



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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## **1. General Descriptions**

Murata MAGICSTRAP® is an innovative RFID module which complies EPC global Gen2 (v2).

This product can be used as an ultra small tag and this can be fit on any metal objects, non-metal objects, as well as embedding into any objects by glue or adhesive and so on.

This can be used globally with high performance and reliability.

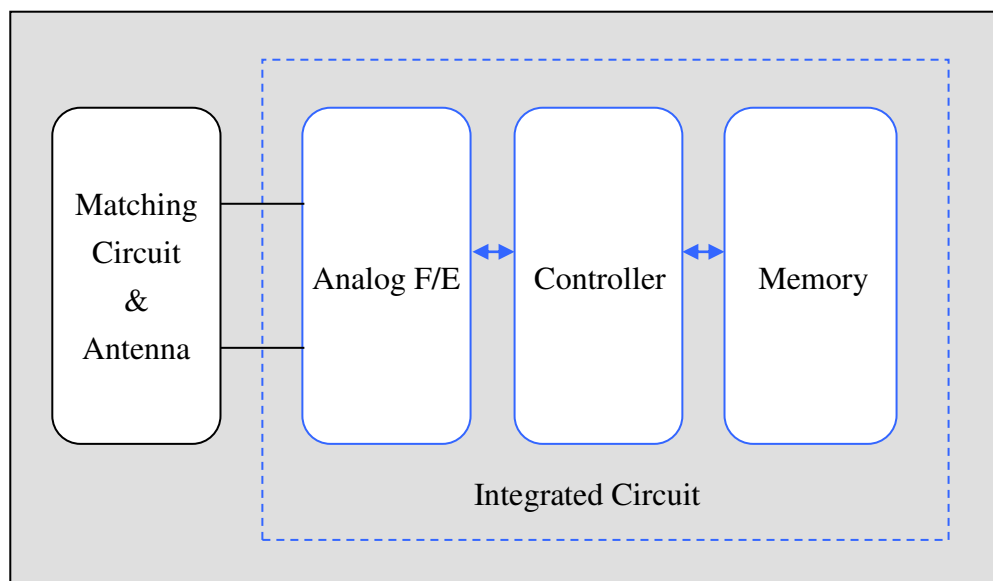


### **[Features]**

- 1-1. Compliant with ISO18000-63 and EPC global Gen2(v2)
- 1-2. Ultra small package (1.25 x 1.25 x 0.55mm )
- 1-3. Supports wide frequency range from 865MHz to 928MHz, allowing to cover all globally relevant UHF frequency bands
- 1-4. 100% green material for RoHS compliance

## **2. MAGICSTRAP® Block Diagram**

Figure.1 shows MAGICSTRAP® block diagram.



**Fig.1 MAGICSTRAP®Block Diagram**

### 3. Mechanical Information

[Dimension]

