

Wi-SUN module for B-Route, Enhanced HAN

BP35C0-J11-T01 Evaluation Board

Version 1.0.1

Overview

This document describes the specifications of the Wi-SUN module Evaluation board BP35C0-J11-T01.



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1. Absolute Max. Rating

No.	Item	Symbol	Rating	Unit	Remarks
1	Power supply Voltage	VCC	-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	VCC	2.6	3.3	3.6	V	20mW/ 10mW mode
			1.8	3.3	3.6	V	1mW mode
2	Operating Temperature	Ta	-30	+25	+85	°C	

3. Main Performance

Item	Contents
Radio standards	ARIB STD-T108 Compliant
Radio frequency	920 MHz band
Modulation scheme	Binary GFSK
Data rate	100 kbps
Transmission Power	20mW (default)/ 10mW/ 1mW output (*1)
Reception sensitivity	-103 dBm (Typ.) (100 kbps, BER<0.1 %) BP35C0-J11 Terminal end
Frequency deviation	Below ± 20 ppm
HOST interface	UART(115,200 bps) / GPIO

(*1) It is able to change the transmission power via command [Initial setting (command code: 0x005F)].

For details, refer to the software specification

4. Terminal Table

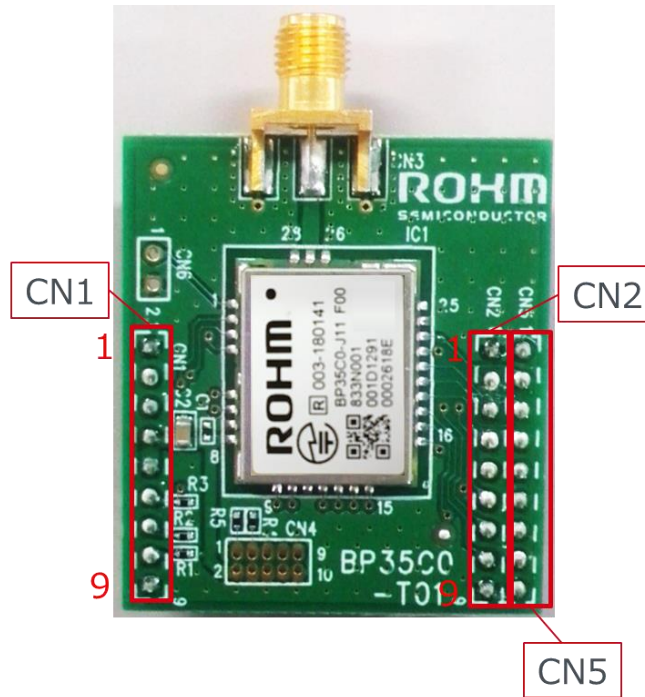


Figure 1 BP35C0-J11-T01 Terminal position

* Antenna connector is SMA Female type.

Table 1. Module Terminal instruction table (CN1)

No.	Pin	I/O	Features	Remarks
1	GND	-	GND Pin	
2	ADC1	I _A	Analog IN	OPEN
3	ADC2	I _A	Analog IN	OPEN
4	VCC	-	Power supply terminal	
5				
6	GPIOA7	I/O	Generic port	OPEN
7	MODE2	I	Mode Pin	OPEN
8	MODE0	I		
9	GND	-	GND Pin	

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

Table 2. Module Terminal Description Table (CN2)

No.	Pin	I/O	Features	Remarks
1	GND	-	GND Pin	
2	RTS	O	Generic port (*1)	OPEN
			UART_RTS (*2)	
3	CTS	I	Generic port (*1)	OPEN
			UART_CTS (*2)	
4	RXD	I	UART_RXD	
5	TXD	O	UART_TXD	
6	SCL	I/O	Generic port	OPEN
7	RESET	I	Power-ON Reset/Reset	RESET: L, Normal: H
8	SDA	I/O	Generic port	OPEN
9	GND	-	GND Pin	

※ I/O definition I: Digital input terminal, O: Digital output terminal,
I_A: Analog input terminal

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

(*2) When HW flow control is enabled

Table 3. Module Terminal instruction table (CN5)

