminal characteristics are summarized Table below.

Table 5-3-1:

Characteristics	Min	Typ	Max	Unit
I/O static characteristics				
VIL input logic level low	-	-	0.3VDD	V
VIH input logic level high	$0.4V_{DD}$	-	-	V
VHYS input hysteresis	-	10% V_{DD}	-	V
Ilkg input leakage current	-	-	1	uA
RPU Weak pull-up equivalent resistor	30	40	50	KΩ
RPD Weak pull-down equivalent resistor	30	40	50	KΩ
CIO pin capacitance	-	5	-	pF
VOL output logic level low	-	-	0,2	V
VOH output logic level high	Vdd -0.4	-	-	V
NRST pin characteristics				
VTH,res threshold voltage	1.65	1.8	VDD	V
RIRES input resistance	-	10	-	kΩ
CIRES input capacitance	-	100	-	nF

5.4 Current Consumption

FSC-BT909's current consumption is summarized in Table below.

Table 5-4-1:

Operation Mode	Connection Type	Average	Unit
Standby	--	150	uA
Discoverable	Inquiry/page:640mS interval ,11.25mS window Advertising :152.5mS interval	28	mA
ACL Connection	Active Mode	34	mA
	File transfer ,throughput	44	mA
LE Connection	20mS Interval	30	uA
	File transfer ,throughput	36	mA
Maximum Current	Send 2441MHZ fixed frequency signals	~225	mA

5.5 Radio Characteristics

5.5.1 Transmitter Radio Characteristics

TX output is guaranteed to be unconditionally stable over the guaranteed temperature range.

Refer to Table below. Measurement conditions: T = 20℃, Vdd = 3.3V.

Table 5-5-1-1:

Item	Typical Value	Bluetooth Specification	Unit
Maximum output power1,2	+18.5	-6 to 20	dBm
RF power control range	34	≧16	dB
20dB bandwidth for modulated carrier	790	≦1000	kHz
Adjacent channel transmit power F = F0 ± 2MHz	-36	≦ 20	dBm
Adjacent channel transmit power F = F0 ± 3MHz	-45	□ -40	dBm
Adjacent channel transmit power F = F0 ± > 3MHz	-50	□ -40	dBm
□ Δf1avg Maximum Modulation	168	140<f1avg<175	kHz
□ Δf2max Maximum Modulation	152	115	kHz
□ Δf1avg / Δf2avg	0.94	□ □ ≧0.80	-
Initial carrier frequency tolerance	15	□ ≦75	kHz
Drift Rate	8	□ ≦20	kHz/50μs
Drift (single slot packet)	7	□ ≦ 25	kHz
Drift (five slot packet)	9	□ ≦ 40	kHz
2nd Harmonic content	-65	□ ≦ -30	dBm
3rd Harmonic content	-45	□ ≦ -30	dBm

5.5.2 Receiver Radio Characteristics

RX input is guaranteed to be unconditionally stable over the guaranteed temperaturerange.Refer to Table below. Measurement conditions: T = 20℃, Vdd = 3.3V.

Table 5-5-2-1:

	Frequency(GHz)	Typ.	Unit	Bluetooth Specification
Sensitivity@0.1% BER for all packet types	2.402	-85	dBm	<-75dBm
	2.441	-86	dBm	
	2.480	-85	dBm	
BER@ Maximum received signal(-20dBm)	2.402	0	dBm	<0.1%
	2.441	0	dBm	
	2.480	0	dBm	

6. Interface Characteristics

6.1 UART Interface

Four signals are used to implement the UART function. When FSC-BT909 is connected to another digital device, UART_RX and UART_TX transfer data between the two devices. The remaining two

signals, UART_CTS and UART_RTS, can be used to implement RS232 hardware flow control where both are active low indicators.

