

Wi-SUN module for FAN

BP35C5-T01 Evaluation Board

Version 1.0.0

Overview

This document describes the specifications of the Wi-SUN module Evaluation board BP35C5-T01.



Index

1.	Absolute Max. Rating	3
2.	Recommend Operating Conditions	4
3.	Main Performance	5
4.	Terminal Table	6
5.	Circuit Diagram	8
6.	External Dimensions	9
7.	Precautions of Use	10
8.	Revision History	11

1. Absolute Max. Rating

No.	Item	Symbol	Rating	Unit	Remarks
1	Power supply Voltage	VDD	-0.3 to +3.9	V	DC
2	Digital input voltage	V _{DIN}	-0.3 to VDD+0.3	V	
3	Digital output voltage	V _{DO}	-0.3 to VDD+0.3	V	
4	Digital output current	I _{DO}	-8 to +8	mA	
5	RF input power	PIN	0	dBm	
6	Operating temperature range	T _{opr}	-30 to +85	°C	
7	Storage temperature range	T _{stg}	-30 to +85	°C	

(Note) The absolute maximum ratings represent values that shall not be exceeded for even an instant on all operating or testing conditions. Design systems with a margin for the ratings listed above.

2. Recommend Operating Conditions

No.	Item	Symbol	Specifications			Unit	Remarks
			MIN.	TYP.	MAX.		
1	Power supply Voltage	VDD	2.6	3.3	3.6	V	
2	Operating Temperature	Ta	-30	+25	+85	°C	

3. Main Performance

Item	Contents
Radio standards	ARIB STD-T108, FCC Part15 Compliant
Radio frequency	• ARIB STD-T108 : 920.6MHz~928MHz • FCC Part15 : 902.2MHz~927.8MHz
Modulation scheme	Binary GFSK
Data rate	• ARIB STD-T108 : 50kbps, 100kbps, 150kbps, 300kbps • FCC Part15 : 50kbps, 150kbps, 300kbps
Transmission Power	20mW
Reception sensitivity	-95dBm (Typ.) (150 kbps, BER<0.1 %) BP35C5 Antenna terminal end
Frequency deviation	Below ± 20 ppm
HOST interface	UART(115,200 bps) , GPIO