No.	Pin	I/O	Features	Remarks
1	N.C	-	No connection	OPEN
2	SPI_SCK	I/O	Generic port	OPEN
3	DCLK_SPI_SSN	I/O	Generic port	OPEN
4	DIO/SPI_MOSI	I/O	Generic port	OPEN
6	FTM	I/O	Generic port	OPEN
7	N.C	-	No connection	OPEN
8	N.C	-	No connection	OPEN
9	N.C	-	No connection	OPEN

※ I/O definition I: Digital input terminal, O: Digital output terminal, I_A: Analog input terminal

5. Circuit Diagram

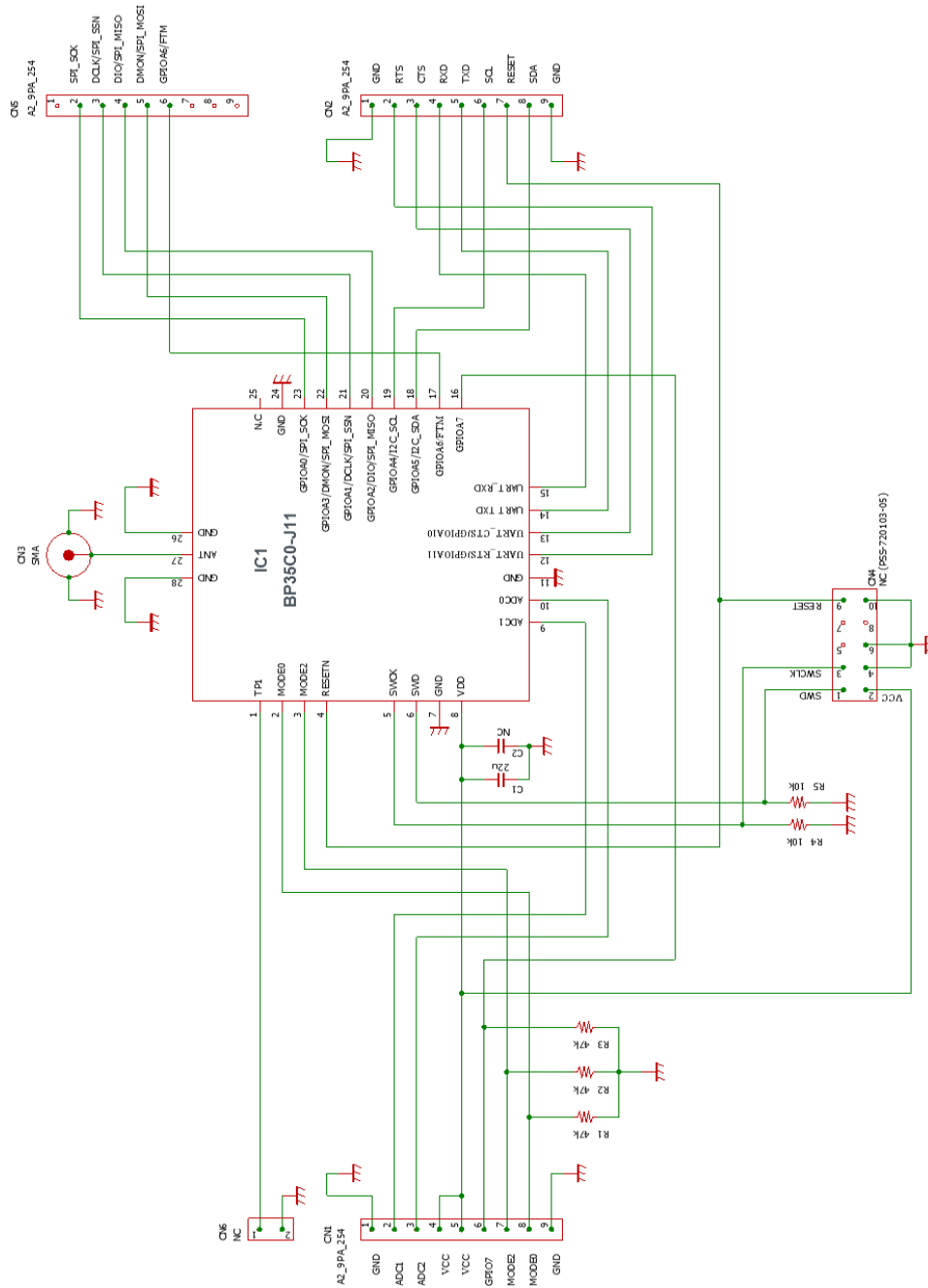


Figure 2 BP35C0-J11-T01 Circuit configuration

* If not using the RTS terminal and CTS Terminal, please keep it OPEN.

