Description: 2.4-2.5GHz Sheet Metal PIFA

PART NUMBER: W3317

Features:
- 2400-2500MHz
- Gain 4dBi
- Radiation Efficiency 77%
- Size 22.4 x 3 x 6.25mm
- VSWR 2:1

Applications:
- Wi-Fi, Bluetooth, ZigBee
- 2.4GHz ISM band radios
- Routers, Gateways
- IoT terminals
- M2M
- Automation, security, transportation

All dimensions are in mm / inches
## ELECTRICAL SPECIFICATIONS

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency</td>
<td>2400-2500 MHz</td>
</tr>
<tr>
<td>Nominal Impedance</td>
<td>50 Ω</td>
</tr>
<tr>
<td>VSWR</td>
<td>2:1</td>
</tr>
<tr>
<td>Average efficiency</td>
<td>77 %</td>
</tr>
<tr>
<td>Peak Gain</td>
<td>4 dBi +/- 1 dB</td>
</tr>
<tr>
<td>Polarization</td>
<td>linear</td>
</tr>
<tr>
<td>Power withstanding</td>
<td>5 W</td>
</tr>
</tbody>
</table>

**Note:**

1. Performance measured on standard 100x100x1mm evaluation board, refer to page 5.
Description: 2.4-2.5GHz Sheet Metal PIFA

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MECHANICAL SPECIFICATIONS

<table>
<thead>
<tr>
<th>Material</th>
<th>Cu</th>
<th>Copper-Nickel-Zinc Alloy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight</td>
<td>0.27 g</td>
<td></td>
</tr>
<tr>
<td>Thickness</td>
<td>0.4[0.016] mm[inch]</td>
<td></td>
</tr>
<tr>
<td>Overall Length</td>
<td>22.2[0.874] mm[inch]</td>
<td></td>
</tr>
</tbody>
</table>

ENVIRONMENTAL SPECIFICATIONS

| Operating temperature            | -40/+105 °C |
| Low temperature                  | -30 °C 500 hours |
| High temperature                 | +85 °C 500 hours |
| Humidity                         | +85°C and 90-95 % r.h. 96 hours |
| Vibration                        | X&Y directions 2 hours |
|                                  | Z directions 4 hours |
| Thermal Shock                    | -30 °C /+85 °C 5 cycles |
Description: 2.4-2.5GHz Sheet Metal PIFA

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OTHER SPECIFICATIONS

PCB LAYOUT
1. PCB material, FR4, size, 100X100X1mm

2. Clearance area (Top)
Description: 2.4-2.5GHz Sheet Metal PIFA

PART NUMBER: W3317

OTHER SPECIFICATIONS

PCB LAYOUT
3. Clearance area (Bottom)

4. PCB features

Issue: 1649
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Description: 2.4-2.5GHz Sheet Metal PIFA

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OTHER SPECIFICATIONS

ANTENNA MOUNTING ON PCB
5, Antenna on test PCB

Others:
1. This antenna is designed for manual or semi automated assembly.
2. While soldering of the antenna it is recommend to use process jig to keep the placement of the antenna stable.
Description: 2.4-2.5GHz Sheet Metal PIFA

PART NUMBER: W3317

CHARTS

VSWR

VSWR vs Frequency measured with 100mm*100mm ground
W3317 measured at Pulse Suzhou
Description: 2.4-2.5GHz Sheet Metal PIFA

Series: Embedded Antenna

PART NUMBER: W3317

Efficiency

Efficiency vs Frequency measured with 100mm*100mm ground
W3317 measured at Pulse Suzhou
Description: 2.4-2.5GHz Sheet Metal PIFA

PART NUMBER: W3317

Peak Gain vs Frequency measured with 100mm*100mm ground
W3317 measured at Pulse Suzhou
Description: 2.4-2.5GHz Sheet Metal PIFA

Series: Embedded Antenna

PART NUMBER: W3317

CHARTS

Gain plots

XY Plane

2400MHz
Avg (dBi) = -2.73
Peak (dBi) = 2.41
Avg -3 (deg) = 75

2450MHz
Avg (dBi) = -2.44
Peak (dBi) = 2.34
Avg -3 (deg) = 70

2500MHz
Avg (dBi) = -2.32
Peak (dBi) = 2.48
Avg -3 (deg) = 65
Description: 2.4-2.5GHz Sheet Metal PIFA

PART NUMBER: W3317

CHARTS

Gain plots

ZX Plane

2400MHz
Avg (dBi) = -2.09
Peak (dBi) = 2.41
Avg -3 (deg) = 105

2450MHz
Avg (dBi) = -2.48
Peak (dBi) = 2.22
Avg -3 (deg) = 95

2500MHz
Avg (dBi) = -2.39
Peak (dBi) = 2.55
Avg -3 (deg) = 75

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Description: 2.4-2.5GHz Sheet Metal PIFA

PART NUMBER: W3317

CHARTS

Gain plots

YZ Plane

2400MHz
Avg (dBi) = -2.26
Peak (dBi) = 1.45
Avg -3 (deg) = 110

2450MHz
Avg (dBi) = -2.35
Peak (dBi) = 0.92
Avg -3 (deg) = 180

2500MHz
Avg (dBi) = -2.23
Peak (dBi) = 1.23
Avg -3 (deg) = 145

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PACKAGING

Tray packing
50PCS/Tray
2000PCS/Carton box