Table 6-1-1: The interface consists of four-line connection as described in below:

Signal name	Driving source	Description
UART-TX	FSC-BT909 module	Data from FSC-BT909 module
UART-RX	Host	Data from Host
UART-RTS	FSC-BT909 module	Request to send output of FSC-BT909 module
UART-CTS	Host	Clear to send input of FSC-BT909 module

Table 6-1-2: Possible UART Settings

Property	Possible Values
Baud Rate	1200bps to 921Kbps
Flow Control	RTS/CTS or None
Data bit length	8bits
Parity	None, Odd or Even
Number of Stop Bits	1 or 2

Table 6-1-3: Default Data Format

Property	Possible Values
Baud Rate	115.2Kbps
Flow Control	None
Data bit length	8bit
Parity	None
Number of Stop Bits	1

6.2 PCM/I^{2}S Interface

The I^{2}S can be operated in master or slave mode, in full duplex and simplex communication modes and can be configured to operate with a 16-/32-bit resolution as an input or output channel. Audio sampling frequencies from 8 kHz up to 192 kHz are supported. When either or both of the I^{2}S interfaces is/are configured in master mode, the master clock can be output to the external DAC/CODEC at 256 times the sampling frequency.
The I^{2}S can be served by the DMA controller.

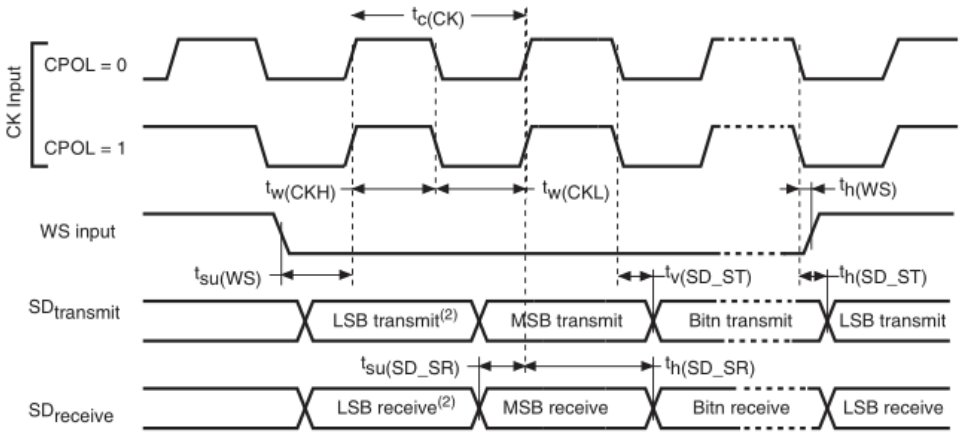
6.2.1 I²S dynamic characteristics

Table 6-2-1-1: I²S dynamic characteristics

Symbol	Parameter	Conditions	Min	Max	Unit
f_{MCK}	I2S Main clock output	-	256x8K	256xFs(2)	MHz
f_{CK}	I2S clock frequency	Master data: 32 bits	-	64xFs	MHz
		Slave data: 32 bits	-	64xFs	
D_{CK}	I2S clock frequency duty cycle	Slave receiver	30	70	%
$t_{v(WS)}$	WS valid time	Master mode	0	6	ns
$t_{h(WS)}$	WS hold time	Master mode	0	-	
$t_{su(WS)}$	WS setup time	Slave mode	1	-	
$t_{h(WS)}$	WS hold time	Slave mode	0	-	
$t_{su(SD\_MR)}$	Data input setup time	Master receiver	7.5	-	
$t_{su(SD\_SR)}$		Slave receiver	2	-	
$t_{h(SD\_MR)}$	Data input hold time	Master receiver	0	-	
$t_{h(SD\_SR)}$		Slave receiver	0	-	
$t_{v(SD\_ST)}$ $t_{h(SD\_ST)}$	Data output valid time	Slave transmitter (after enable edge)	-	27	
$t_{v(SD\_MT)}$		Master transmitter (after enable edge)	-	20	
$t_{h(SD\_MT)}$	Data output hold time	Master transmitter (after enable edge)	2.5	-	