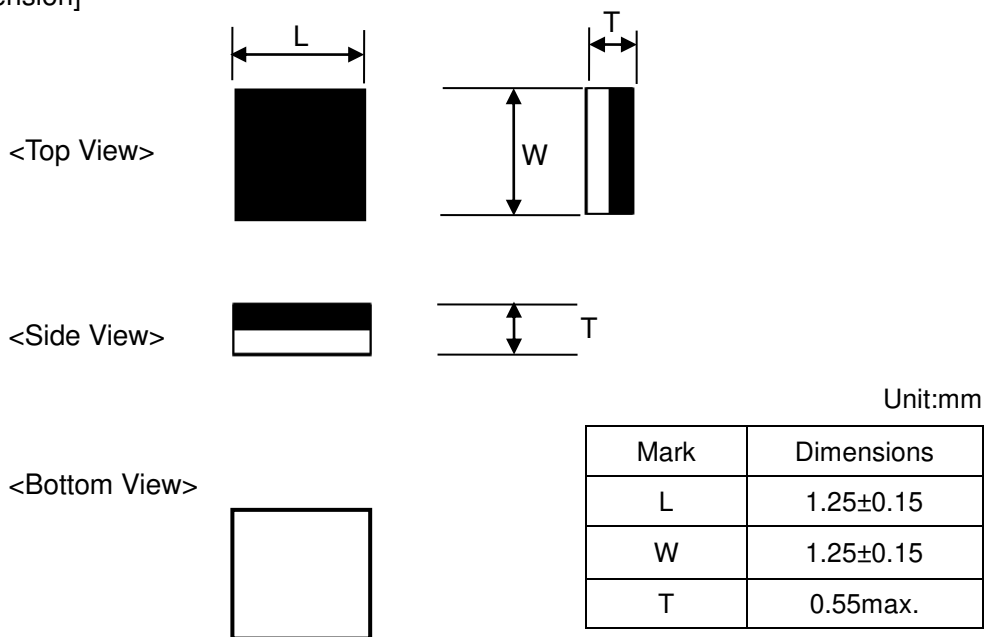


Fig.2 MAGICSTRAP® Package Dimension

### 4. Electrical Performance

#### 4-1. Frequency range

865 – 928 MHz

#### 4-2. Part number / IC / Memory size

P/N	IC	TID	EPC
LXMSJZNCMF-198	Impinj MonzaR6	96bits	96bit

### 5. Absolute maximum ratings

Symbol	Parameter	Min	Max	Unit
T <sub>stg</sub>	Storage temperature	-40	+85	°C
T <sub>a</sub>	Operating temperature	-40	+85	°C

### 6. RoHS compliance

This product is compliant with RoHS directive

**7. Reading range (reference only)**

Reading range varies by Output Power of Reader/Writer and an antenna.

