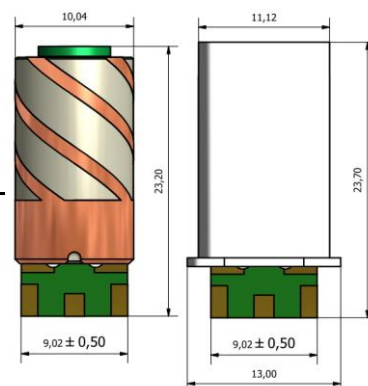


# MWSL-1251 "The dielectric-loaded helical antenna solution"

L1 GPS miniature dielectric loaded antenna: PCB feed

## APPLICATIONS

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



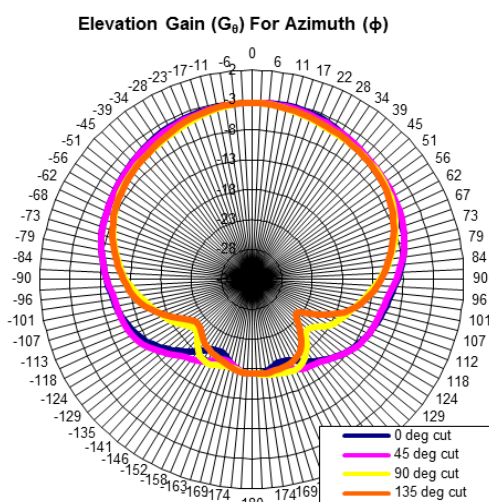
## Product Description

The MWSL1251 GPS L1 miniature dielectric-loaded antenna uses MARUWA's distinctive materials technology to provide circularly-polarized gain from a small volume, where the housing environment causes a higher degree of frequency down-tuning. For less tightly integrated applications the alternative MWSL1252 part should be selected. This product is designed for solder or spring connection to the host PCB and can be supplied with a plastic sleeve to provide mechanical protection and also to stabilise frequency in the presence of a wide variety of housing features and materials.



## Key Features

- Designed for installation with 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	1603.5	MHz
Embedded Frequency	1575.42	MHz
Efficiency (Free Space)	27%	Total spherical
Gain (RHCP)	-3	dBic at zenith
Beamwidth	>135	Degrees
Bandwidth	15	MHz
Axial Ratio	<2.0	at zenith
VSWR	<2.0:1	-
Impedance	50	Ohms
Operating Temp	-40→+85	dB
Overall dimensions	Refer to drawings	mm
Weight (excl radome/sleeve)	7	grams