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.

![MAGICSTRAP® Block Diagram](image)
3. Mechanical Information

[Dimension]

Fig.2 MAGICSTRAP® Package Dimension

<table>
<thead>
<tr>
<th>Mark</th>
<th>Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>L</td>
<td>2.00±0.20</td>
</tr>
<tr>
<td>W</td>
<td>1.25±0.20</td>
</tr>
<tr>
<td>T</td>
<td>0.6max.</td>
</tr>
</tbody>
</table>
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

![EU band diagram](image1)

4-2. US band

![US band diagram](image2)
4-3. Reference design of reader/writer antenna

4-3-1. Dimension

This port is connected to 50 ohm line.

Part without resist

Plated through hole

[mm]
4-3-2. Matching circuit

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:-


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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8. Contact window / the latest data about MAGICSTRAP®

Email: magicstrap@ml.murata.co.jp

<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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Murata:
LXMS21NCNH-147