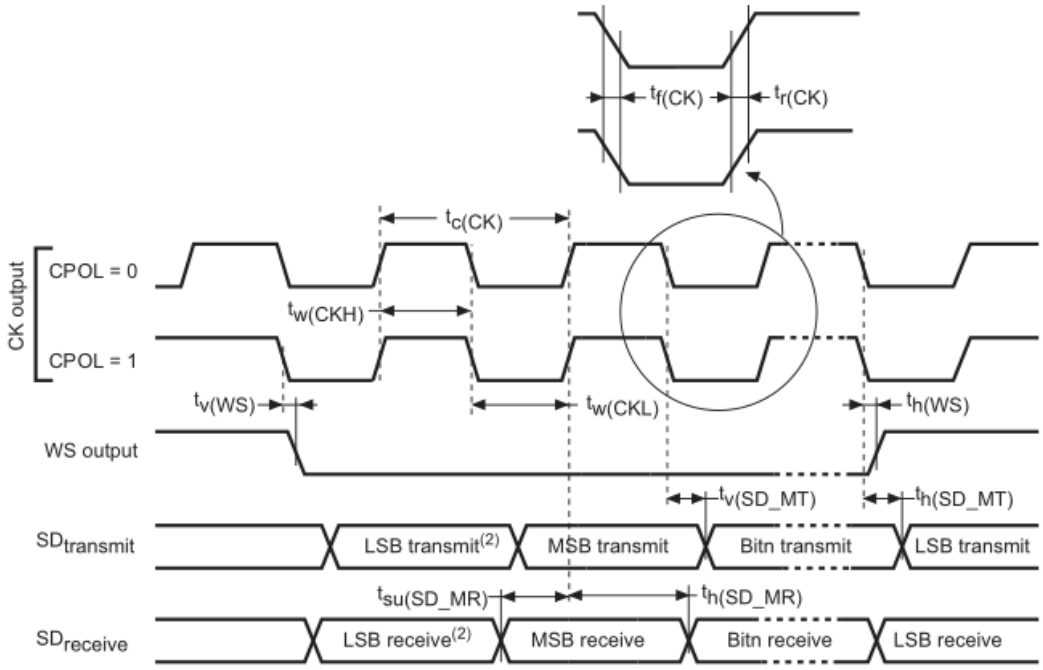
1. Guaranteed by characterization.
2. The maximum value of 256xFs is 42 MHz (APB1 maximum frequency).

Note: Refer to the I2S section of the reference manual for more details on the sampling frequency(F_S).
f_{MCK}, f_{CK}, and D_{CK} values reflect only the digital peripheral behavior. The values of these parameters might be slightly impacted by the source clock precision. D_{CK} depends mainly on the value of ODD bit. The digital contribution leads to a minimum value of (I2SDIV/(2*I2SDIV+ODD) and a maximum value of (I2SDIV+ODD)/(2*I2SDIV+ODD). F S maximum value is supported for each mode/condition.



1. LSB transmit/receive of the previously transmitted byte. No LSB transmit/receive is sent before the first byte.

Figure 6-2-1-1: I²S slave timing diagram (Philips protocol)



1. LSB transmit/receive of the previously transmitted byte. No LSB transmit/receive is sent before the first byte.

Figure 6-2-1-2: I²S master timing diagram (Philips protocol)

6.3 AIO , PIO lines and I²C

Up to 16 programmable bidirectional input/output (I/O) can be used.
Two general purpose analogue interface pin can be used.
PIO6 and PIO7 can be used as I2C interface.

Inter-Integrated Circuit Interface (I²C)

I²C bus interfaces can operate in multi-master and slave modes. They can support the standard (up to 100 kHz) and fast (up to 400 kHz) modes. The I²C bus frequency can be increased up to 1 MHz. For more details about the complete solution, please contact your local ST sales representative. They also support the 7/10-bit addressing mode and the 7-bit dual addressing mode (as slave). A hardware CRC generation/verification is embedded.
They can be served by DMA and they support SMBus 2.0/PMBus.
The devices also include programmable analog and digital noise filters

Analog to Digital Converter (ADC)

One 12-bit analog-to-digital converter is embedded and shares up to 16 external channels, performing conversions in the single-shot or scan mode. In scan mode, automatic conversion is performed on a selected group of analog inputs.
The ADC can be served by the DMA controller. An analog watchdog feature allows very precise monitoring of the converted voltage of one, some or all selected channels. An interrupt is generated when the converted voltage is outside the programmed thresholds.
To synchronize A/D conversion and timers, the ADCs could be triggered by any of TIM1,TIM2, TIM3, TIM4 or TIM5 timer.

6.4 USB Interface

USB 2.0 full-speed device/host/OTG controller with on-BT Module PHY.

