

### **UGMZ2AA Series** Bluetooth® Communication Module

# with Built-in Antenna Type

## Easy-to-Use Built-in Antenna Type Leading the Industry in Compactness and Low Power\*



#### **Features**

- Compact dimensions:  $4.7 \times 4.7 \times 2.0$ mm
- Low power consumption at 5.1mA (sleep:  $0.6 \mu$  A)
- Built-in antenna helps reduce the workload during equipment development and design
- Technical Conformity Japan, FCC and CE certification

#### **Applications**

 IoT devices, wearable computers, pen type devices, healthcare devices, energy management system (xEMS) devices

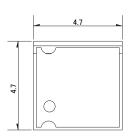
**%**Alps Electric research as of June 2016

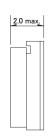
Typi	ical	Sp	ec	ific	ati	ions
		_				

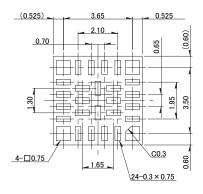
Dimensions(W x D x H)	4.7 × 4.7 × 2.0 mm			
Bluetooth <sup>®</sup> version	Bluetooth® Ver 4.1			
Power consumption	Rx : 5.1mA Sleep : 0.6 μ A			
Built-in crystal	Reference : 16MHz, Sub : 32.768kHz			
Interface	UART, SPI , I2C			

#### **Dimensions**

Unit : mm







#### Precautions when handling our products

• For the export of products which are controlled items subject to foreign and domestic export laws and regulations, you must obtain approval and/or follow the formalities of such laws and regulations. Products must not be used for military and/or antisocial purposes such as terrorism, and shall not be supplied to any party intending to use the products for such purposes. Unless provided for otherwise, the products have been designed and manufactured for application in equipment and devices which are sold to end users in the market, including audio-visual (AV) equipment, electrical home appliances, office machines, information and communication equipment, and amusement equipment. The products are not intended for use in, and must not be used for, any application for nuclear equipment, driving equipment for aerospace or any other unauthorized use. With the exception of the abovementioned prohibited applications, please contact an Alps sales representative and/or evaluate the total system regarding applicability for applications involving high levels of safety and liability such as medical equipment, burglar alarm equipment, disaster prevention equipment and undersea equipment. Please also incorporate fail-safe design, protection and redundant circuitry, malfunction protection, and/or fire protection into the complete system to ensure safety and reliability of the total system. 

Before using products which were not specifically notive applications, please contact an Alps sales representative

#### Cautions for using this catalog

Specification indicated in this catalog is outline only. When employing the product,use of an officially authorized specification for supply contract is recommended. 

Please note that the colors of products shown in this catalog may be a little different from those of the actual products. 

Names for products and companies and titles of specifications indicated in this catalog are mostly trademarks or registered trademarks of their respective owners. Please contact us for any enquiries and queries on our products and their uses. This catalog is valid till the end of December 2016.