

## 5dBi Flat Antenna

### SBA-U2505F

**SBA-U2505F** is a 5dBi linear polarized UHF RFID antenna designed for short- to mid-range applications within the 902–928 MHz frequency band. Its wide 90° horizontal beam makes it ideal for broad area coverage, while the slim aluminum body and ear-mount design ensure quick and space-efficient installation. Suitable for indoor use or controlled outdoor environments where tag orientation is fixed.

#### Features and Benefits:

- Frequency Range: 902–928 MHz
- Gain: 5dBi for stable mid-range coverage
- Linear Polarization for controlled, fixed-orientation tag reading
- Beamwidth: 90° horizontal / 35° vertical
- VSWR  $\leq 1.5$  ensures efficient signal transfer
- Front-to-Back Ratio  $\geq 20$  reduces unwanted reflections
- Connector Type: SMA socket
- Max Input Power: 100W
- Lightweight aluminum build with ear-mount installation
- Operating Temperature: -20°C to +60°C
- Integrated DC grounding for lightning protection

#### Applications:

- Smart shelf and POS systems in retail
- Controlled-access RFID checkpoints
- Conveyor belt item tracking
- Workstation-level inventory monitoring
- Indoor asset tracking in compact zones



<b><u>SPECIFICATIONS</u></b>	
<b>Physical Parameter</b>	
Dimensions	460mm X 90mm X 20mm
Colour	White/Black
Weight	0.7 Kgs (Gross)
Packaging Dimensions	510mm X 110mm X 25mm
Material	Aluminium
Installation Method	Ear-mount Installation
<b>UHF Technical Parameters</b>	
Operating Frequency	902-928 MHz
Gain	Up to 5 dBi
Beam Width	Horizontal: 90°, Vertical: 35°
VSWR	<=1.5
Front Back Ratio	>=20
Polarization	Linear
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**