Table 6-4-1: USB OTG FS startup time

Symbol	Parameter	Max	Unit
$t_{STARTUP}$(1)	USB OTG FS transceiver startup time	1	μs

1. Guaranteed by design.

Table 6-4-2: USB OTG FS DC electrical characteristics

Symbol		Parameter	Conditions	Min.(1)	Typ.	Max.(1)	Unit
Input levels	V_{DD}	USB OTG FS operating voltage		3.0(2)	-	3.6	V
	V_{DI}(3)	Differential input sensitivity	I(USB_FS_DP/DM)	0.2	-	-	V
	V_{CM}(3)	Differential common mode range	Includes V_{DI} range	0.8	-	2.5	
	V_{SE}(3)	Single ended receiver threshold		1.3	-	2.0	
Output levels	V_{OL}	Static output level low	R_L of 1.5 kΩ to 3.6 V(4)	-	-	0.3	V
	V_{OH}	Static output level high	R_L of 15 kΩ to V_{SS}(4)	2.8	-	3.6	
R_{PD}		PIO0,PIO1 (USB_FS_DM/DP)	$V_{IN} = V_{DD}$	17	21	24	kΩ
R_{PU}		PIO0,PIO1 (USB_FS_DM/DP)	$V_{IN} = V_{SS}$	1.5	1.8	2.1	

1. All the voltages are measured from the local ground potential.

2. The USB OTG FS functionality is ensured down to 2.7 V but not the full USB full speed electrical characteristics which are degraded in the 2.7-to-3.0 V_{VDD} voltage range.

3. Guaranteed by design.

4. R_L is the load connected on the USB OTG FS drivers.

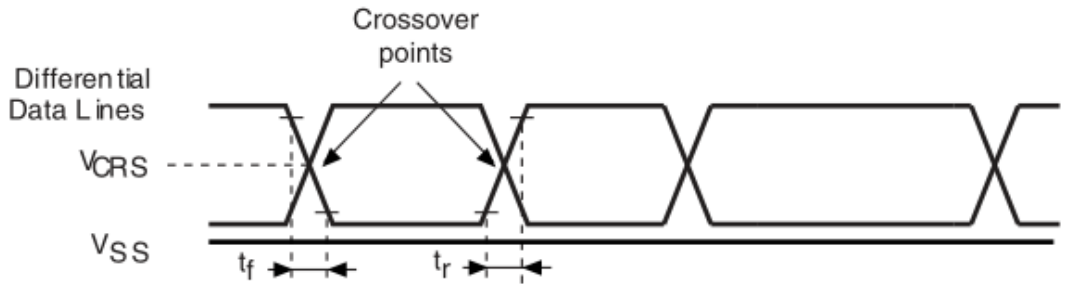


Figure 6-4-1: USB OTG FS timings: definition of data signal rise and fall time

Table 6-4-3: USB OTG FS electrical characteristics (1)

Driver characteristics					
Symbol	**Parameter**	**Conditions**	**Min**	**Max**	**Unit**
t_r	Rise time(2)	C_L = 50 pF	4	20	ns
t_f	Fall time(2)	C_L = 50 pF	4	20	ns
t_{rfm}	Rise/ fall time matching	t_r/t_f	90	110	%
V_{CRS}	Output signal crossover voltage		1.3	2.0	V

1. Guaranteed by design.

2. Measured from 10% to 90% of the data signal. For more detailed information, please refer to USB Specification - Chapter 7 (version 2.0).

7. RECOMMENDED TEMPERATURE REFLOW PROFILE

The re-flow profiles are illustrated in Figure 4 and Figure 5 below.

- Follow: IPC/JEDEC J-STD-020 C
- Condition:
  - Average ramp-up rate(217℃ to peak):1~2℃/sec max.
  - Preheat:150~200C,60~180 seconds
  - Temperature maintained above 217℃:60~150 seconds
  - Time within 5℃ of actual peak temperature:20~40 sec.
  - Peak temperature:250+0/-5℃ or 260+0/-5℃
  - Ramp-down rate:3℃/sec.max.
  - Time 25℃ to peak temperature:8 minutes max
  - Cycle interval： 5 mintutes

