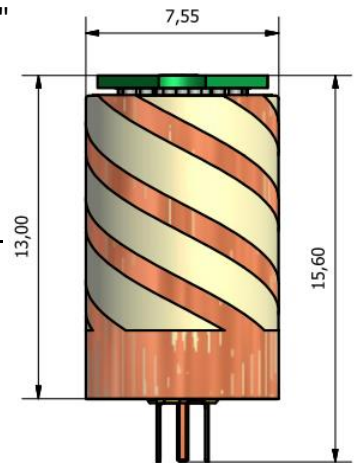


# MWSL-1300 "The dielectric-loaded helical antenna solution"

L1 GPS miniature dielectric loaded antenna: 3-pin connection

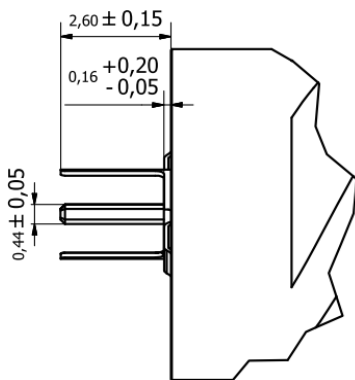
## APPLICATIONS

- Asset Tracking
- Hand Held Devices
- UAV/AUV
- Traffic Enforcement
- Emergency Location
- Seismic Monitors/Measuring
- Wildlife Tracking
- Marine Tracking



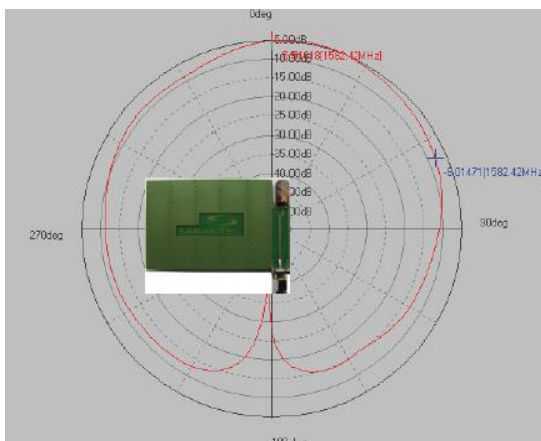
## Product Description

The MWSL1300 GPS L1 miniature dielectric-loaded antenna uses MARUWA's distinctive materials technology to provide circularly-polarized gain from a uniquely small volume. This product is lazer-trimmed for optimum performance and this together with the high relative dielectric constant of the core ensures excellent performance in tightly integrated applications. The MWSL1300 acts as its own filter, attenuating signals from common cellular and ISM frequencies by as much as 30dB. The part can be connected using a special insertion connector that is supplied by IMS Connector Systems GmbH: part number AGK-4234.



## Key Features

- Designed for installation with 1.5mm gap from antenna side to host PCB ground-plane
- Filters against interference from cellular and ISM bands
- Balanced design rejects common mode noise from ground plane
- Solder-pad installation to device PCB



| Design Specifications       | Typical           | Units           |
|-----------------------------|-------------------|-----------------|
| Type                        | Quadrifilar-Helix | -               |
| Free Space Frequency        | 1582.5            | MHz             |
| Embedded Frequency          | 1575.42           | MHz             |
| Efficiency (Embedded)       | 20%               | Total spherical |
| Embedded Gain (RHCP)        | -5.0              | dBic at zenith  |
| Beamwidth                   | >135              | Degrees         |
| Bandwidth                   | 15                | MHz             |
| Axial Ratio                 | <1.5              | at zenith       |
| VSWR                        | <2.0:1            | -               |
| Impedance                   | 50                | Ohms            |
| Operating Temp              | -40→+85           | dB              |
| Overall dimensions          | Refer to drawings | mm              |
| Weight (excl radome/sleeve) | 3                 | grams           |