

NFC PCB Antenna Specification

1. Scope

This specification defines the core technical parameters and performance requirements of the NFC antenna, applicable to the production, inspection, and customer use of the NFC antenna manufactured by our company.

2. Normative References

This product complies with ISO/IEC 14443-1:2008, ISO/IEC 14443-2:2010, ISO/IEC 18092, YD/T 3145-2016, and GB/T 2423 series of related standards. The latest version of the standard shall apply.

3. Product Overview

This product is a 13.56MHz high-frequency NFC antenna manufactured using PCB technology. It supports reader/writer mode to enable data communication. The product model is NFC-0127.

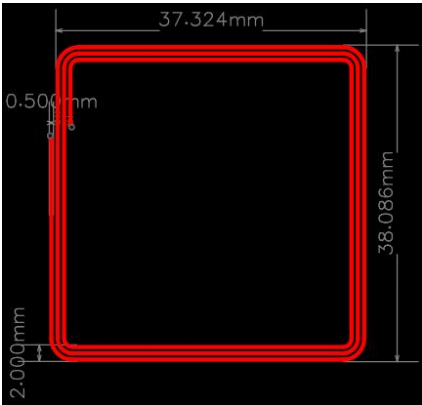
4. Core Technical Parameters

4.1 Electrical Parameters

Parameter Name	Specification Requirements	Test Conditions
Operating Frequency	13.56MHz $\pm$ 150kHz	Ambient temperature & pressure
Inductance Value	0.9 μ H	13.56MHz, unloaded
Q Factor	20	13.56MHz, unloaded
Number of Turns	3 turns	—
Communication Distance	10~30mm (typical value)	No metal interference

4.2 Dimensions and Material Parameters

Outline dimensions as shown below; the thickness is 1.6 mm. Constructed with FR-4 PCB and lead-free solder, which meets the RoHS standard.



(Tolerance: $\pm$ 0.3 mm)

5. Key Performance

- **Communication Performance:** Supports the ISO/IEC 14443A protocol, with a communication response delay ≤ 10 ms and excellent anti-collision performance capability.
- **Environmental Adaptability:** Stable performance in the -40°C to 85°C environment. The parameter variation is $\leq 5\%$ after damp heat, vibration, and salt spray testing.
- **Reliability:** Operating life $\geq 50,000$ hours; ESD protection ≥ 8 kV.

6. Manufacturer Information

Manufacturer: Shenzhen Xunke Technology Co., Ltd

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