

## 9dBi Underground Antenna

### SBA-U2509UA

**SBA-U2509UA** is a 9dBi UHF RFID antenna optimized for underground and floor-level applications in the 902–928 MHz range. With circular polarization and a wide beam pattern (80° horizontal, 40° vertical), it ensures stable tag reading even when placed below surfaces like floors or entry mats. Its compact aluminum design and IP65 waterproof rating provide reliable performance in challenging or semi-concealed environments.

#### Features and Benefits:

- Frequency Range: 902–928 MHz (UHF)
- Gain: 9dBi for effective underground tag detection
- Circular Polarization ensures flexible tag orientation
- Beam Coverage: 80° horizontal / 40° vertical
- VSWR  $\leq 1.5$  for stable RF performance
- Connector Type: SMA socket
- IP65 waterproof rating with a robust aluminum body
- Slim and durable for embedded or low-profile installations
- Operating Temperature: -20°C to +60°C
- Lightning protection with DC grounding

#### Applications:

- Vehicle entry systems with underground tag readers
- Smart retail zones with floor-mounted antennas
- Access control beneath entry mats or panels
- Conveyor belt and pallet tracking systems
- Industrial automation in embedded environments



<b>SPECIFICATIONS</b>	
<b>Physical Parameter</b>	
Dimensions	354mm X 229mm X 20mm
Colour	Black
Weight	1.25 Kgs (Gross)
Packaging Dimensions	360mm X 280mm X 70mm
Material	Aluminium
Waterproof Rating	IP65
<b>UHF Technical Parameters</b>	
Operating Frequency	902-928 MHz
Gain	Up to 9 dBi
Beam Width	Horizontal: 80°, Vertical: 40°
VSWR	<=1.5
Front Back Ratio	>=20
Polarization	Circular
Input Impedance	50 Ω
Maximum Input Power	100 W
Lightening Protection	DC Grounding
Connector Type	SMA Socket
<b>Environmental Parameters</b>	
Operating Temperature	-20°C to +60°C
Storage Temperature	-40°C to +85°C
Working Humidity	5% to 95% RH No condensation

*Soochak Bharat, with its technical expertise in RFID technology, focuses on designing, developing, innovating, and deploying RFID hardware solutions.*

\*Read range is dependent on tag size and design.

\*Soochak Bharat reserves the right to make changes in the above specifications without notice.

#### **SOOCHAK BHARAT TECHNOLOGIES PRIVATE LIMITED**