1. General Descriptions
HF MAGICSTRAP® is a small size HF band RFID IC module, including embedded antenna. This complies with ISO15693 standard. It can be used globally with high performance even in small form factor.

[Features]
- ISO15693 Compliance
- Operating frequency of 13.56MHz
- Embedded antenna
- Using NXP ICODE SLIX (SL2S2002FTB), 896bit user memory
- Small package (8.3X8.3X0.7mm typ.)
- Completely green material and RoHS Compliant.
- Bi-adhesive on the back size to stick best on Polycarbonate material

2. Block Diagram
Figure.1 shows block diagram.

<table>
<thead>
<tr>
<th>RF Circuit</th>
<th>Analog F/E</th>
<th>Controller</th>
<th>Memory</th>
</tr>
</thead>
<tbody>
<tr>
<td>Integrated Circuit</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
3. Mechanical Information
3-1. Construction and Dimension

[Construction]

[Dimension]

Fig.2 Package Dimension

<table>
<thead>
<tr>
<th>Mark</th>
<th>Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>L</td>
<td>8.3 ± 0.2</td>
</tr>
<tr>
<td>W</td>
<td>8.3 ± 0.2</td>
</tr>
<tr>
<td>T</td>
<td>0.70 typ. / 0.80 max</td>
</tr>
<tr>
<td>T1</td>
<td>0.45 typ.</td>
</tr>
<tr>
<td>T2</td>
<td>0.15 typ.</td>
</tr>
<tr>
<td>T3</td>
<td>0.10 typ.</td>
</tr>
</tbody>
</table>
3-2. Property of bi-adhesive tape
   Supplier : Teraoka
   P/N : 776P
   Adhesive strength :
      -18.38 [N/W.25mm]
   Material composition :
      -Base : nonwoven fabric
      -Adhesive : Acrylic

4. Electrical performance
4-1. Reading range (reference only)
   40mm*

   *Reader/Writer : TI TRF7960 Reference Board
   Reader/Writer antenna : 37x54mm on TI TRF7960 Reference Board
   Output Power of Reader/Writer : 200mW

4-2. ESD performance (reference only)
   Passed +/-2kV (contact discharge), +/-4kV (air discharge)*

   *IEC61000-4-2 testing

5. Operating Temperature
   -40degC ~ +70degC

6. RoHS compliance
   This product is compliant with RoHS directive
7. Packing Information

(1) Tag position on carrier sheet

(2) Dimension of Reel

<table>
<thead>
<tr>
<th>Mark</th>
<th>Dimension</th>
<th>Mark</th>
<th>Dimension</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>24.0±0.3</td>
<td>F</td>
<td>16.0±0.4</td>
</tr>
<tr>
<td>B</td>
<td>20.5±0.1</td>
<td>G</td>
<td>φ1.5±0.1</td>
</tr>
<tr>
<td>C</td>
<td>10.25±0.3</td>
<td>H</td>
<td>0.08±0.03</td>
</tr>
<tr>
<td>D</td>
<td>1.75±0.1</td>
<td>J</td>
<td>0.0±0.3</td>
</tr>
<tr>
<td>E</td>
<td>4.0±0.1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
(3) Leader and Tail tape

![Diagram of Leader and Tail tape](image)

<table>
<thead>
<tr>
<th>Mark</th>
<th>Items</th>
<th>Minimum length (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Tail</td>
<td>800–900</td>
</tr>
<tr>
<td>B</td>
<td>Leader no cover tape</td>
<td>1900–2000</td>
</tr>
</tbody>
</table>

(4) Packaging unit : 2500 pcs/Reel

(5) Material :  
- Base tape ........PET
- Reel ...............Plastic

8. Contents

8-1) 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.

8-2) “MAGICSTRAP® ” is the registered trademark of Murata Manufacturing. Co., Ltd. in Japan.

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