



高霖通訊科技有限公司  
Go-Link Technology Co., Ltd.

產品規格/承認書  
PRODUCT SPECIFICATION / APPROVAL SHEET

產品 : 藍芽低功耗模組  
Product : Bluetooth Low Energy (BLE) module

型號  
Model No. : MBLEA-03N

客戶  
Customer :

客戶型號  
Customer Model No. :

		本承認書內容若貴公司確認無誤， 請於下方承認欄內簽章。 <b>Please confirm your acceptance of this approval sheet by authorized signatures.</b>	
		承認欄 <b>Approved Signature</b>	
版本 (Version)	V1.0		
日期 (Date)	2017/08/30		

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# 1. General

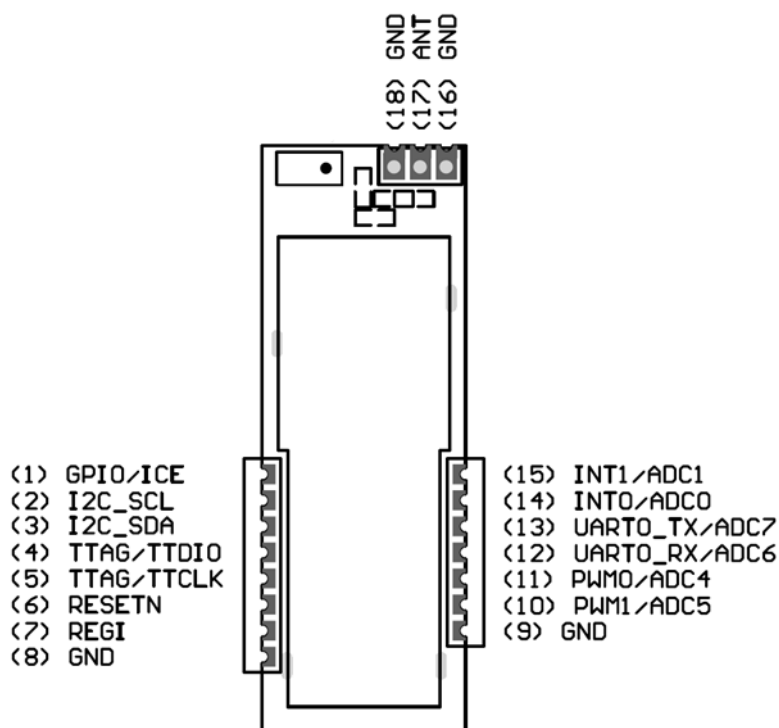
MBLEA-03N module is a high performance 2.4GHz FSK/GFSK system-on-chip (SOC) wireless transceiver. With on chip fraction-N synthesizer, it can support the application of data rate from 4Kbps to 2Mbps and frequency hopping system. This device integrates high speed pipeline 8051 MCU, 32KBytes In-system programmable flash memory, 2KB SRAM, various powerful functions and excellent performance of 2.4GHz FSK/GFSK RF transceiver. It can be operated with wide voltage from 2.0V ~ 3.6V and various operating modes, making it highly suited for systems where ultra-low power consumption is required.

## 2. Electrical Characteristics

Testing Condition @ 25°C

No.	Items	Specification.	Remark
1	Supply Voltage	2.0V~3.6V	
2	Current Consumption	0.8uA @Deep Sleep mode 3mA @Stand-by mode 9.5mA @PLL mode 18mA @Rx mode 23.5mA @Tx mode (Pout = 3dBm)	typical
3	Frequency	2402 – 2480 MHz	ISM band
4	Transmit output power	3 dBm @ room temperature	Typical
5	RX sensitivity	-92 dBm (typical) @ 1Mbps mode	BER ≤ 1E-3
6	Modulation	GFSK	
7	Interface	PIN 1 ~ 18 Stamp Hole 2.0mm pitch ANT1 - On board chip ANT Option	
8	Dimension	9.9 x 28.7 x 2.5mm (PCB thickness is 0.8mm)	
9	Operating temperature	-40 ~ 85 °C	