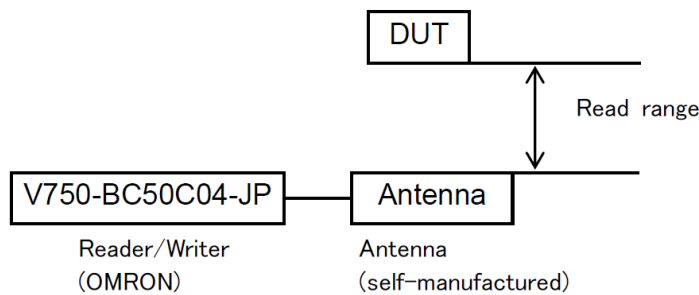
**7-1. EU band**

10mm

**7-2. US, JAPAN band**

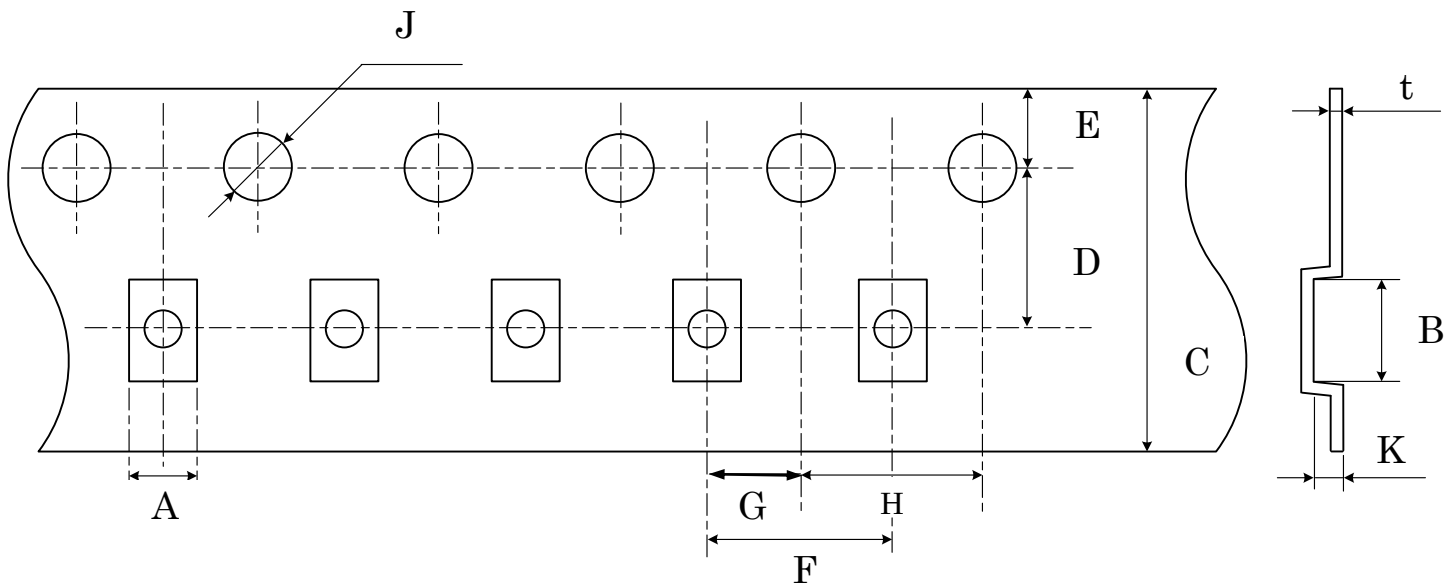
10mm

\*Measurement setup



**8. Packaging**

**8-1. Dimensions of tape (plastic tape)**



	A	B	C	D	E	F
dimensions	1.45±0.1	1.45±0.1	8.0±0.2	3.5±0.05	1.75±0.1	4.0±0.1

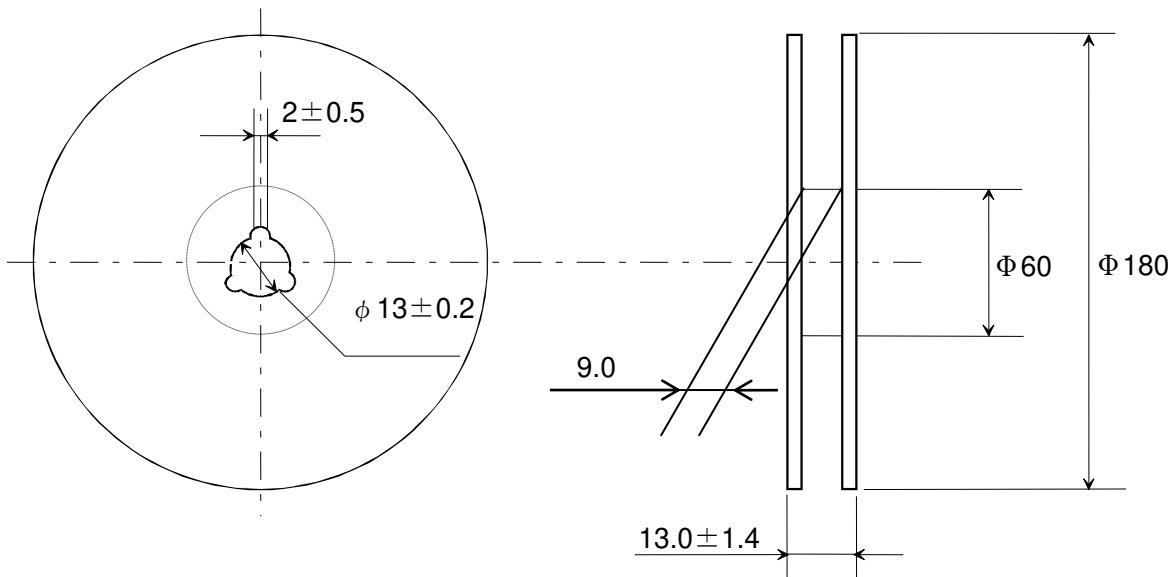
	G	H	J	K	t
dimensions	2.0±0.05	4.0±0.1	1.5±0.1	0.65±0.05	0.25±0.05