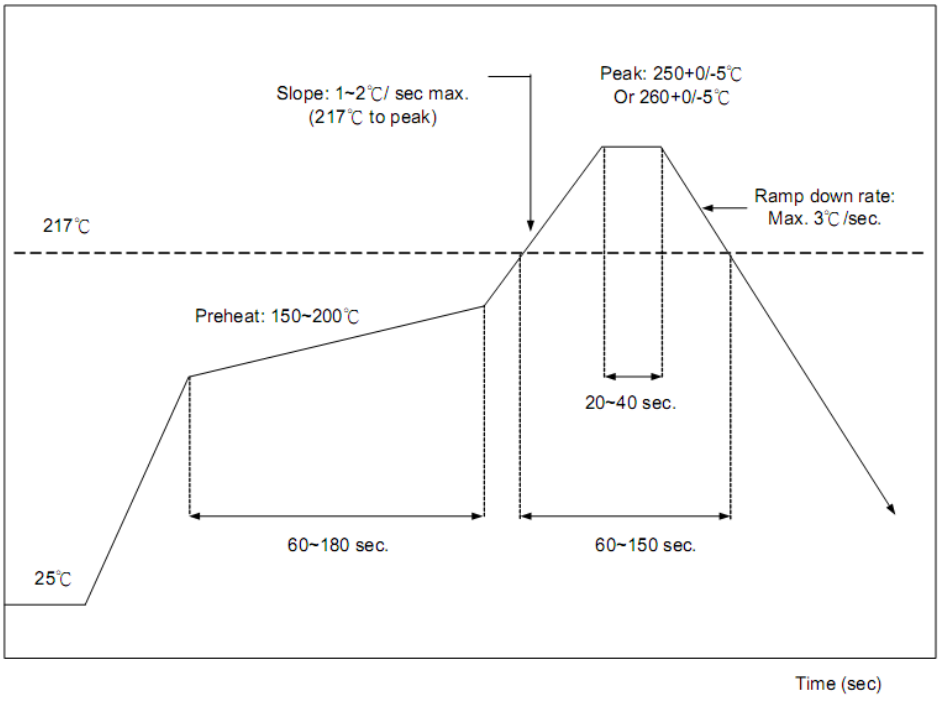


Figure 7-1: Typical Lead-free Re-flow Solder Profile

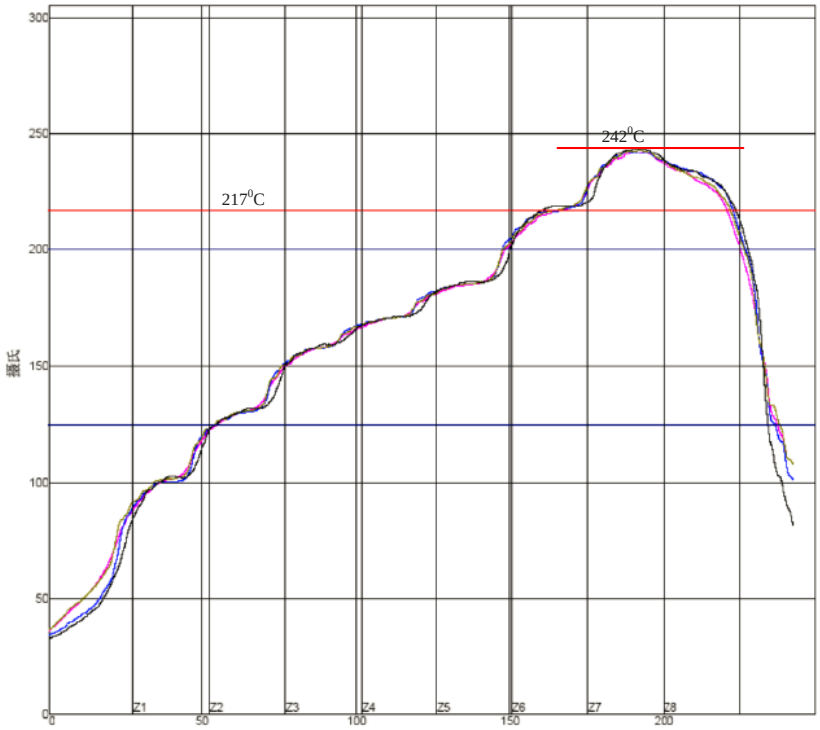


Figure 7-2: Typical Lead-free Re-flow

The soldering profile depends on various parameters according to the use of different solder and material. The data here is given only for guidance on solder re-flow.

FSC-BT909 will withstand up to two re-flows to a maximum temperature of 245°C.

