苏州硕贝德通讯技术有限公司

SUZHOU SPEED COMMUNICATION

TECHNOLOGY CO.LTD

Antenna Specifications

Customer/Project		NFC Antenna	Frequency Band		13.56 MHz
Date		20250220	Version		
SPEED					
Checked by	RF	HW	Designed by	RF	HW
	ME	RW		ME	RW
	QC		Remark		
Customer					
Date					
Confirmed by		RF			
		ME			
Address		No. 21 Chunyao road, Xiangcheng district, Suzhou city, Jiangsu province.			

www.speed-hz.com

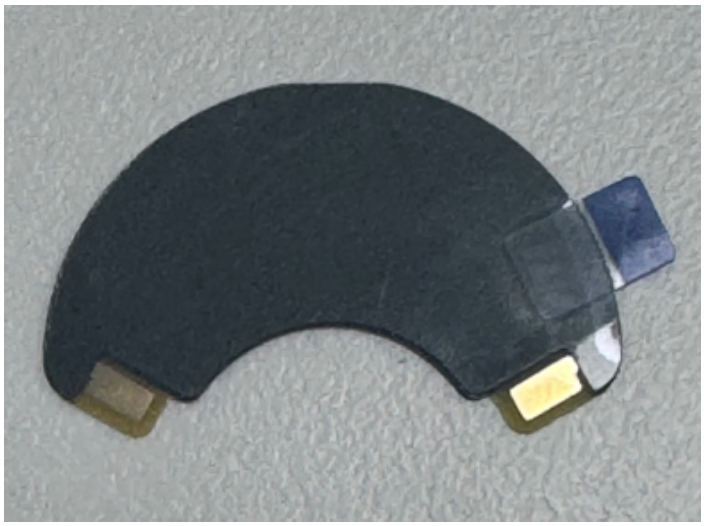
CONTENT

Antenna Gain: Only radiated measurements are used to show compliance with FCC limits for fundamental and spurious emissions.

1. PROJECT OVERVIEW

This specification covers the characteristics of the NFC antenna.

(a) Top view



(b) Bottom view

Figure 1 Antenna Dimensions

2. ANTENNA SPECIFICATION

Items	Content
Outline Dimensions	30.59×18.81mm
Working Frequency	13.56 MHz
Return loss	<-2dB

3. TEST

3.1 Test Conditions

Antenna is installed inside the plastic fixture.

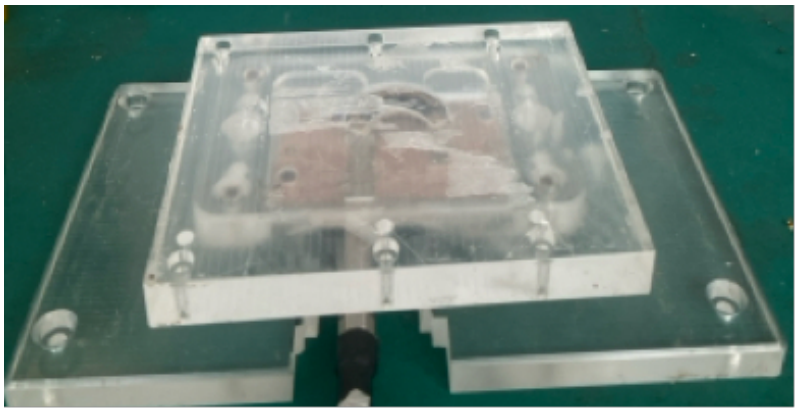


Figure 2 plastic fixture

3.2 Test Environment

The measuring equipment for antenna return loss and voltage standing wave ratio is Keysight E5071C vector network analyzer. As shown below:

