

UHF RFID Tag Data sheet LXMS21NCNH-147

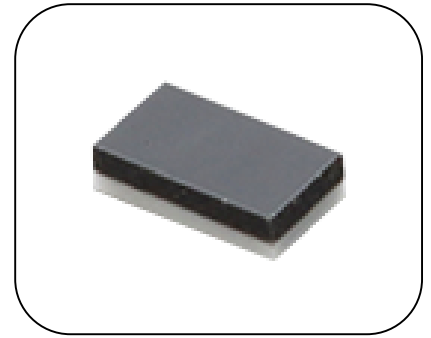


1. General Descriptions

LXMS21NCNH-147 is an innovative RFID module which complies ISO18000-63/EPC global Gen2(v1.2.0).

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.

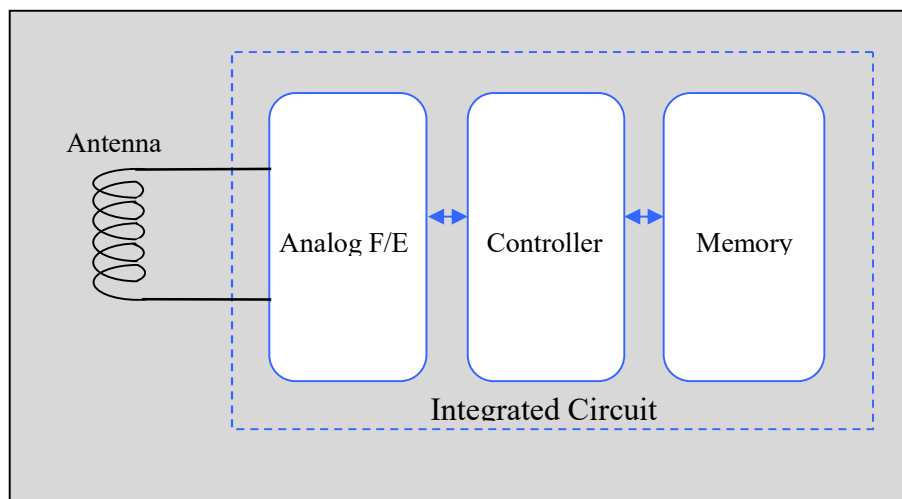
This can be used globally with high performance and reliability.



[Features]

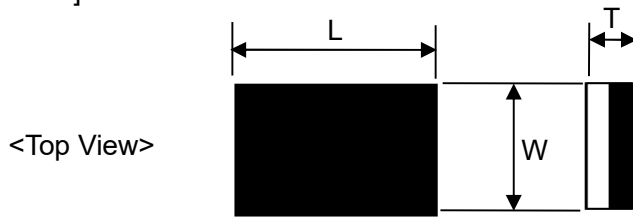
- Small and Robust package design
- UHF band (865~928MHz)
- ISO18000-63 /EPC global Gen2(v1.2.0) compliant
- Size is 2.0 x 1.25 x 0.55mm
- Using NXP G2iM
- Reading range:10mm *Reference
- RoHS compliant

2. Block Diagram



3. Mechanical Information

[Dimension]



<Bottom View>



Unit:mm

Mark	Dimensions
L	2.00±0.20
W	1.25±0.20
T	0.55max.

4. Electrical Performance

4-1. Frequency range

865 – 928 MHz

4-2. IC / Memory size

Parameter		Description	Remarks
IC		NXP UCODE G2iM	
Protocol		ISO/IEC 18000-63	
		EPC global Gen2 V1.2.0	
Memory	EPC	256 bit	Read & Write
	TID	96 bit	Read Only
	Reserved memory	32 bit Access	Read & Write
		32 bit Kill	
User	512 bit		
Data retention Time		※50years	Tamb = 22°C

