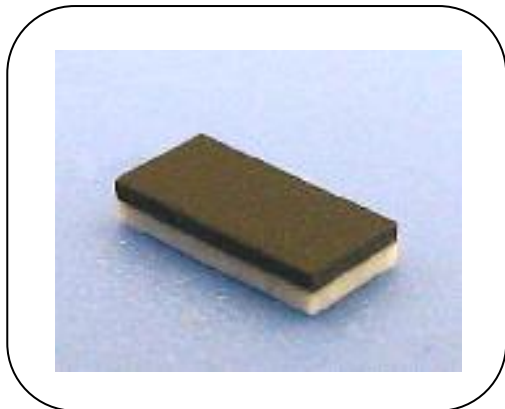


1, General Descriptions

Murata MAGICSTRAP[®] is an innovative RFID module which complies EPCglobal C1G2 standard.

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 to EPC global Class1 Gen2
- 1-2. Ultra small package (2.0 x 1.25 x 0.5mm typ)
- 1-3. Supports wide frequency range from 865MHz to 955MHz, allowing to cover all globally relevant UHF frequency bands
- 1-4. 100% green material for RoHS compliance
- 1-5. Internal 640bit user memory available.

2, MAGICSTRAP[®] Block Diagram

Figure.1 shows MAGICSTRAP[®] block diagram.

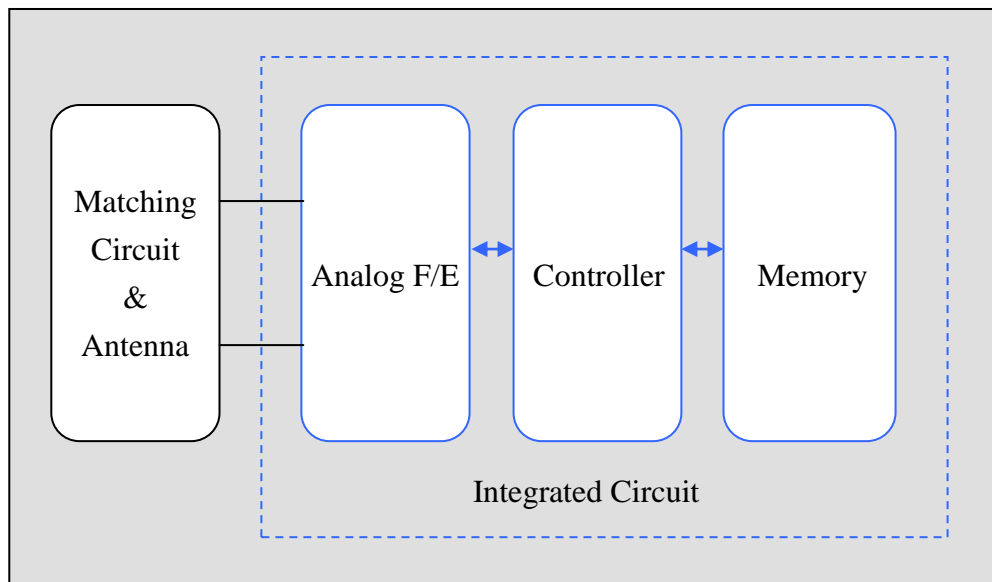
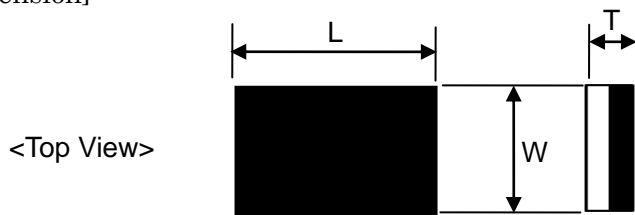


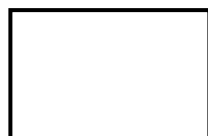
Fig.1 MAGICSTRAP[®] Block Diagram

3. Mechanical Information

[Dimension]