8. Reliability and Environmental Specification

8.1 Temperature test

Put the module in demo board which uses exit power supply, power on the module and connect to mobile. Then put the demo in the -40℃ space for 1 hour and then move to +85℃ space within 1minute, after 1 hour move back to -40℃ space within1 minute. This is 1 cycle. The cycles are 32 times and the units have to pass the testing.

8.2 Vibration Test

The module is being tested without package. The displacement requests 1.5mm and sample is vibrated in three directions(X,Y,Z).Vibration frequency set as 0.5G , a sweep rate of 0.1 octave/min from 5Hz to 100Hz last for 90 minutes each direction. Vibration frequency set as 1.5G, a sweep rate of 0.25 octave/min from 100Hz to 500Hz last for 20 minutes each direction.

8.3 Desquamation test

Use clamp to fix the module, measure the pull of the component in the module, make sure the module`s soldering is good.

8.4 Drop test

Free fall the module (condition built in a wrapper which can defend ESD) from 150cm height to cement ground, each side twice, total twelve times. The appearance will not be damaged and all functions OK.

8.5 Packaging information

After unpacking, the module should be stored in environment as follows:

Temperature: 25℃ ±2℃

Humidity: <60%

No acidity, sulfur or chlorine environment

The module must be used in four days after unpacking.

9. Layout and Soldering Considerations

9.1 Soldering Recommendations

FSC-BT909 is compatible with industrial standard reflow profile for Pb-free solders. The reflow profile used is dependent on the thermal mass of the entire populated PCB, heat transfer efficiency of the oven and particular type of solder paste used. Consult the datasheet of particular solder paste for profile configurations.

Feasycom will give following recommendations for soldering the module to ensure reliable solder joint and operation of the module after soldering. Since the profile used is process and layout dependent, the optimum profile should be studied case by case. Thus following recommendation should be taken as a starting point guide.

9.2 Layout Guidelines

It is strongly recommended to use good layout practices to ensure proper operation of the module. Placing copper or any metal near antenna deteriorates its operation by having effect on the matching properties. Metal shield around the antenna will prevent the radiation and thus

metal case should not be used with the module. Use grounding vias separated max 3 mm apart at the edge of grounding areas to prevent RF penetrating inside the PCB and causing an unintentional resonator. Use GND vias all around the PCB edges.

The mother board should have no bare conductors or vias in this restricted area, because it is not covered by stop mask print. Also no copper (planes, traces or vias) are allowed in this area, because of mismatching the on-board antenna.

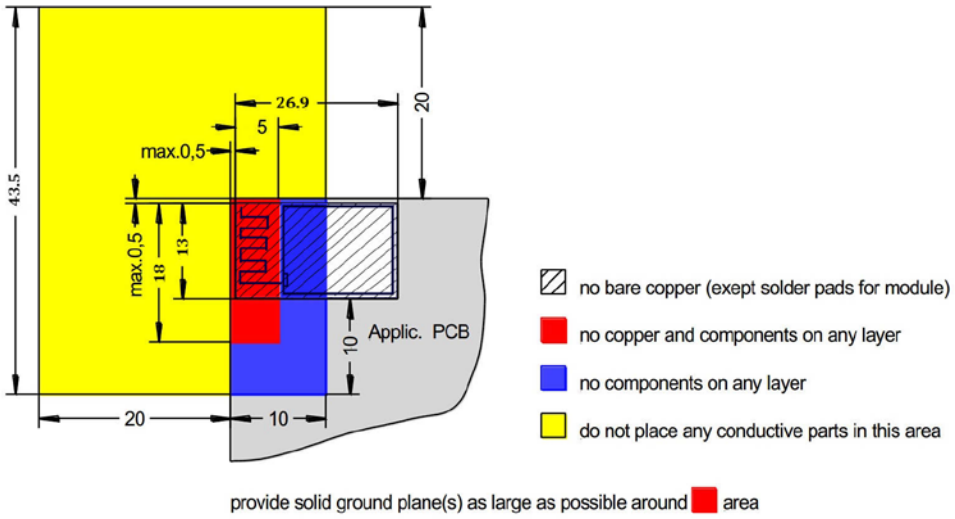


Figure 9-2-1: FSC-BT909 Restricted Area

Following recommendations helps to avoid EMC problems arising in the design. Note that each design is unique and the following list do not consider all basic design rules such as avoiding capacitive coupling between signal lines. Following list is aimed to avoid EMC problems caused by RF part of the module. Use good consideration to avoid problems arising from digital signals in the design.

