

Shenzhen Ai-Thinker Technology Co., Ltd.

Room 410, Building C, Huafeng Smart Innovation Port, Gushu, Xixiang, Bao'an District,
Shenzhen

Chip SMD Antenna

Product Specification

1. General Specifications

Product Name	Chip SMD Antenna
Model	1503
Frequency	400–1000 MHz
Polarization	Linear
Radiation Pattern	Omnidirectional
VSWR	≤ 2.0
Return Loss	≤ -10 dB
Radiation Efficiency	10–50%
Power Handling	4 W
Operating Temperature	-40 ~ 80°C
Dimensions	15 (L) × 3 (W) × 1.2 (H) mm

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2. Mechanical Dimensions

Antenna size: 15 (L) × 3 (W) × 1.2 (H) mm.

Refer to antenna package drawing for detailed layout (unit: mm).

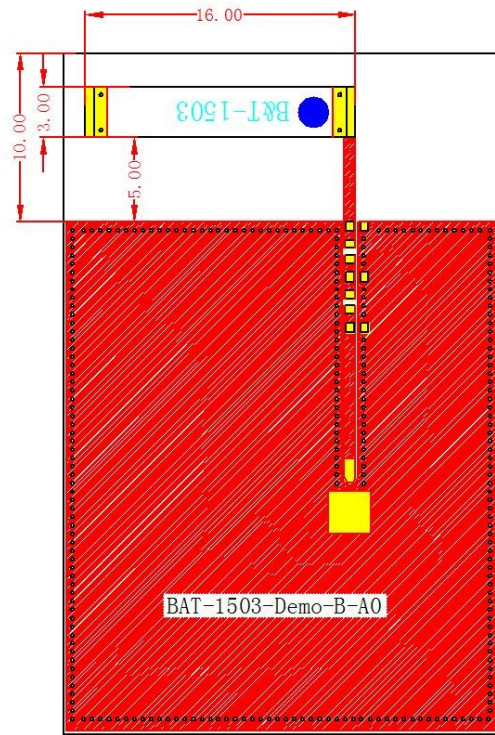
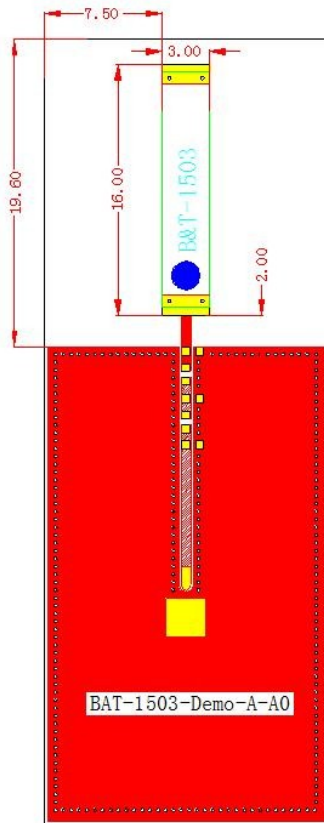


3. Hardware Design Guidelines

The antenna can be placed either vertically or horizontally.

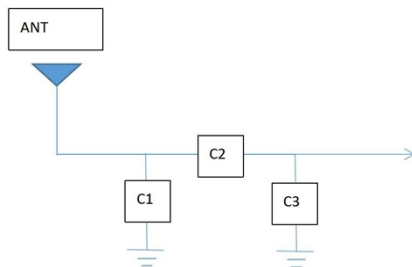
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Vertical placement is preferred when space allows for better performance.

4. Impedance Matching

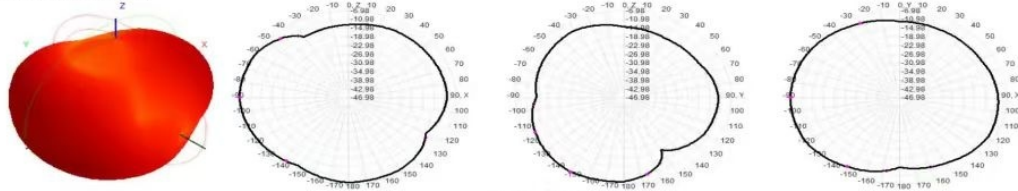


- Use inductors and capacitors for impedance tuning.
- Inductor range: 1–110 nH.
- Capacitor range: 0.5–10 pF.
- Matching parameters should be adjusted according to the operating frequency band.
Different frequency bands require different matching values.

5. Antenna Gain and Pattern

Frequency (MHz)	Gain (dBi)	Efficiency (%)
900.0	-6.87	9.25
905.0	-6.49	9.42
910.0	-6.83	9.12
915.0	-6.98	8.88
920.0	-6.68	9.07
925.0	-6.61	9.48
930.0	-6.68	8.98

TD20 915MHz



Q20 915MHz