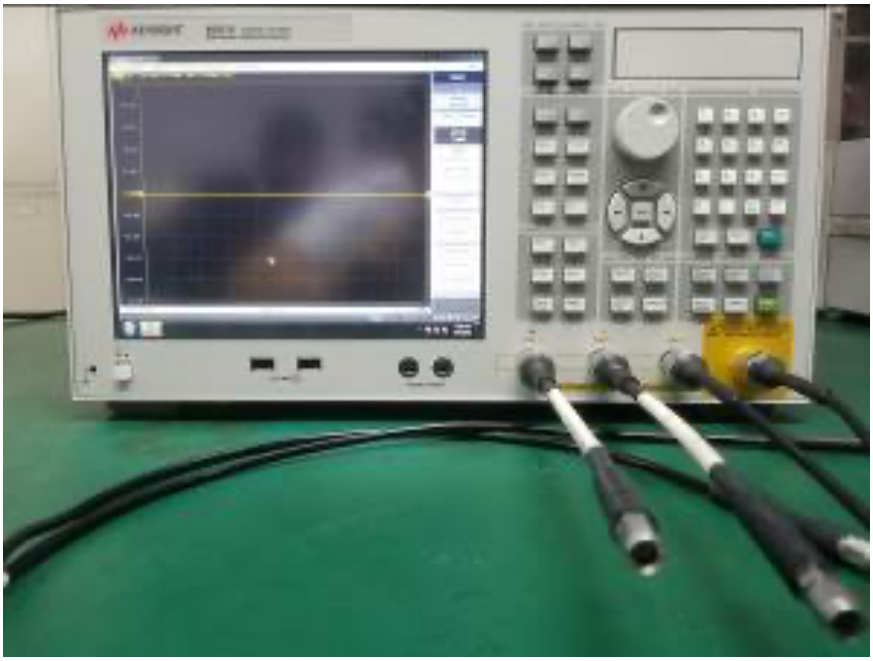


Figure 3 Keysight E5071C vector network analyzer

4. Test Results

4.1 Electrical Properties Performance

Antenna inductance	1.37uH
DC resistance	1.15Ω
Parallel resistance	3.2kΩ
Self-resonance Frequency	50.67MHz