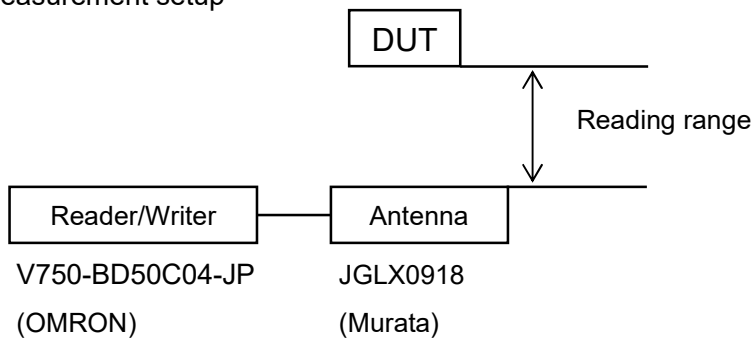
※Reference value

5. Reading range (reference only)

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

UHF band(865~928MHz): 10mm

*Measurement setup

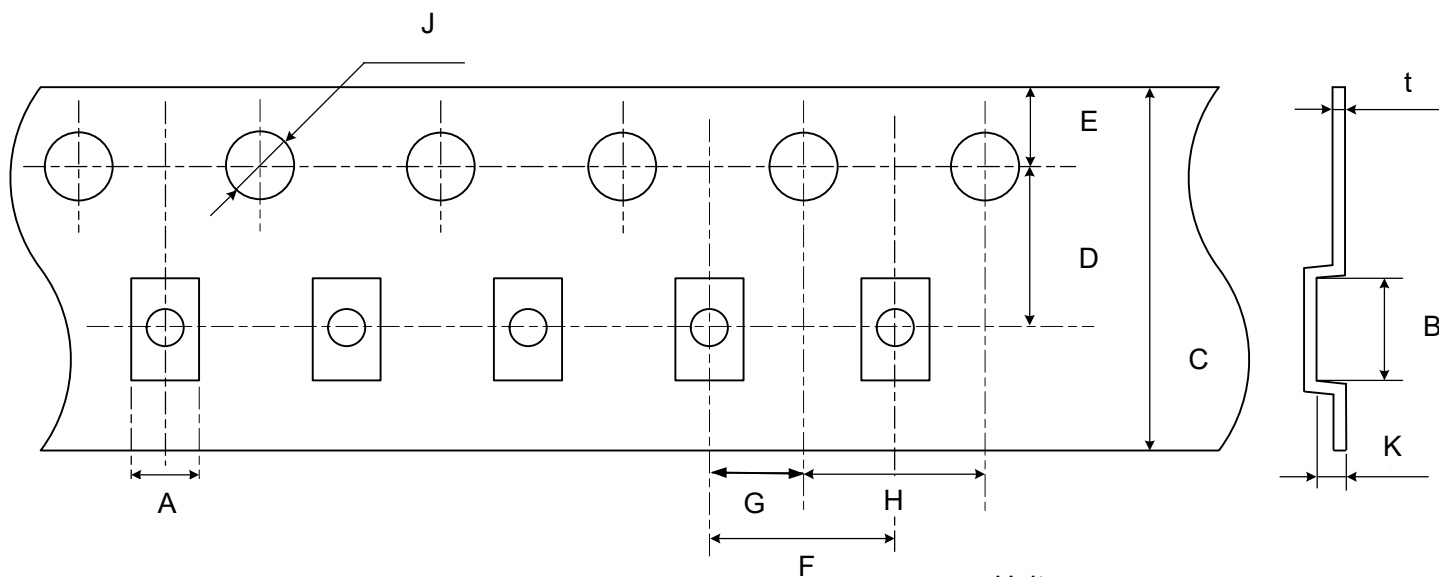


6. Absolute maximum ratings

Symbol	Parameter	Min	Max	Unit
T _{stg}	Storage temperature	-40	+85	°C
T _{amb}	Operating temperature	-40	+85	°C