# UHF MAGICSTRAP® Data Sheet LXMSJZNCMF-198



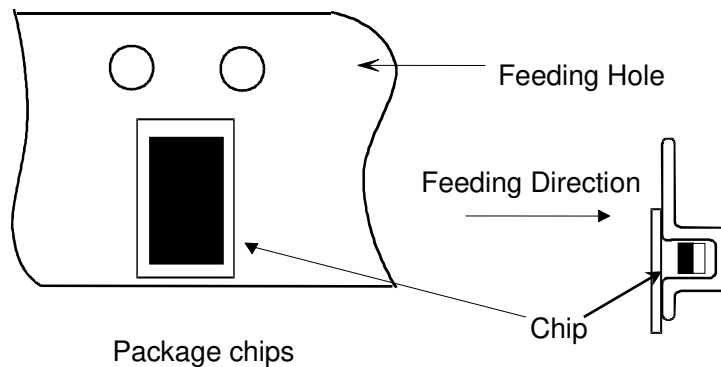
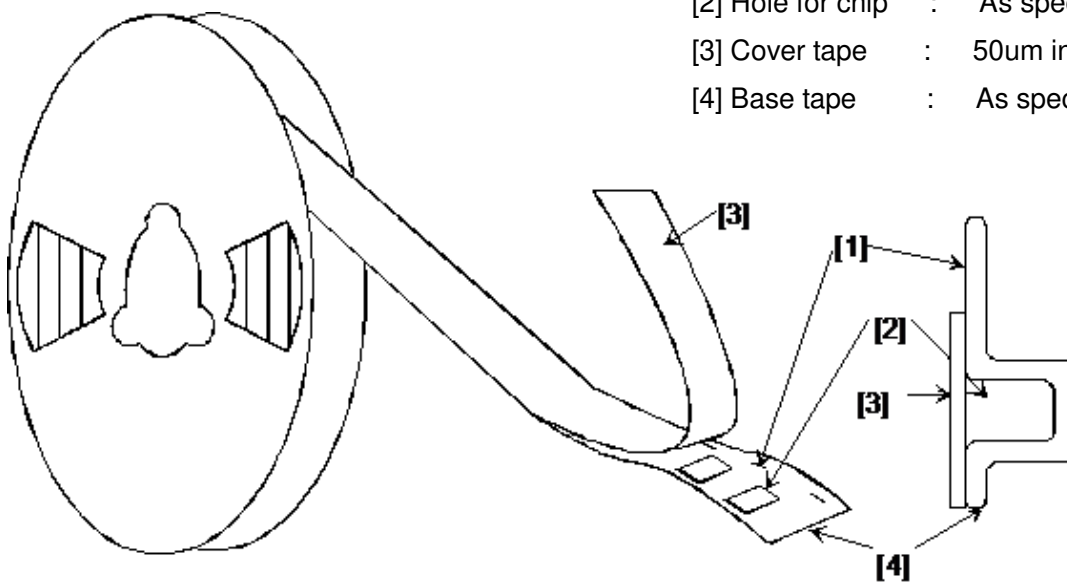
## 8-2. Dimensions of reel

Unit: mm

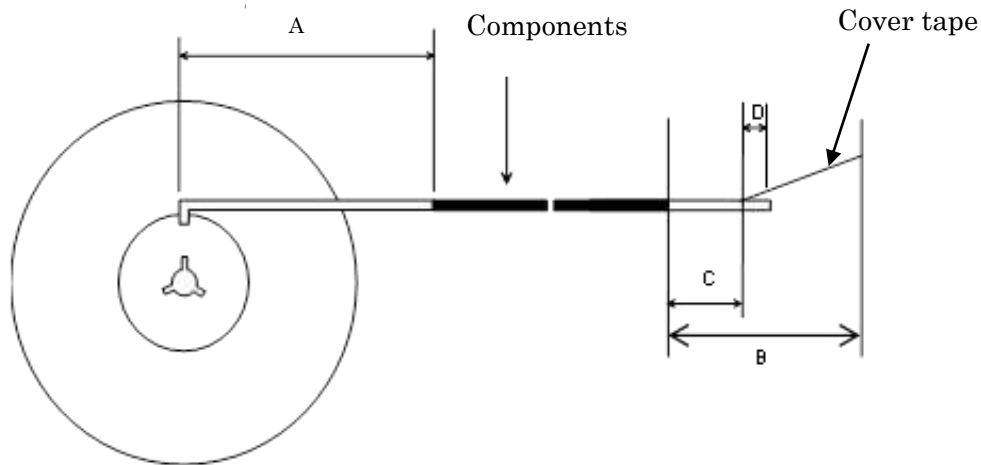


## 8-3. Taping Diagrams

- [1] Feeding Hole : As specified in (1)
- [2] Hole for chip : As specified in (1)
- [3] Cover tape : 50um in thickness
- [4] Base tape : As specified in (1)



**8-4 Leader and Tail tape**



A	1160-1190 mm
B	400-500 mm
C	150-200 mm
D	20-40 mm

**8-5 Taping direction**

The tape for chips are wound clockwise, the feeding holes to the right side as the tape is pulled toward the user.