Ensure that signal lines have return paths as short as possible. For example if a signal goes to an inner layer through a via, always use ground vias around it. Locate them tightly and symmetrically around the signal vias. Routing of any sensitive signals should be done in the inner layers of the PCB. Sensitive traces should have a ground area above and under the line. If this is not possible, make sure that the return path is short by other means (for example using a ground line next to the signal line).

10. Product Packaging Information

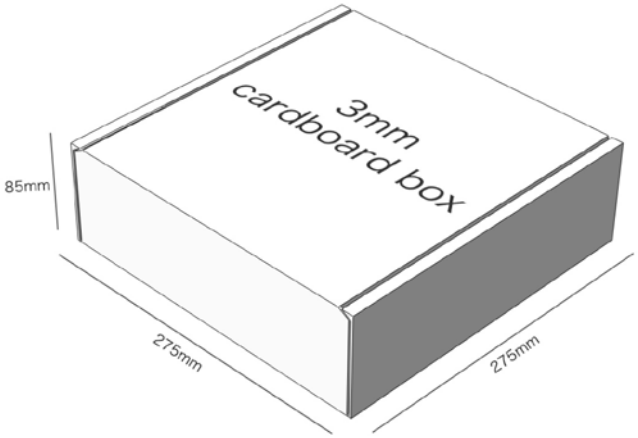
10.1 Packing

a, Tray vacuum

b, Tray Dimension: 180mm * 195mm

Figure 10-1: Product Packaging Information (Tray)

10.2 Packing box (Optional)



* If require any other packing, must be confirmed with customer

Figure 10-2: Packing Box

11. Certification

11.1 FCC

- FSC-BT909_FCC Certificate (DSS)

FCC IDENTIFIER:	2AMWOFSC-BT909
Name of Grantee:	Shenzhen Feasycom Technology Co.,Ltd
Equipment Class:	**Part 15 Spread Spectrum Transmitter**
Notes:	**Bluetooth Module**

- FSC-BT909_FCC Certificate (DTS)

FCC IDENTIFIER:	2AMWOFSC-BT909
Name of Grantee:	Shenzhen Feasycom Technology Co.,Ltd
Equipment Class:	**Digital Transmission System**
Notes:	**Bluetooth Module**

11.2 CE

- FSC-BT909_RED_Certificate_BT

EU-RED Certificate of Conformity

Radio Equipment Directive (RED) 2014/53/EU

Registration No.	AGC01249170601E0
Manufacturer	Shenzhen Feasycom Technology Co.,Ltd Room 2004A, 20th Floor, Huichao Technology Building, Jinhai Road, Xixiang, Baoan District, Shenzhen, China
Product Designation	Bluetooth Module
Brand Name	Feasycom
Model / Series Models	FSC-BT909
Factory	Shenzhen Feasycom Technology Co.,Ltd Room 2004A, 20th Floor, Huichao Technology Building, Jinhai Road, Xixiang, Baoan District, Shenzhen, China

Requirement	Applied Standards	Document Evidence	Result
Art.3.1(a) Health	EN 62311:2008	Test Report: AGC01249170601EH04	Conform
Art.3.1(a) Safety	EN 60950-1:2006+A11:2009 +A1:2010+A12:2011+A2:2013	Test Report: AGC01249170601ES01	Conform
Art.3.1(b) EMC	Draft EN 301 489-1 V2.2.0 Draft EN 301 489-17 V3.2.0	Test Report: AGC01249170601EE01	Conform
Art.3.2 Radio	EN 300 328 V2.1.1	Test Report: AGC01249170601EE04	Conform
		Test Report: AGC01249170601EE11	Conform

CE

Signed by Quality Manager
Issue Date: Aug. 04, 2017

Recognized by Attestation of Global Compliance (Shenzhen) Co., Ltd., in accordance with the RED Directive 2014/53/EU. The certificate doesn't imply assessment of the production. The Applicant of the certificate is authorized to use this certificate in connection with EC declaration of conformity to the Directive. The certificate is only applicable to the equipments described above. This certificate shall not be re-produced except in full without the written approval of Attestation of Global Compliance (Shenzhen) Co., Ltd.

Note: This certificate is part of the full test report(s) and should be used in conjunction with it.

12. Application Schematic