6. External Dimensions

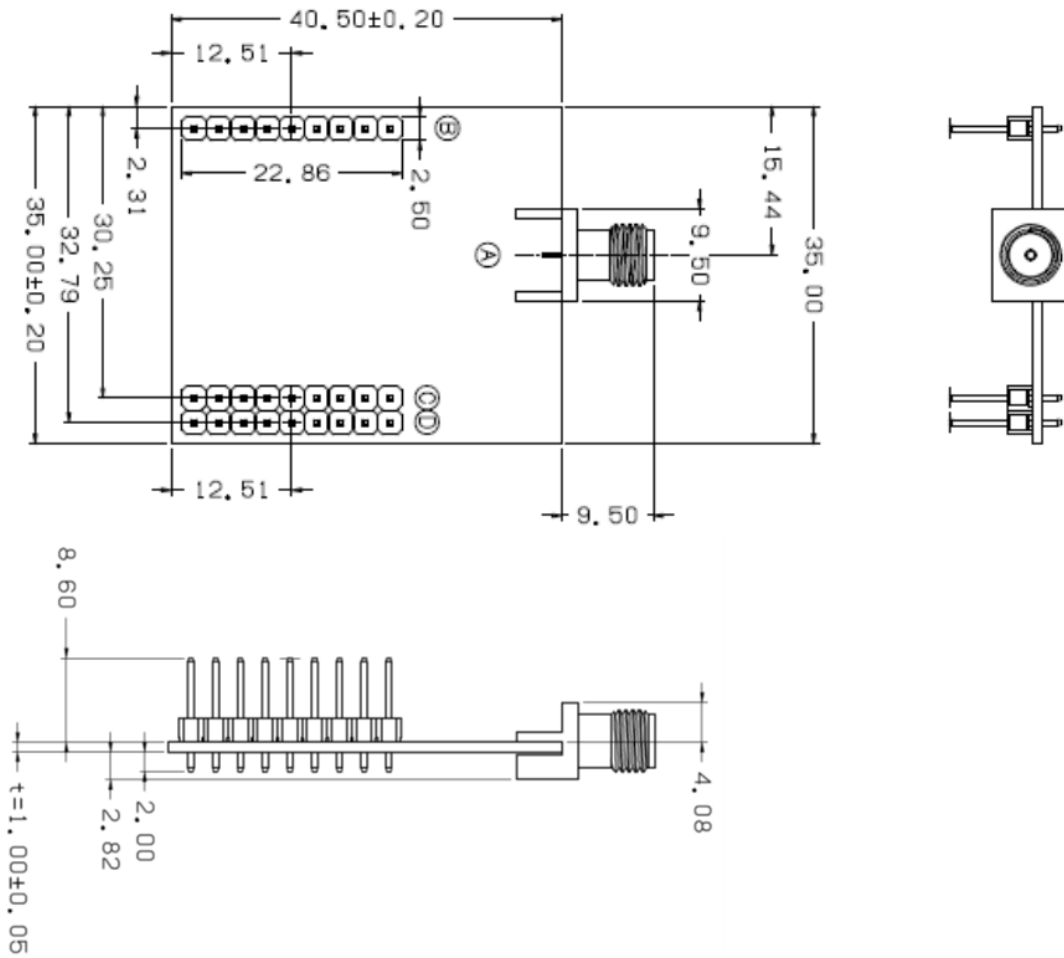


Figure 3 External dimensions

(*) Figures are all reference values.

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	March 1, 2019	Create New
1.0.1 (Rev.001)	May 20, 2020	Format Change

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