**8-6. Quantity per reel**

5,000 pcs

**8-7. Minimum order quantity**

5,000pcs

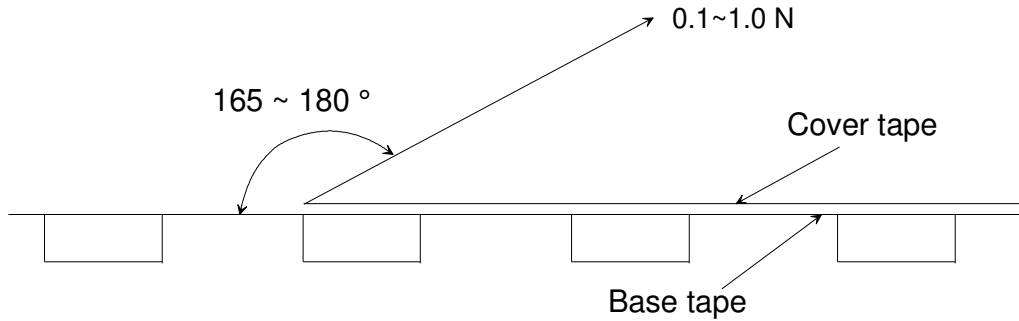
**8-8. Material**

Base tape: Plastic

Reel: Plastic

**8-9. Peeling force**

0.1~1.0 N in the direction of peeling as shown below.



**9. Contact window**

URL : <http://www.murata.com/products/rfid/index.html>

" MAGICSTRAP® " is the registered trademark of Murata Manufacturing. Co., Ltd. in Japan.

For any inquiries/queries, please feel free to contact us.

## NOTICE

### 1. Storage Conditions:

To avoid damaging, be sure to observe the following points.

- Store products where the ambient temperature is 15 to 35 °C and humidity 45 to 75% RH.  
(Packing materials, In particular, may be deformed at the temperature over 40 °C.).
- Store products in non corrosive gas (Cl<sub>2</sub>, NH<sub>3</sub>, SO<sub>2</sub>, NO<sub>x</sub>, etc.).
- Stored products should be used within 6 months of receipt.

This product is applicable to MSL1 (Based on IPC/JEDEC J-STD-020)

### 2. Handling Conditions:

Be careful in handling or transporting products because excessive stress or mechanical shock may break products due to the nature of ceramics structure.

### 3. Cleaning Conditions:

Any cleaning is not permitted..

### 4. Operational Environment Conditions:

Products are designed to work for electronic products under normal environmental conditions (ambient temperature, humidity and pressure). Therefore, products have no problems to be used under the similar conditions to the above-mentioned. However, if products are used under the following circumstances, it may damage products and leakage of electricity and abnormal temperature may occur.

- In an atmosphere containing corrosive gas ( Cl<sub>2</sub>, NH<sub>3</sub>, SO<sub>x</sub>, NO<sub>x</sub> etc.).
- In an atmosphere containing combustible and volatile gases.
- In a dusty environment.
- Direct sunlight
- Water splashing place.
- Humid place where water condenses.
- In a freezing environment.

If there are possibilities for products to be used under the preceding clause, consult with Murata before actual use.

If product malfunctions may result in serious damage, including that to human life, sufficient fail-safe measures must be taken, including the following:

- (1) Installation of protection circuits or other protective device to improve system safety
- (2) Installation of redundant circuits in the case of single-circuit failure



## **5. Input Power Capacity:**

Products shall be used in the input power capacity as specified in this specification.

Inform Murata beforehand, in case that the components are used beyond such input power capacity range.

## **6. Limitation of Applications:**

The products are designed and produced for application in ordinary electronic equipment (AV equipment, OA equipment, telecommunication, etc). If the products are to be used in devices requiring extremely high reliability following the application listed below, you should consult with the Murata staff in advance.

- Aircraft equipment.
- Aerospace equipment
- Undersea equipment.
- Power plant control equipment.
- Medical equipment.
- Transportation equipment (vehicles, trains, ships, etc.).
- Traffic signal equipment.
- Disaster prevention / crime prevention equipment.
- Data-processing equipment.
- Application which malfunction or operational error may endanger human life and property of assets.
- Application which related to occurrence the serious damage
- Application of similar complexity and/ or reliability requirements to the applications listed in the above.



### **Note:**

Please make sure that your product has been evaluated and confirmed against your specifications when our product is mounted to your product.

All the items and parameters in this product specification have been prescribed on the premise that our product is used for the purpose, under the condition and in the environment agreed upon between you and us. You are requested not to use our product deviating from such agreement.

We consider it not appropriate to include other terms and conditions for transaction warranty in product specifications, drawings or other technical documents. Therefore, even if your original part of this product specification includes such terms and conditions as warranty clause, product liability clause, or intellectual property infringement liability clause, we are not able to accept such terms and conditions in this product specification unless they are based on the governmental regulation or what we have agreed otherwise in a separate contact. We would like to suggest that you propose to discuss them under negotiation of contract.