1. General Descriptions
LXMSJZNCMF-198 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]
- Small and Robust package design
- UHF band (865~928MHz)
- ISO18000-63 / EPC Global Gen2(v2) Compliant
- Size is 1.2 x 1.2 x 0.55mm
- Using impinj MonzaR6
- Read range:10mm *Reference
- RoHS compliant

2. MAGICSTRAP® Block Diagram

Fig.1 MAGICSTRAP® Block Diagram
3. Mechanical Information
[Dimension]

![Top View]

![Side View]

![Bottom View]

Unit:mm

<table>
<thead>
<tr>
<th>Mark</th>
<th>Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>L</td>
<td>1.2±0.15</td>
</tr>
<tr>
<td>W</td>
<td>1.2±0.15</td>
</tr>
<tr>
<td>T</td>
<td>0.55max.</td>
</tr>
</tbody>
</table>

Fig.2 MAGICSTRAP® Package Dimension

4. Electrical Performance

4-1. Frequency range
865 – 928 MHz

4-2. Part number / IC / Memory size

<table>
<thead>
<tr>
<th>IC</th>
<th>EPC</th>
<th>TID</th>
<th>USER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impinj MonzaR6</td>
<td>96bit</td>
<td>96bits</td>
<td>N/A</td>
</tr>
</tbody>
</table>

5. Absolute maximum ratings

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Parameter</th>
<th>Min</th>
<th>Max</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>T_{stg}</td>
<td>Storage temperature</td>
<td>-40</td>
<td>+85</td>
<td>°C</td>
</tr>
<tr>
<td>T_{a}</td>
<td>Operating temperature</td>
<td>-40</td>
<td>+85</td>
<td>°C</td>
</tr>
</tbody>
</table>
6. Reading range (reference only)
Reading range varies by Output Power of Reader/Writer and an antenna.

6-1. EU band
10mm

6-2. US, JAPAN band
10mm

*Measurement setup

![Diagram of reading range setup]

DUT

Read range

V750-BD50C04-J
Reader/Writer (OMRON)

Antenna
(self-manufactured)
7. Packaging
7-1. Dimensions of tape (plastic tape)

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>dimensions</td>
<td>1.45±0.1</td>
<td>1.45±0.1</td>
<td>8.0±0.2</td>
<td>3.5±0.05</td>
<td>1.75±0.1</td>
<td>4.0±0.1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>G</th>
<th>H</th>
<th>J</th>
<th>K</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>dimensions</td>
<td>2.0±0.05</td>
<td>4.0±0.1</td>
<td>1.5+0.1</td>
<td>0.65±0.05</td>
<td>0.25±0.05</td>
</tr>
</tbody>
</table>

7-2. Dimensions of reel

Unit: mm

All Rights Reserved, Copyright© Murata Manufacturing Co., Ltd.
< Specification is subject to change without notice >
7-3. Taping Diagrams

- Feeding Hole: As specified in (1)
- Hole for chip: As specified in (1)
- Cover tape: 50um in thickness
- Base tape: As specified in (1)

7-4 Leader and Tail tape

<table>
<thead>
<tr>
<th>Components</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>7-4 Leader and Tail tape</td>
<td>1160-1190 mm</td>
<td>400-500 mm</td>
<td>150-200 mm</td>
<td>20-40 mm</td>
</tr>
</tbody>
</table>

All Rights Reserved, Copyright© Murata Manufacturing Co., Ltd.
< Specification is subject to change without notice >
7-5 Taping direction
The tape for chips are wound clockwise, the feeding holes to the right side as the tape is pulled toward the user.

7-6. Quantity per reel
5,000 pcs

7-7. Minimum order quantity
5,000 pcs

7-8. Material
Base tape: Plastic
Reel: Plastic

7-9. Peeling force
0.1~1.0 N in the direction of peeling as shown below.

8. Contact window
URL: http://www.murata.com/products/RFID
Email: magicstrap@murata.com

"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 (Cl₂, NH₃, SO₂, NOₓ, 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.

⚠️ Note:
Please make sure that your product has been evaluated and confirmed against your specifications when
our product is applied 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.