

#### ● Introduction

PIMF-HSNAT-IVA (with ABS enclosure) is Mifare & Mifare Ultralight 13.56MHz UID reading module which supports ABA, UART output. Only requests DC4.9~5.4V input.

We provide complete software/Hardware support and shorten schedule of RFID product development, OEM/ODM service is available.



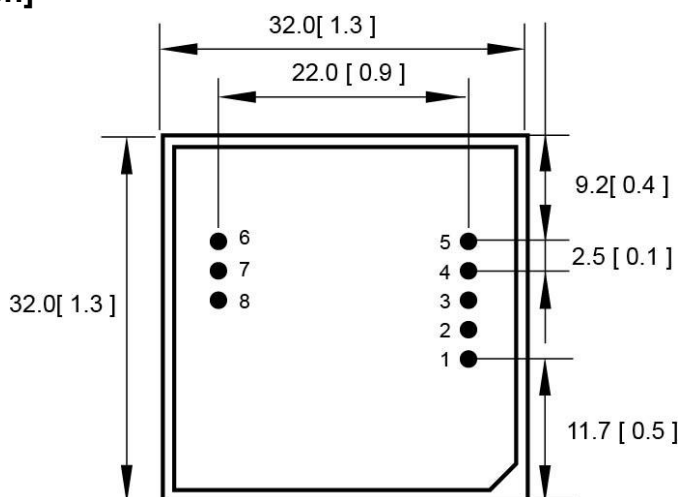
#### ● Features

- Support Mifare ISO 14443A(UID)
- Support ABA, UART Output.
- Supply firmware modification accords to request of special function
- High speed data transfer and high integrity
- Comply with ROHS

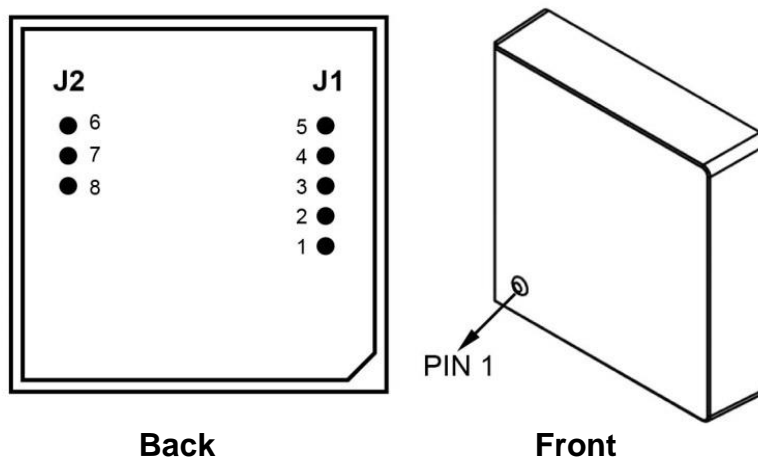
#### ● Specification

RFID frequency	13.56MHz
Applicable cards	Mifare S50 / S70, Ultra Light or compatible
Reading range	Card (T:0.8mm)Max.2.5 cm
Output format	ABA, UART
Power input	5V DC±10%
Transmission spec.	9,600 bps N, 8, 1
Sleep current	13mA ±10%@5V DC
Standby current	38mA ±10%@5V DC
Working current	45mA ±10%@5V DC
Material	ABS
Dimensions(L) ×(W) ×(H) mm/inch	32 x 32 x 8 /1.3 x 1.3 x 0.3
Operating temperature	-10°C ~70°C
Storage temperature	-20°C ~85°C

#### ● Dimension: Unit: mm[inch]



- **Wire configuration**



J1- UART Output			
<b>J1</b> 5 ● 4 ● 3 ● 2 ● 1 ●	Pin	Signal direction	Function
	5	→	CLS
	4	←	Log. 0: Sleep Mode Log. 1: Reads Continuously
	3	→	Tx
	2	—	GND
	1	←	+4.9~5.4V

J2- ABA Output			
<b>J2</b> ● 6 ● 7 ● 8	Pin	Signal direction	Function
	6	→	Buzzer
	7	→	DATA
	8	→	CLK

- **Data formats**

#### ABA output format

##### Magnetic stripe ABA Track2 output format (For Mifare)

SS	CARD ID(10D)	ES	LRC
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**SS** is the start sentinel character of 11010

**ES** is the end character of 11111

**LRC** is the longitudinal redundancy check.

##### Magnetic stripe ABA Track2 output format (For Ultra Light)

SS	CARD ID(17D)	ES	LRC
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**SS** is the start sentinel character of 11010

**ES** is the end character of 11111

**LRC** is the longitudinal redundancy check.

### UART output format

STX(02Hex)	CARD ID(8 ASCII)	CR	LF	ETX(03Hex)
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If the card no. is 00318F59, you will get the following ASCII.

STX ETX

Hex : 02H, 30H, 30H, 33H, 31H, 38H, 46H, 35H, 39H, 0DH, 0AH, 03H

### Transmission Spec.

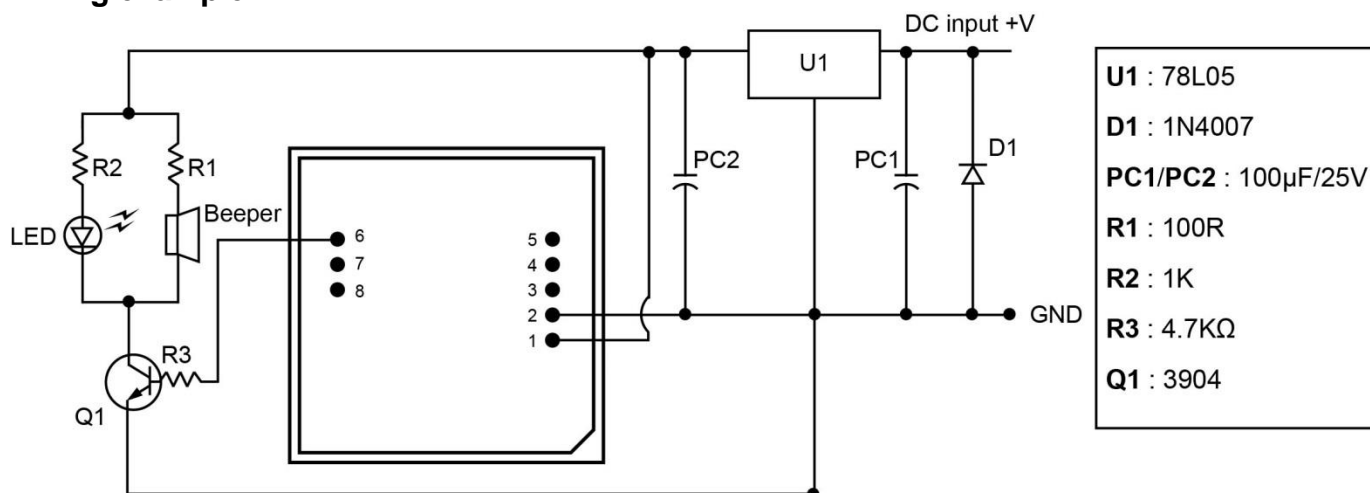
Baud rate : 9,600 bps

Parity bit : none

Data bit : 8

Stop bit : 1

### ● Wiring example



Mifare is a registered trademark of NXP B.V.

Specifications subject to change without notice for further modification.

W-04- PIMF-HSNAT-IVA1/E