<Bottom View>



Unit:mm

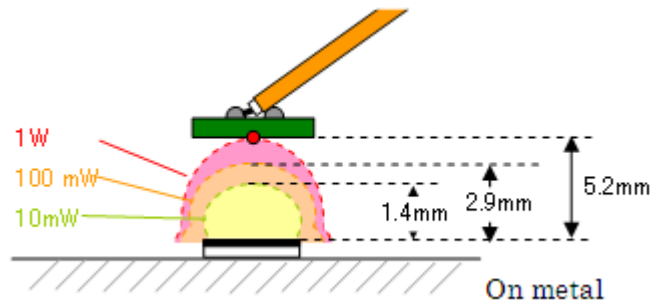
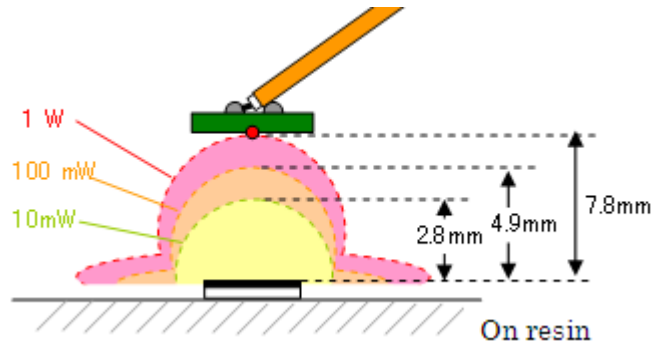
Mark	Dimensions
L	2.00±0.20
W	1.25±0.20
T	0.6max.

Fig.2 MAGICSTRAP[®] Package Dimension

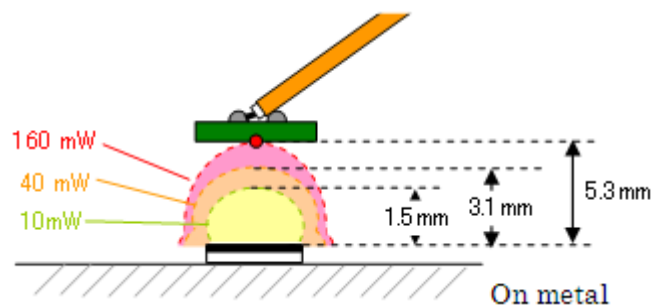
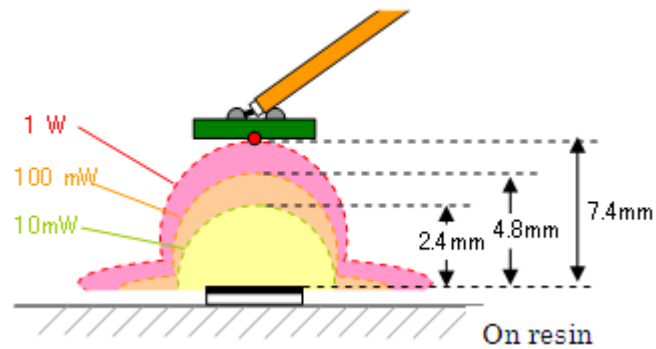
4. Reading range (reference only)

Reading range varies with Output Power of Reader/Writer and reading range hereafter is measured with matched Reader/Writer antenna in 4-3.

