

Approval Sheet

Product Specification

Part Description: **Bluetooth Module**

Customer Part No:

BIGSOLON Part No: BT-MSO4

Acknowledgement of reception

We have received the attached specification

Date 2021. 08 .02

Company

EVERINT

Dept.

BIXOLON R&D LAB

Representative

Dong-gil.Lee

Received by

Revision Record

No	Date	Item	Modifications	Approved
1	2021. 08. 02		First Issued	

1. Module Features

- Complies with Bluetooth Core Specification version 5.2
- Up to 96MHz integrated ARM M3 micro-controller
- Built-in Reference Clock: 24MHz
- RoHS Compliant

2. Applications

- Home automation gateways
- Heart rate monitors
- Wearables
- Thermometers
- Blood pressure monitors
- Mobile

3. Features

- Size (18mm X 28mm X 3.6mm)
- Surface Mountable

4. Electrical Characteristics

Parameter	Min	Nor	Max	Unit
Supply Voltage (VBAT, VDD_IO)	3.0	3.3	3.6	V
Operation Temperature	-30	25	85	°C

5. External Reset

An External active-low reset signal, BT_RESET(RESET), can be used to put the BT-MSO4 in the reset state. An external voltage detector reset IC with 50ms delay is needed on the BT_RESET(RESET). The BT_RESET should be released only after the VDD_IO supply voltage level has been stabilized for 50ms.

7. Pin Description

PIN No.	Pin Name	Description	Pad Type
1	GND	Ground connection	
2	GND	Ground connection	
3	GND	Ground connection	
4	GND	Ground connection	
5	NC	No connection	
6	BT_STATUS		
7	BT_RESET	Active-low reset input	
8	NC	No connection	
9	NC	No connection	
10	NC	No connection	
11	VBAT		
12	VDDIO		
13	GND	Ground connection	
14	GND	Ground connection	
15	GND	Ground connection	
16	NC	No connection	
17	PUART_TX		
18	PURT_CTS		
19	PUART_RX		
20	NC	No connection	
21	NC	No connection	
22	PUART_RTS		
23	BT_AT_CMD		
24	NC	No connection	
25	BT_DUT		
26	NC	No connection	
27	GND	Ground connection	
28	NC	No connection	
29	NC	No connection	
30	NC	No connection	
31	UART_RTS	D/L	
32	UART-CTS	D/L	