4. Terminal Table

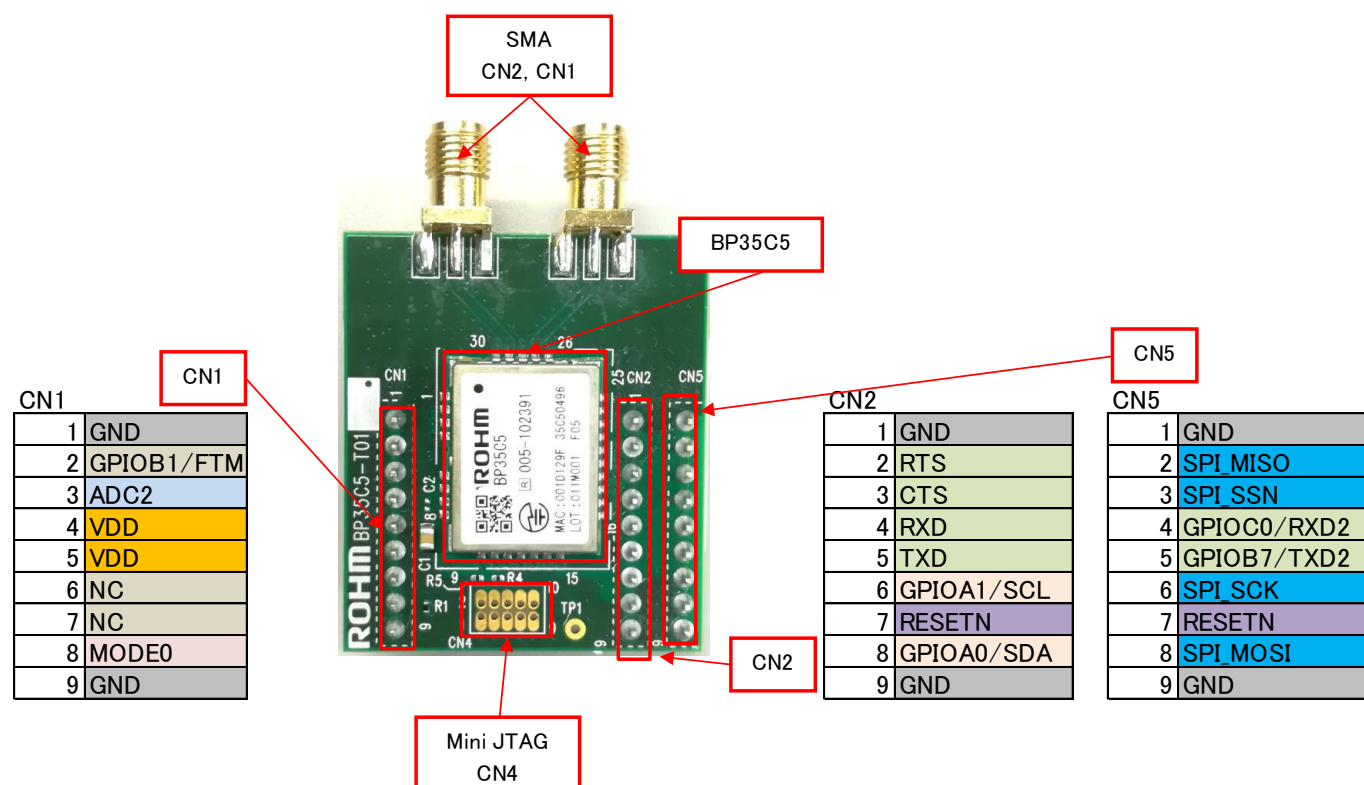


Figure 1 BP35C5-T01 Terminal position

* Antenna connector is SMA Female type.

Table 1. Module Terminal instruction table (CN1)

No.	Pin	I/O	Features	Remarks
1	GND	-	GND	-
2	GPIOB1/FTM	I	Reserve	OPEN
3	ADC2	I	Reserve	OPEN
4	VDD	-	Power supply terminal	-
5				
6	NC	-	Non connect	OPEN
7	NC	-	Non connect	OPEN
8	MODE0	I	Mode	Pull down on BP35C5-T01 PCB
9	GND	-	GND	-

* I/O definition I: Digital input terminal, O: Digital output terminal

Table 2. Module Terminal Description Table (CN2)

No.	Pin	I/O	Features	Remarks
1	GND	-	GND	-
2	RTS	O	Reserve (*1)	OPEN
			UART_RTS (*2)	-
3	CTS	I	Reserve (*1)	OPEN
			UART_CTS (*2)	-
4	RXD	I	UART_RXD	-
5	TXD	O	UART_TXD	-
6	GPIOA1/SCL	O	Status indicator (*3)	OPEN or LED etc.
7	RESETN	I	Power-ON Reset/Reset	RESET: L, Normal: H
8	GPIOA0/SDA	I/O	Reserve	OPEN
9	GND	-	GND	-

*I/O definition I: Digital input terminal, O: Digital output terminal

(*1) When HW flow control is disabled (Default)

(*2) When HW flow control is enabled

(*3) When status indicator is enabled (Default) : Broad cast transmitting : High output

Table 3. Module Terminal instruction table (CN5)

No.	Pin	I/O	Features	Remarks
1	GND	-	GND	-
2	SPI_MISO	I/O	Reserve	OPEN
3	SPI_SSN	I/O	Reserve	OPEN
4	GPIOC0/RXD2	I/O	Reserve	OPEN
5	GPIOB7/TXD2	I/O	Reserve	OPEN
6	SPI_SCK	I/O	Reserve	OPEN
7	RESETN	I	Power-ON Reset/Reset	RESET: L, Normal: H
8	SPI_MOSI	I/O	Reserve	OPEN
9	GND	-	GND	-