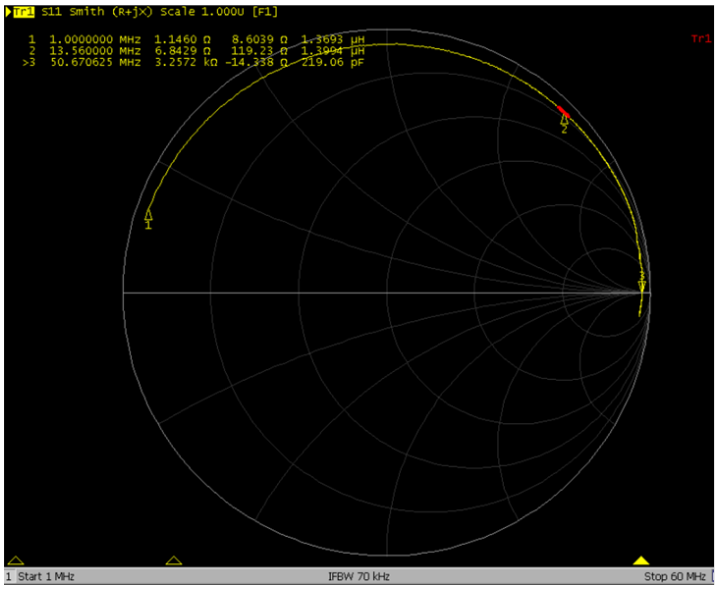


Figure 4 Electrical Properties Performance

4.2 Return loss and VSWR

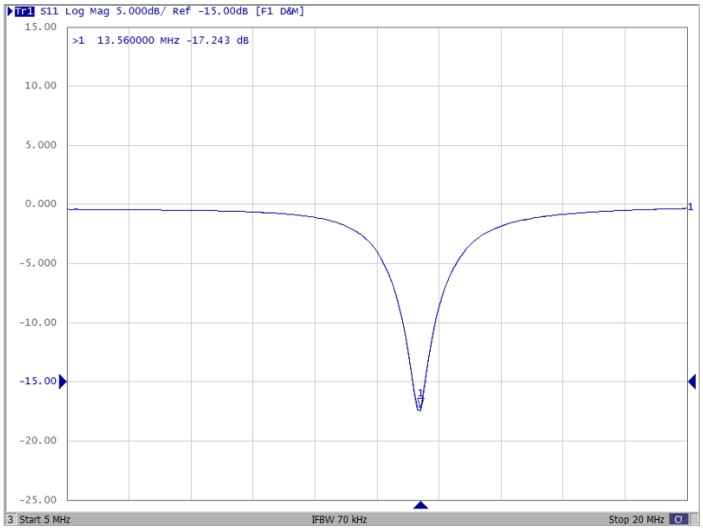


Figure5 Return Loss

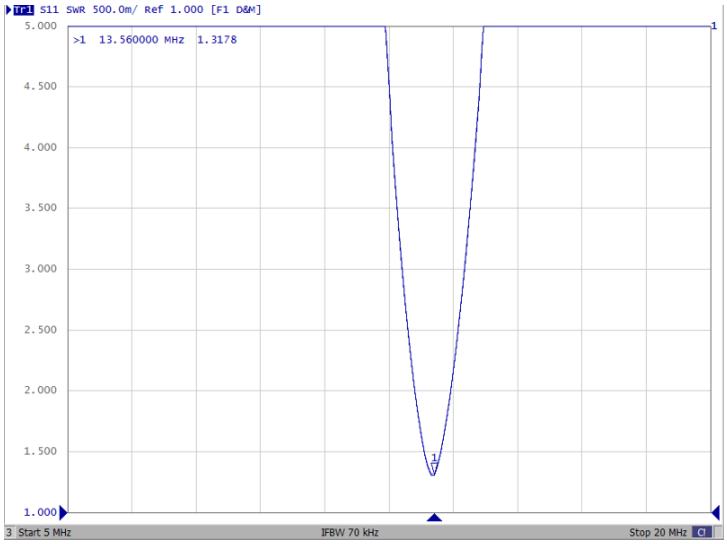


Figure 6 VSWR

5. Structure Diagram

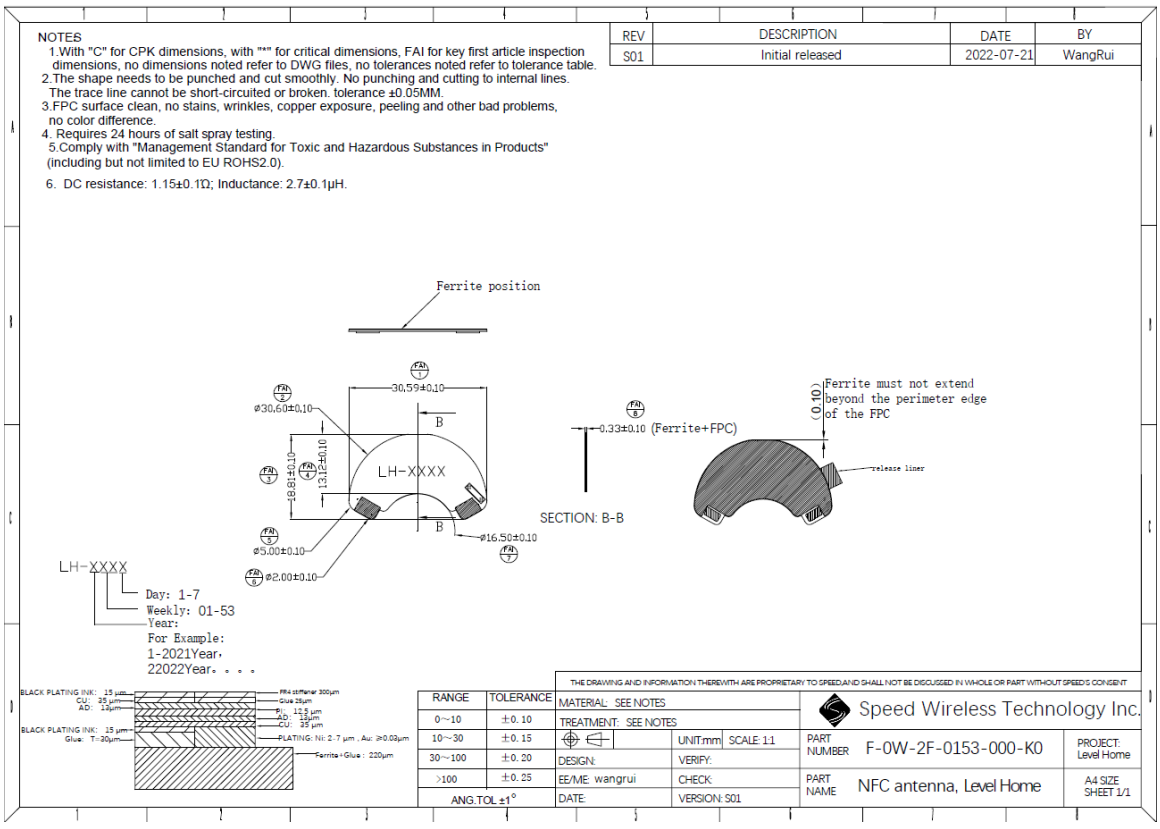


Figure 7 Antenna structure diagram