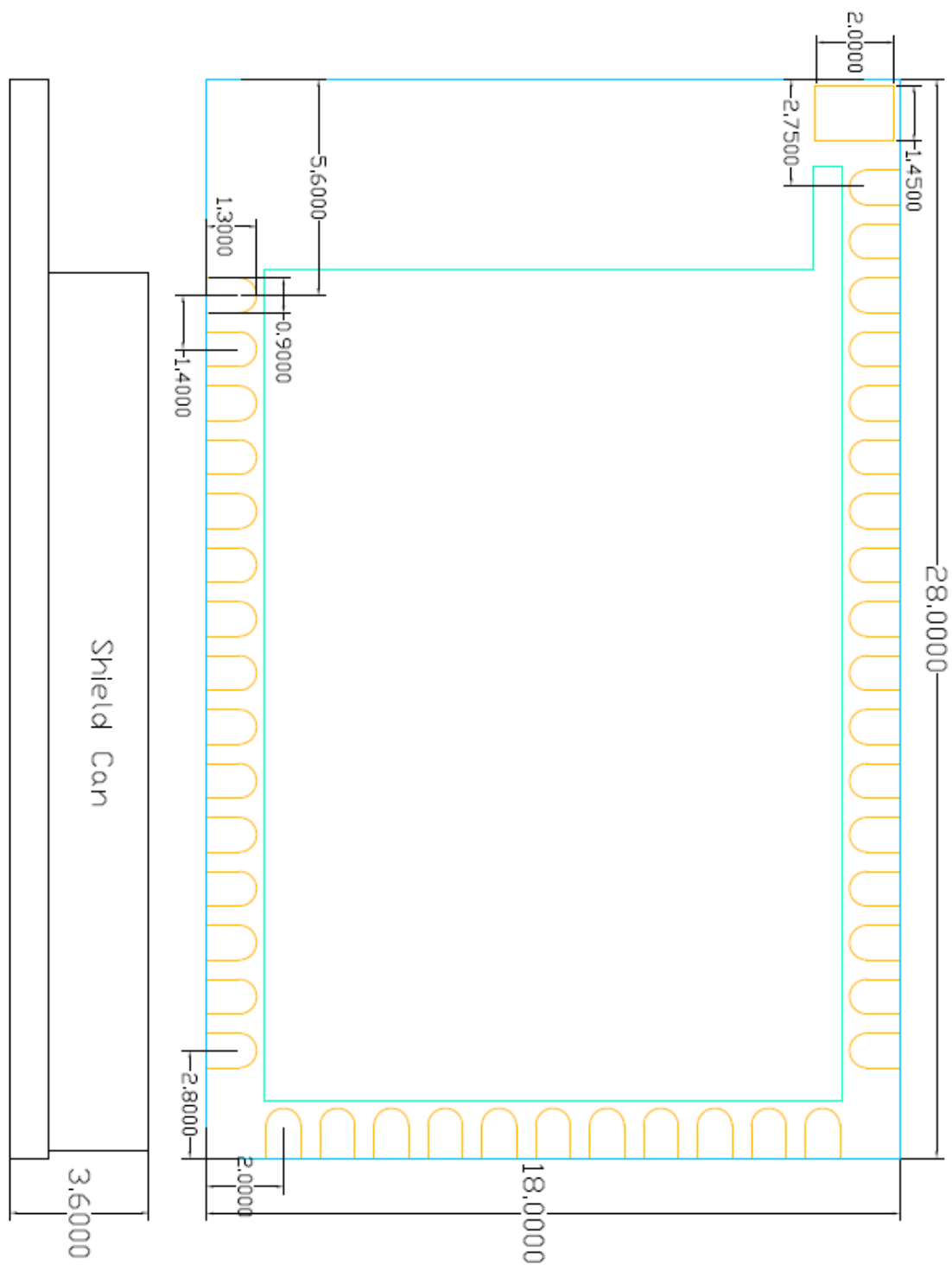
EVERINT

33	MOSI_C	Serial flash memory reset(Active low)	
34	GND	Ground connection	
35	UART_TX	D/L	
36	UART_RX	D/L	
37	GND	Ground connection	
38	NC	No connection	
39	NC	No connection	
40	GND	Ground connection	
41	GND	Ground connection	
42	NC	No connection	
43	GND	Ground connection	
44	GND	Ground connection	



<Top View>

10. Dimension(unit :mm)



EVERINT

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- ò Reorient or relocate the receiving antenna.
- ò Increase the separation between the equipment and receiver.
- ò Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- ò Consult the dealer or an experienced radio/TV technician for help.

CAUTION : Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes: (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

RF Radiation Exposure Statement:

This equipment complies with FCC/ISED radiation exposure limits set forth for an uncontrolled environment and meets the FCC radio frequency (RF) Exposure Guidelines and RSS-102 of the ISED radio frequency (RF) Exposure rules as this equipment has very low levels of RF energy.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

RSS-102 RF Exposure

L'antenne (ou les antennes) doit être installée de façon à maintenir à tout instant une distance minimum de au moins 20 cm entre la source de radiation (l'antenne) et toute personne physique.

Cet appareil ne doit pas être installé ou utilisé en conjonction avec une autre antenne ou

émetteur.

IMPORTANT NOTE

This device complies with FCC & ISED radiation exposure limits set forth for an uncontrolled environment. This device should be installed and must not be co-located or operating in conjunction with any other antenna or transmitter.

This device is intended only for OEM integrators under the following conditions:

- 1) This module may not be co-located with any other transmitters or antennas.
- 2) The antenna must be installed such that 20cm is maintained between the antenna and users.

As long as 2 conditions above are met, further transmitter test will not be required. However, the OEM integrator is still responsible for testing their end-product for any additional compliance requirements with this module installed.

In the event that these conditions cannot be met, then the FCC & IC authorizations are no longer considered valid and the FCC ID cannot be used on the final product. In these circumstances, the OEM integrator will be responsible for re-evaluating the end product including this module and obtaining separate FCC & IC authorizations.

- End Product Labeling

To satisfy FCC exterior labeling requirements, the following text must be placed on the exterior of the end product.

Contains Transmitter module FCC ID: 2AKMF-BT-MSO4

IC: 22266-BTMSO4

- Manual Information to the End User

The OEM integrator is responsible for ensuring the end-user has no manual instruction to remove or install module.

The end user manual shall include all required regulatory information/warning as show in this manual.