*I/O definition I: Digital input terminal, O: Digital output terminal

5. Circuit Diagram

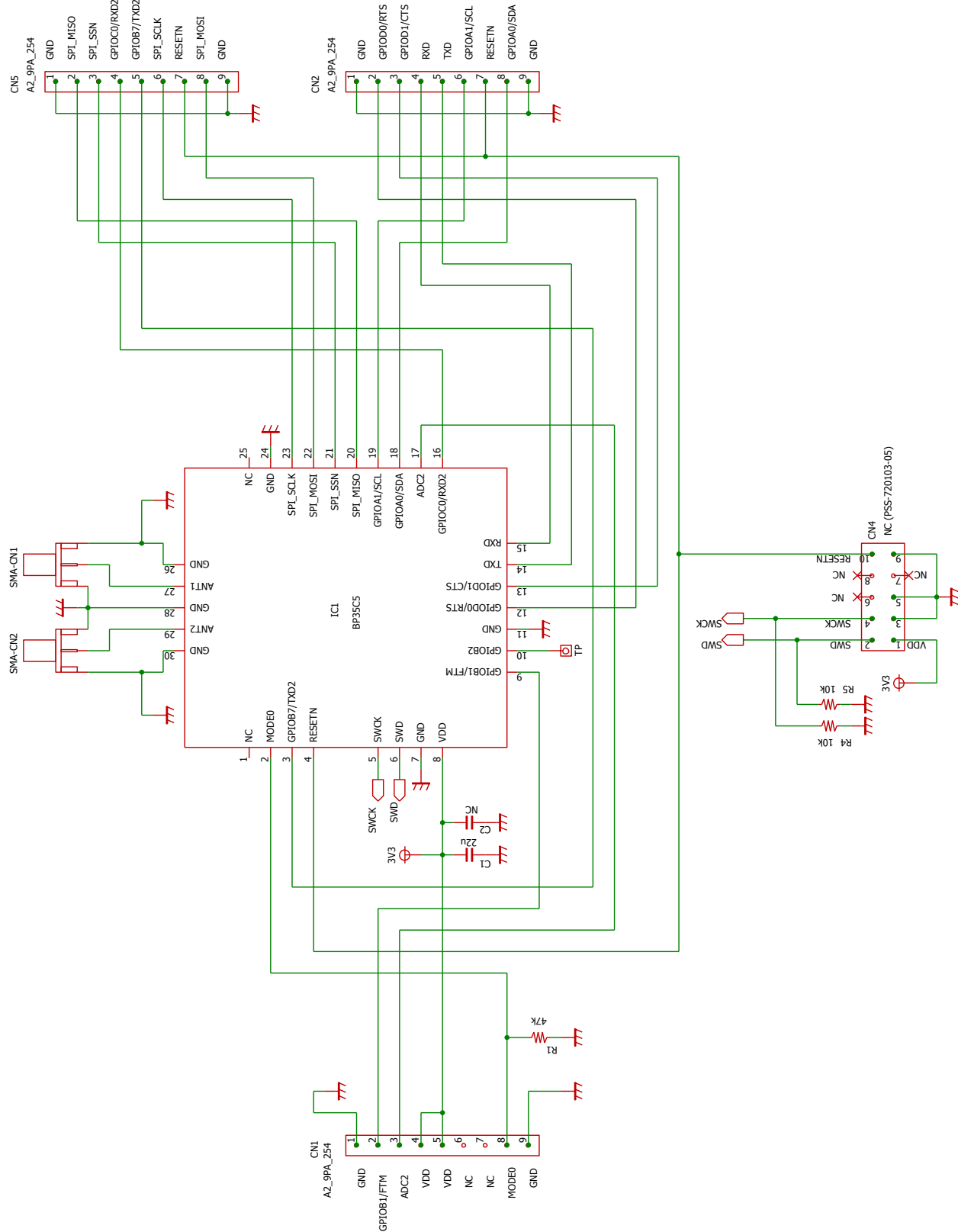


Figure 2 BP35C5-T01 Circuit configuration

6. External Dimensions

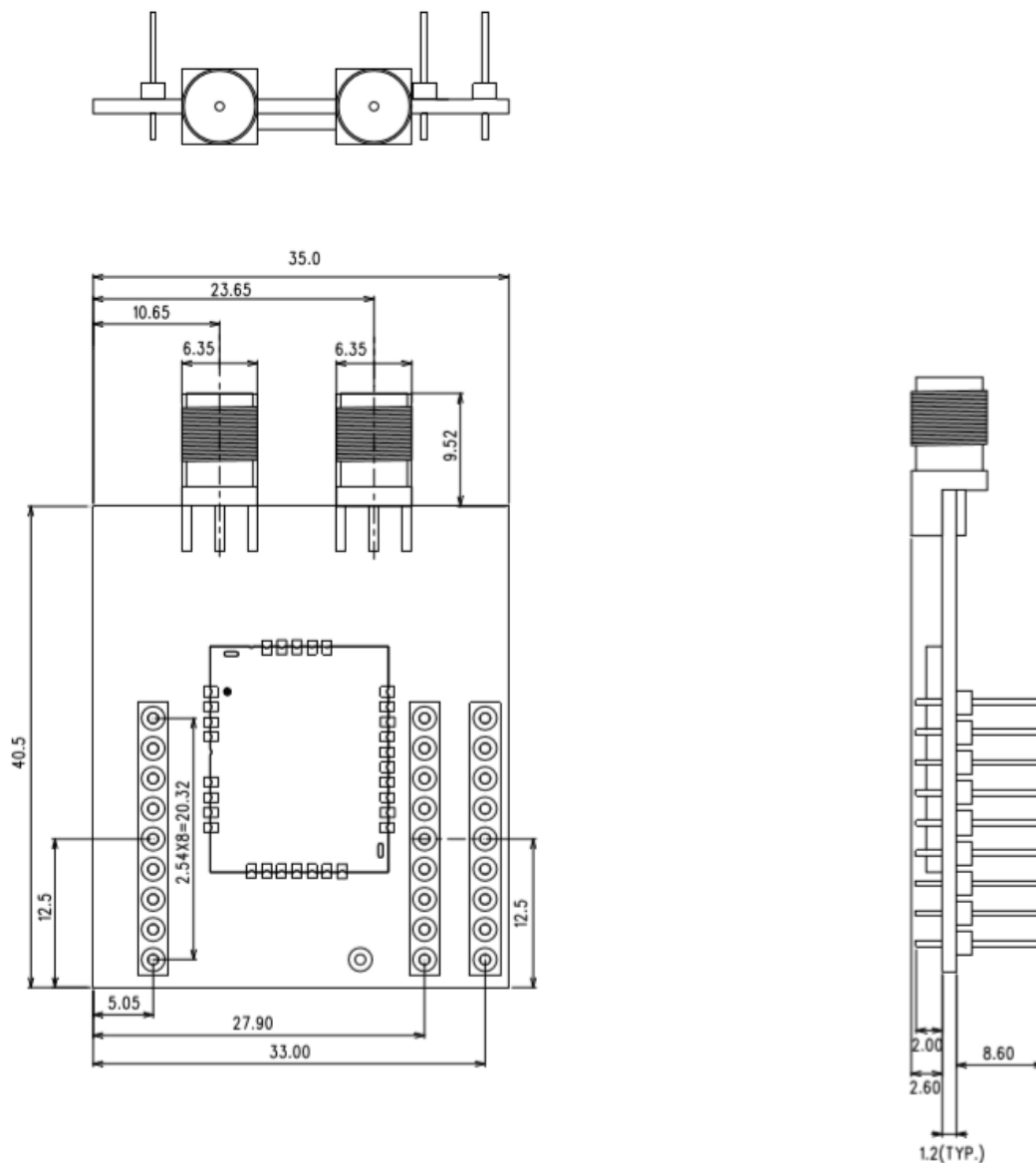


Figure 3 External dimensions

(*) Figures are all reference values.

(*) The board specifications and label specifications of this product may change due to manufacturing lots.

7. Precautions of Use

- (1) The soldering part of the module which is implemented in this product is assumed that there is no solder fillet.
- (2) This product is a technical evaluation board for wireless modules. Please note that the specifications are not intended to be incorporated into the product. If you use it in your product, please use a compatible wireless module.

8. Revision History

Ver.	Date	Contents
1.0.0	2020/6/11	Initial version

Notes

- 1) The information contained herein is subject to change without notice.
- 2) Before you use our Products, please contact our sales representative and verify the latest specifications :
- 3) Although ROHM is continuously working to improve product reliability and quality, semiconductors can break down and malfunction due to various factors.
Therefore, in order to prevent personal injury or fire arising from failure, please take safety measures such as complying with the derating characteristics, implementing redundant and fire prevention designs, and utilizing backups and fail-safe procedures. ROHM shall have no responsibility for any damages arising out of the use of our Products beyond the rating specified by ROHM.
- 4) Examples of application circuits, circuit constants and any other information contained herein are provided only to illustrate the standard usage and operations of the Products. The peripheral conditions must be taken into account when designing circuits for mass production.
- 5) The technical information specified herein is intended only to show the typical functions of and examples of application circuits for the Products. ROHM does not grant you, explicitly or implicitly, any license to use or exercise intellectual property or other rights held by ROHM or any other parties. ROHM shall have no responsibility whatsoever for any dispute arising out of the use of such technical information.
