Monarch Series: Satellite Navigation System
Antenna GPS/GLONASS/Beidou/Galileo
Part# CW3010

(Ground cleared under antenna, clearance area 10.80 x 6.25mm)

Features
- Omni directional radiation
- Low profile
- Compact size W x L x H (3.2 x 10.0 x 2.0 mm)
- Low weight (310 mg)
- Fully SMD compatible
- Lead free soldering compatible
- Tape and reel packaging
- RoHS Compliant Product

Applications
- Systems: GPS/GLONASS/Beidou/Galileo
- 1560 – 1610 MHz
- Global Navigation
- Asset and Fleet Tracking
- Mobile Devices
- Industrial, Internet of Things

Electrical specifications @ +25 ℃
Note: Electrical characteristics depend on test board (GP) size and antenna positioning on GP and Ground Clearance area size.

Contact: mobiledeviceantenna_sales@pulseelectronics.com

pulseelectronics.com/products/antennas

L192.C 2/16
Covered positioning systems: GPS, GLONASS, Beidou, Galileo
Typical performance (test board size 80x37 mm, PWB ground clearance area 10.80 x 6.25 mm)

<table>
<thead>
<tr>
<th>ELECTRICAL SPECIFICATIONS</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>FREQUENCY (MHz)</td>
<td>1560-1610 MHz</td>
</tr>
<tr>
<td>NOMINAL IMPEDANCE (Ω)</td>
<td>50</td>
</tr>
<tr>
<td>RETURN LOSS</td>
<td>&lt;-12dB</td>
</tr>
<tr>
<td>VSWR min</td>
<td>1.6:1</td>
</tr>
<tr>
<td>EFFICIENCY</td>
<td>-1.2 dB</td>
</tr>
<tr>
<td>EFFICIENCY</td>
<td>75%</td>
</tr>
<tr>
<td>GAIN MAX</td>
<td>3 dBi±1 dBi</td>
</tr>
<tr>
<td>GAIN MAX RHCP</td>
<td>1 dBic± 1 dBic</td>
</tr>
<tr>
<td>POWER WITHSTANDING</td>
<td>2 watts</td>
</tr>
<tr>
<td>CONNECTOR TYPE</td>
<td>SMD</td>
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</table>

<table>
<thead>
<tr>
<th>ENVIRONMENTAL SPECIFICATIONS</th>
<th></th>
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<tbody>
<tr>
<td>OPERATING TEMPERATURE</td>
<td>-40 to +85 °C</td>
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</table>

<table>
<thead>
<tr>
<th>MECHANICAL SPECIFICATIONS</th>
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</tr>
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<tbody>
<tr>
<td>SIZE</td>
<td>3.2 x 10.0 x 2.0 mm</td>
</tr>
<tr>
<td>WEIGHT</td>
<td>0.310g</td>
</tr>
</tbody>
</table>
Monarch Series: Satellite Navigation System
Antenna GPS/GLONASS/Beidou/Galileo
Part# CW3010

Ceramic Chip Antenna (Ground cleared under antenna, clearance area 10.80 x 6.25 mm)

Terminal Configuration

Layout

<table>
<thead>
<tr>
<th>No.</th>
<th>Terminal Name</th>
<th>Terminal Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Feed</td>
<td>1.70 x 1.45 mm</td>
</tr>
<tr>
<td>2</td>
<td>GND</td>
<td>1.70 x 1.45 mm</td>
</tr>
<tr>
<td>3</td>
<td>GND</td>
<td>1.70 x 3.20 mm</td>
</tr>
</tbody>
</table>
Ceramic Chip Antenna

Ceramic Chip Antenna (Ground cleared under antenna, clearance area 10.80 x 6.25 mm)

Terminal Configuration

Antenna

<table>
<thead>
<tr>
<th>No.</th>
<th>Terminal Name</th>
<th>Terminal Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Feed / GND</td>
<td>1.50 x 2.75 mm</td>
</tr>
<tr>
<td>2</td>
<td>Feed / GND</td>
<td>1.50 x 2.75 mm</td>
</tr>
</tbody>
</table>

Antenna is symmetrical. Either of terminals 1 or 2 can be Feed / GND
Monarch Series: Satellite Navigation System
Antenna GPS/GLONASS/Beidou/Galileo
Part# CW3010

(Ground cleared under antenna, clearance area 10.80 x 6.25 mm)

Typical Electrical Characteristics (T=25 °C)
Measured on the 80 x 37 mm test board without matching circuit

Typical Return Loss S11/ impedance

Free space efficiency and maximum gain

Total Efficiency

Gain

RHCP Gain
Monarch Series: Satellite Navigation System
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Part# CW3010

Typical Free space Radiation Patterns

Radiation pattern coordinates

XZ-Plane
Monarch Series: Satellite Navigation System
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Monarch Series: Satellite Navigation System
Antenna GPS/GLONASS/Beidou/Galileo
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Antenna Packing
Packing form

- Leader section: min 350 mm before component section
- Trailer section: min 40 mm after component section.

Empty part cavities at leader and trailer section of the tape must be sealed with top cover tape.

| BOX HBS-00120 (182x182x125) | 1 pcs
| LABEL | 1 pcs/BOX
| REEL HBS-00160 (D180,W28) | 4 pcs
| REEL LABEL | 1 pcs/REEL

MATERIAL HANDLING

| PRODUCT | H90-DY113-F01P01
| DENOMINATION | PACKING FORM
| MATERIAL |
| DRAWN | 169187 Parts
| DESER | G
| CHKD | F
| APPRD | E
| APPRD BY | D
| A

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L192.C 2/16