### 3. Pin Assignment

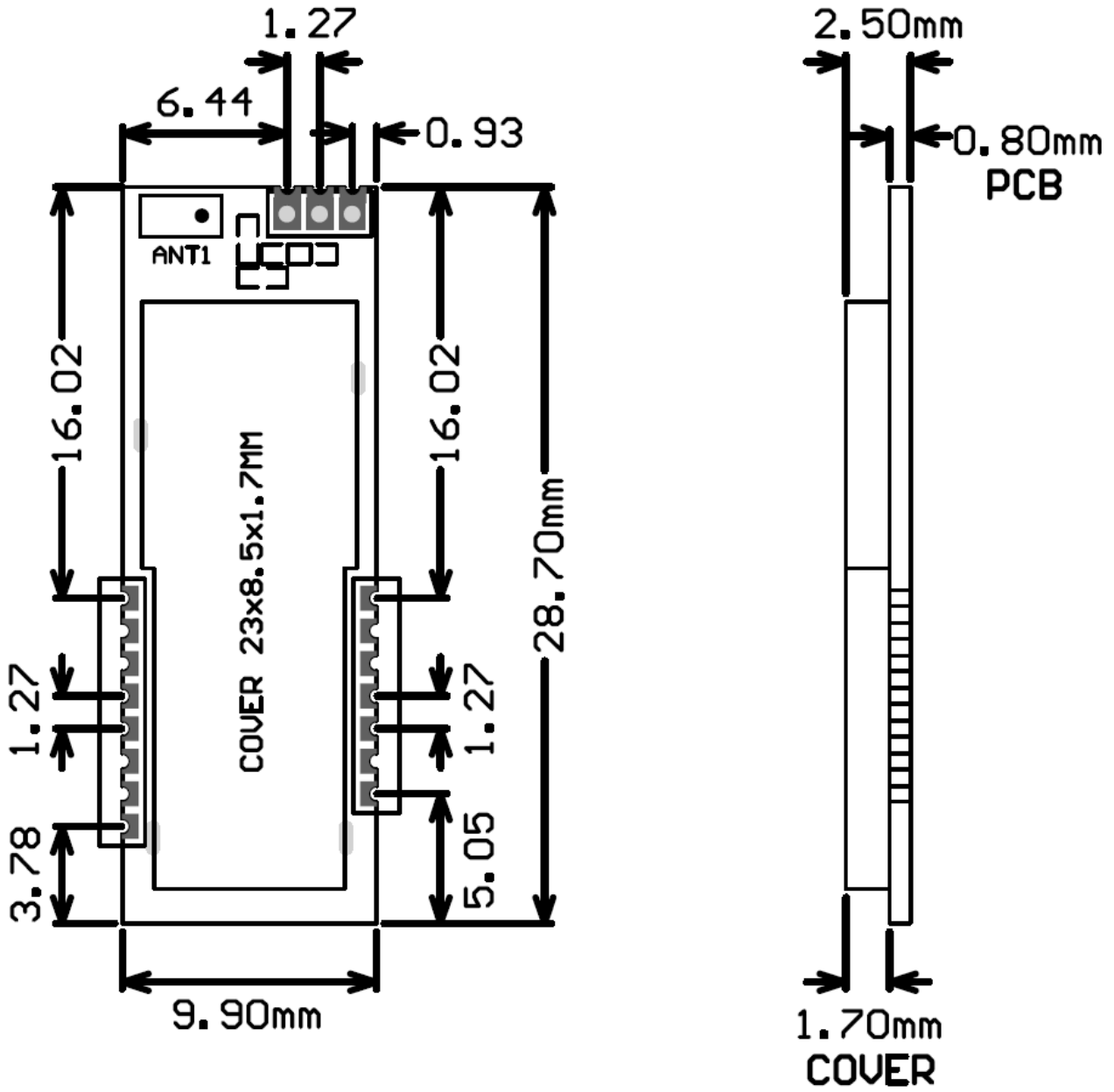


Pin No.	Name	I/O	Function Description
1	GPIO_ICE	I/O	GPIO In Circuit Emulator
2	I2C_SCL	I/O	I2C Clock
3	I2C_SDA	I/O	I2C Data
4	TTAG/TTDIO	I/O	TTAG_TTDIO
5	TTAG/TTCLK	I/O	TTAG_TTCK
6	RESETN	I	RESETN input
7	REGI	I	Regulator input
8	GND	-	Ground
9	GND	-	Ground
10	PWM1/ADC5	I/O	Channel 1 PWM / ADC Channel 5
11	PWM0/ADC4	I/O	Channel 0 PWM / ADC Channel 4
12	UART0_RX/ADC6	I/O	UART0 RX / ADC Channel 6

13	UART0_TX/ADC7	I/O	UART0 TX / ADC Channel 7
14	INT0/ADC0	I/O	External interrupt 0 line / ADC Channel 0
15	INT1/ADC1	I/O	External interrupt 1 line / ADC Channel 1
16	GND	-	Ground
17	ANT	I/O	RF IN / OUT to Antenna
18	GND	-	Ground

# 4. Mechanical Specification

## 4.1 Dimension



## 4.2 Application CKT