- 6) The Products specified in this document are not designed to be radiation tolerant.
- 7) For use of our Products in applications requiring a high degree of reliability (as exemplified below), please contact and consult with a ROHM representative : transportation equipment (i.e. cars, ships, trains), primary communication equipment, traffic lights, fire/crime prevention, safety equipment, medical systems, servers, solar cells, and power transmission systems.
- 8) Do not use our Products in applications requiring extremely high reliability, such as aerospace equipment, nuclear power control systems, and submarine repeaters.
- 9) ROHM shall have no responsibility for any damages or injury arising from non-compliance with the recommended usage conditions and specifications contained herein.
- 10) ROHM has used reasonable care to ensure the accuracy of the information contained in this document. However, ROHM does not warrants that such information is error-free, and ROHM shall have no responsibility for any damages arising from any inaccuracy or misprint of such information.
- 11) Please use the Products in accordance with any applicable environmental laws and regulations, such as the RoHS Directive. For more details, including RoHS compatibility, please contact a ROHM sales office. ROHM shall have no responsibility for any damages or losses resulting non-compliance with any applicable laws or regulations.
- 12) When providing our Products and technologies contained in this document to other countries, you must abide by the procedures and provisions stipulated in all applicable export laws and regulations, including without limitation the US Export Administration Regulations and the Foreign Exchange and Foreign Trade Act.
- 13) This document, in part or in whole, may not be reprinted or reproduced without prior consent of ROHM.



Thank you for your accessing to ROHM product informations.
More detail product informations and catalogs are available, please contact us.

ROHM Customer Support System

<http://www.rohm.com/contact/>