PA1590MF3G-107-28  
Engineering Specification

1. Typical Electrical Properties

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Specification</th>
<th>Unit</th>
<th>Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Center Frequency</td>
<td>1588 ± 5 MHz</td>
<td></td>
<td>By Test housing</td>
</tr>
<tr>
<td>Polarization</td>
<td>RHCP</td>
<td></td>
<td>By Test housing</td>
</tr>
<tr>
<td>S11</td>
<td>&lt; -20 dB</td>
<td></td>
<td>By Test housing</td>
</tr>
<tr>
<td>Frequency Temperature Coefficient</td>
<td>0±20 ppm/°C</td>
<td></td>
<td>-40°C to +85°C</td>
</tr>
</tbody>
</table>

Note: (1) Patch Antenna is located on a 70x70mm Ground Plate.  
PA1590MF3G-107-28, G: Green parts (RoHS compliance).  
-107 are the code of project number, -28 show of appendix.

2. Patch-V0 Antenna Performance and Characteristic Data on 70x70 mm Ground Plane (RFN1330121)

2.1 Smith Chart/Return Loss

Note: (1) Patch Antenna is located on a 70x70mm Ground Plate.

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UNLESS OTHER SPECIFIED TOLERANCES ON:  
X=±  
XX=±  
ANGLES=±  
HOLEDIA=±
2.2 Gain Pattern  (Unit : dBic)

1575.42MHz

1598MHz

1602MHz

1606MHz

UNLESS OTHER SPECIFIED TOLERANCES ON:
X=±  X.X=±  X.XX=±
ANGLES=±  HOLEDIA=±

SCALE :  UNIT : mm

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2.3 Antenna Direction

3. Dimension

UNLESS OTHER SPECIFIED TOLERANCES ON:

\[ X = \pm \quad X.X = \pm \quad X.XX = \pm \]

ANGLES \( = \pm \)    HOLEDIA \( = \pm \)

SCALE :  UNIT : mm

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</table>
4. Typical Electrical Properties on INPAQ Test Ground

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Specification</th>
<th>Unit</th>
<th>Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patch Center Frequency</td>
<td>1583.60± 5 MHz</td>
<td>MHz</td>
<td>By Test on INPAQ Ground Plane</td>
</tr>
<tr>
<td>S11</td>
<td>&lt;-20</td>
<td>dB</td>
<td>By Test on INPAQ Ground Plane</td>
</tr>
<tr>
<td>Polarization</td>
<td>RHCP</td>
<td></td>
<td>By Test housing</td>
</tr>
<tr>
<td>Frequency Temperature Coefficient</td>
<td>0±20 ppm/°C</td>
<td>ppm/°C</td>
<td>-40°C to +85°C</td>
</tr>
</tbody>
</table>

5. Test Condition Ground Plane

6. Return Loss Characteristics

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UNLESS OTHER SPECIFIED TOLERANCES ON:

X=±   X.X=±    X.XX=±

ANGLES=±    HOLEDIA=±

SCALE: UNIT: mm

DRAWN BY: 魯孟仙   CHECKED BY: 鄭大福
DESIGNED BY:許瑞麟   APPROVED BY:曾源標

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7. Measured Input Impedance on a Smith Chart

UNLESS OTHER SPECIFIED TOLERANCES ON:
X=±    X.X=±    X.XX=±
ANGLES=±    HOLEDIA=±

SCALE:    UNIT: mm

DRAWN BY: 羅孟仙    CHECKED BY: 鄭大福
DESIGNED BY: 許瑞麟    APPROVED BY: 曾源標

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8. Explanation of Appendix

**PA1590MF3G-107-28**

(1) **2 = 2.0 mm pin length**

(2) **Adhesive Tape [8] 22×22mm**
   
   Adhesive Transfer Tape Specification
   
   2.1 **TAPE**: Nitto 5000NS 22x22x0.16mm
   
   2.2 **Thickness**: 0.16 mm
   
   2.3 **Release Liner**: 0.1mm (typ.) printed paper or paper
   
   2.4 **Dimension**: mm

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