7. Packaging

7-1. Dimensions of tape

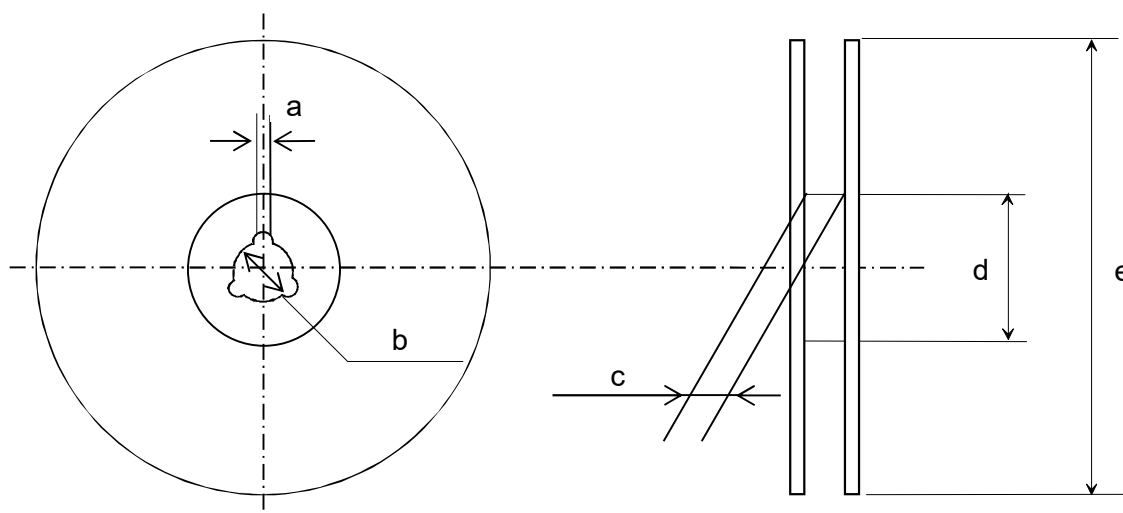


Unit: mm

Symbol	A	B	C	D	E	F
Dimension	1.50±0.1	2.25±0.1	8.0±0.2	3.5±0.05	1.75±0.1	4.0±0.1

Symbol	G	H	J	K	t
Dimension	2.0±0.05	4.0±0.1	1.5±0.1	0.60±0.05	0.25±0.05

7-2. Dimensions of reel

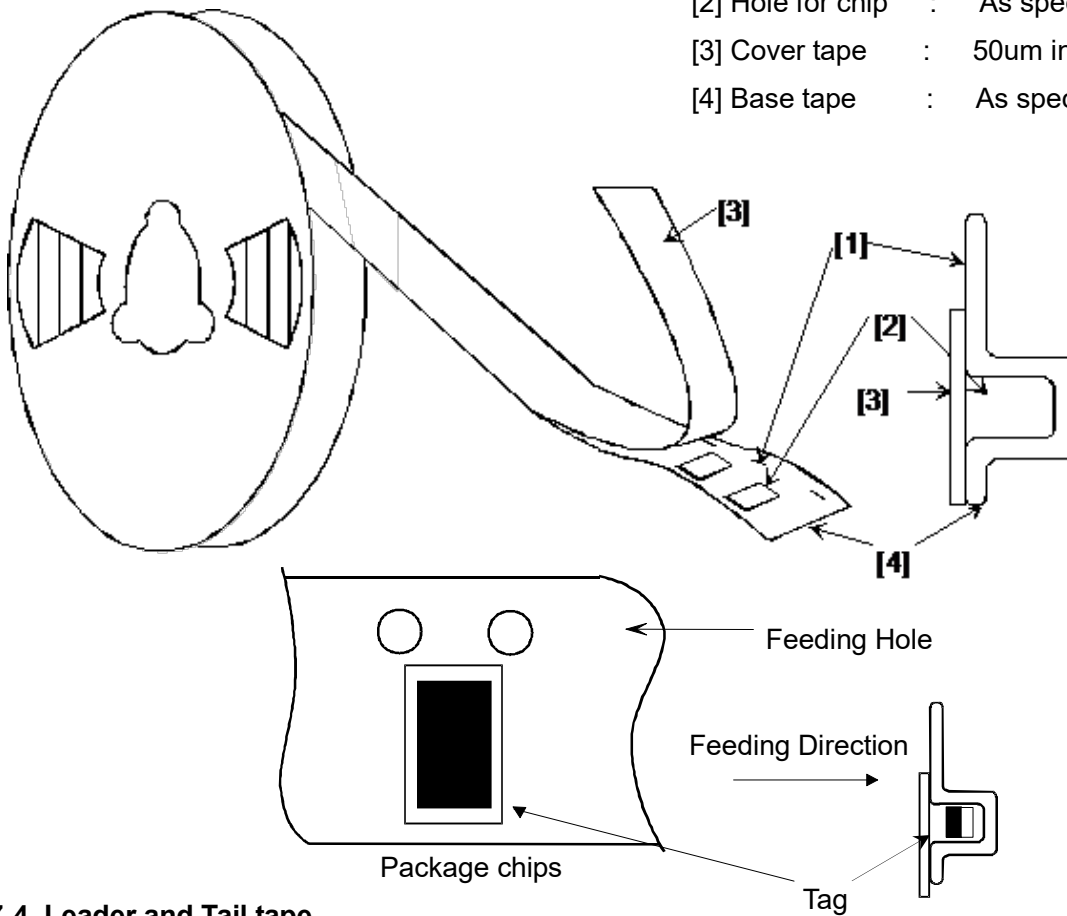


Unit: mm

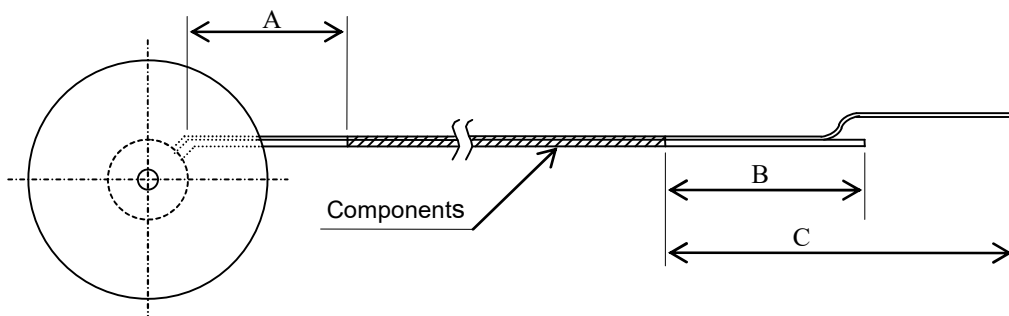
Symbol	a	b	c	d	e
Dimension	2.0+/-0.5	Φ13.0+/-0.2	9.0+/-0.3	(Φ60)	(Φ180)

7-3. Taping Diagrams

- [1] Feeding Hole : As specified in 7-1)
- [2] Hole for chip : As specified in 7-1)
- [3] Cover tape : 50um in thickness
- [4] Base tape : As specified in 7-1)



7-4. Leader and Tail tape



Unit : mm

Symbol	Item	Minimum length
A	Tail	160
B	Leader no components	100
C	Leader with cover tape	400

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7-5. Taping direction

The tape for chips are wound clockwise.

The feeding holes will come on the right side when the tape is pulled to a user's direction.

7-6. Quantity per reel

5,000 pcs

7-7. Minimum order quantity

5,000pcs

7-8. Material

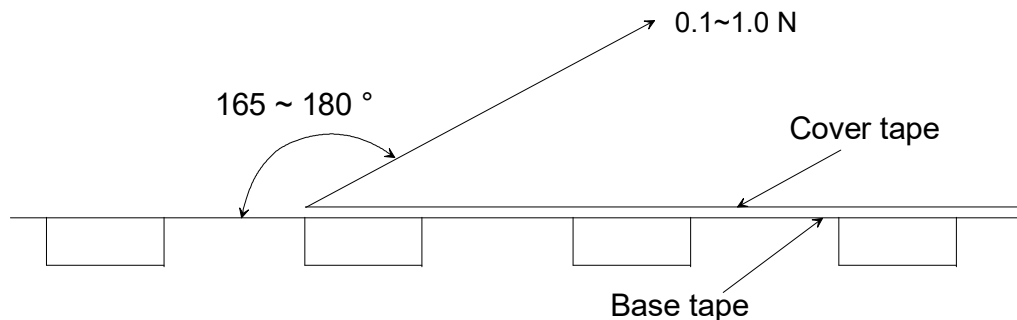
Base and Cover tape : Plastic

Reel : Plastic

Base and Cover tape, Reel have an anti-ESD function.

7-9. Peeling strength

0.1-1.0N when peeled in the direction below.



8. Contact window

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

Email: magicstrap@murata.com

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 (Cl₂, NH₃, SO₂, NO_x, etc.).
- Stored products should be used within 6 months of receipt.

2. Handling Conditions:

Be careful in handling or transporting products because excessive stress or mechanical shock may break products.

3. Operational Environment Conditions:

Products are designed to work 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 (Cl₂, NH₃, SO_x, NO_x etc.).F
- 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 static electricity is added to this product, degradation and destruction may be produced.

Please use it after consideration enough so that neither static electricity nor excess voltage is added at the time of an assembly and measurement.

If product malfunctions may result in serious damage, including that to human life, alternative measures of the operation and design must be taken to secure the safety.

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< Specification is subject to change without notice >

4. Cleaning Conditions:

If the cleaning will be applied, please check with Murata in advance since the product may degrade or get broken.

5. Limitation of Applications:

Please contact us before using our products for the applications listed below which require especially high reliability for the prevention of defects which might directly cause damage to the third party's life, body or property.

- (1) Aircraft equipment
- (2) Aerospace equipment
- (3) Undersea equipment
- (4) Power plant control equipment
- (5) Medical equipment
- (6) Transportation equipment (vehicles, trains, ships, etc.)
- (7) Traffic signal equipment
- (8) Disaster prevention / crime prevention equipment
- (9) Data-processing equipment
- (10) Application of similar complexity and/or reliability requirements to the application listed in the above.



Note:

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

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