



**泛亚汽车技术中心有限公司**  
Pan Asia Technical Automotive Center Co., Ltd.

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# The User Manual Of BRFM

Product Name: Battery Radio Frequency Module

Product Model: BRFM

FCC ID: 2BK7C-BRFM

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**Pan Asia Technical Automotive Center Co., Ltd.**  
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## 1 The Product Description

This product is used in wireless BMS system.

The main function is to collect the data sent by each node inside the battery pack and transmit it to the master controller.

In addition, BRFM also monitors the thermal runaway state of the battery pack.



Picture 1. WBMS Architecture

## 2 Noun Interpretation

Sheet 1. Abbreviation

Abbreviation	Description
BMS	Battery Management System
BRFM	Battery Radio Frequency Module
CMU	Cell Monitoring Unit
VICM	Vehicle Integration Control Module
BDSB	Battery Distribution Sensing Board

## 3 Basic Parameters

Sheet 2. Parameters

Item	Feature Description
Model	BRFM
Product Name	Battery Radio Frequency Module
Interface	ISOSPI
Supply Voltage	5.2V~5.6V ( Normal Voltage: 5.5V )
Dimension	205.23(mm)*69.43(mm)*27.6(mm)
Operating Temperature	-40°C~+85°C



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#### 4 RF Output Power

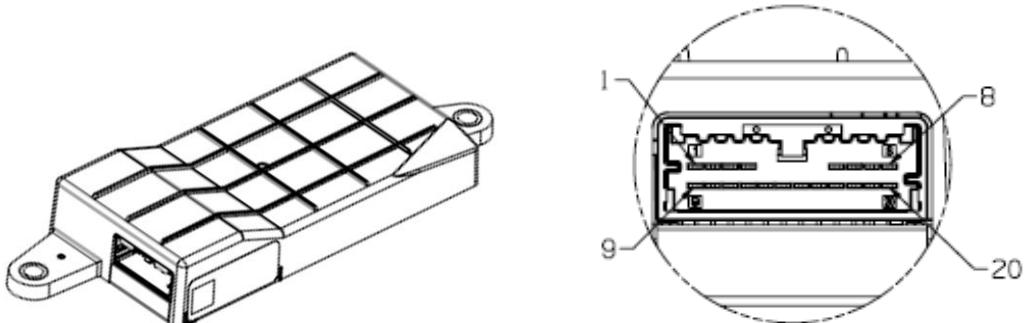
**Sheet 3. Power**

Item	Band	Limited Power
WLAN	2400MHz~2483.5MHz	<12dBm

#### 5 Interface definition

**Sheet 4. BRFM I/O**

PIN	I/O Function
X1-1	5V Input Power from VICM
X1-2	NC
X1-3	NC
X1-4	Vehicle Integration Control Module Wake Up Signal
X1-5	5V Output Power to BDSB
X1-6	NC
X1-7	Ground to BDSB
X1-8	Ground to VICM
X1-9	Battery Radio Frequency Module Supply Voltage 2
X1-10	NC
X1-11	NC
X1-12	NC
X1-13	IsoSPI Positive to VICM
X1-14	IsoSPI Negative to VICM
X1-15	IsoSPI Positive to BDSB
X1-16	IsoSPI Negative to BDSB
X1-17	NC
X1-18	NC
X1-19	NC
X1-20	Battery Radio Frequency Module Return 2



**Picture 2. BRFM Connector**

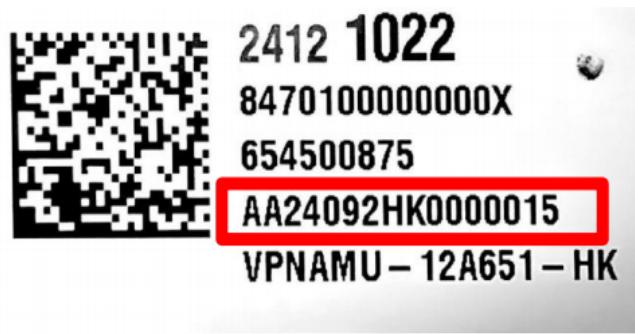
#### **A. Appendix**

The production date of BRFM can refer to the label.

AA24092HK0000015——The third and fourth digits of the number represent the year of production, and the fifth through seventh digits of the code represent the date of production.

24 —— 2024;

092 —— The 92 day.



**Picture 3. BRFM Label**



# 泛亚汽车技术中心有限公司

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## FCC warning:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. End user must follow the specific operating instructions for satisfying RF exposure compliance. This transmitter must not be colocated or operating in conjunction with any other antenna or transmitter.

The portable device is designed to meet the requirements for exposure to radio waves established by the Federal Communications Commission (USA).

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

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:

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

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

## Radiation Exposure Statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance of 20 cm between the radiator and your body. NOTE To satisfy FCC exterior labeling requirements, the following text must be placed on the exterior of the end product: Contains Transmitter module FCC ID: 2BK7C-BRFM