4-1. EU band

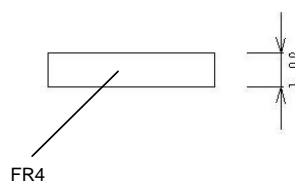
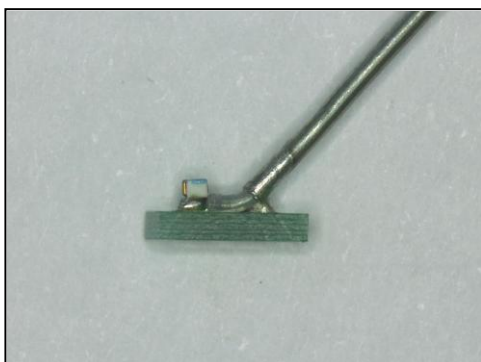
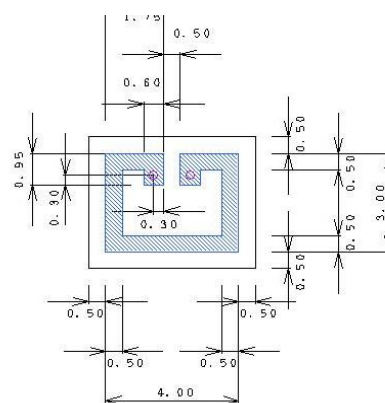
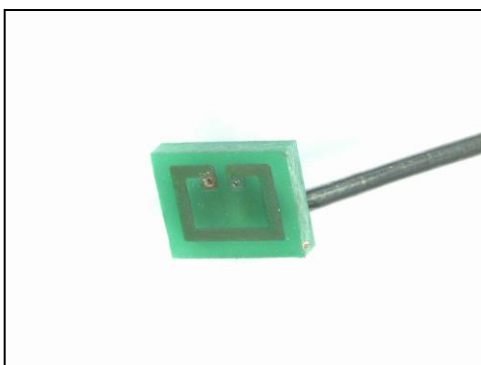
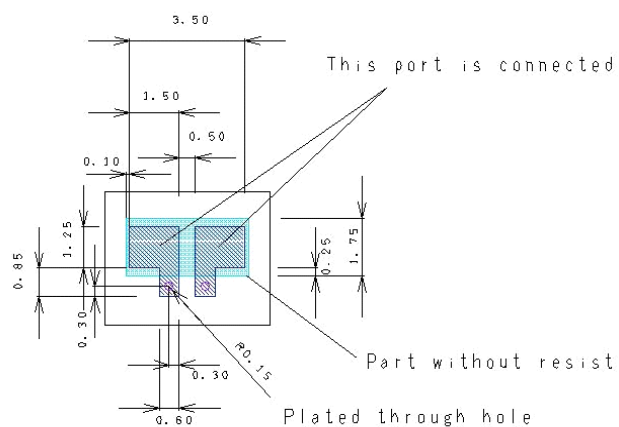
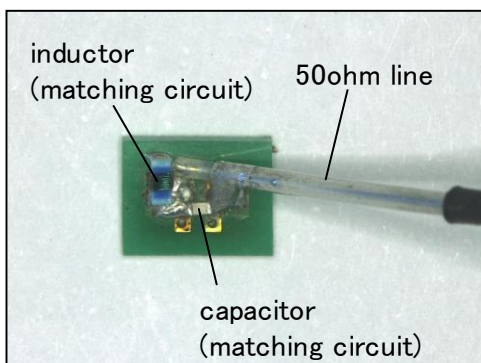


4-2. US band



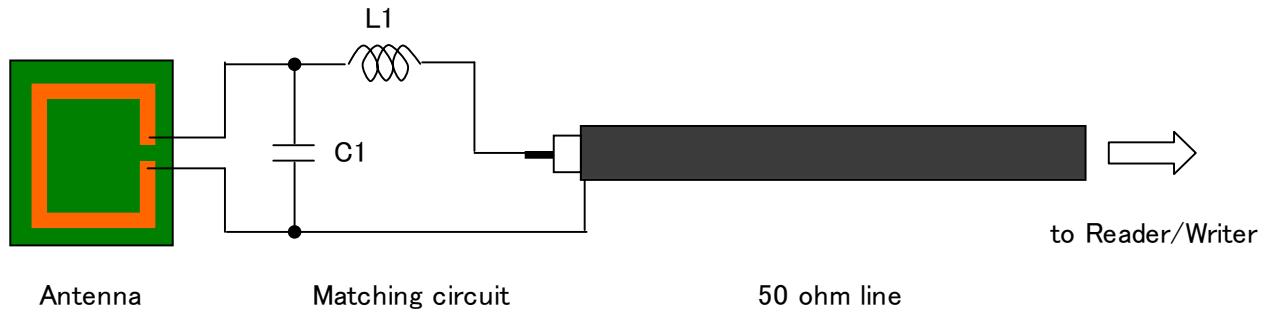
4-3. Reference design of reader/writer antenna

4-3-1. Dimension



[mm]

4-3-2. Matching circuit



Frequency		C1	L1
866.5MHz	EU	6.8pF	39nH
915MHz	US	6.0pF	39nH

Above C1 & L1 are just for references. In actual setting, these values are recommended to be adjusted according to actual antenna characteristics. The best tuning balance will show the minimum return from antenna.

4-3-3. Demo video

Demo video is available from our Web below:-

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

5. Operating temperature

-40degC ~ +85degC

6. RoHS compliance

This product is compliant with RoHS directive

7. Packaging

This product is supplied by tape and reel package

7-1. Quantity per reel

5,000pcs

7-2. Minimum order quantity

5,000pcs

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**MAGICSTRAP® Preliminary Data Sheet
LXMS21NCNH-147**



8. Contact window / the latest data about MAGICSTRAP®

Email : magicstrap@ml.murata.co.jp

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

<Note>

This document is tentative version. The content is under development for improvement and may subject to change without notice. When we submit specification and/or approval sheet, these document should replace this technical data.

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Mouser Electronics

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