



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

SPEED has possession of proprietary information provided in this presentation and this proprietary information shall be kept in strict confidence and not disclosed to any person or firm without the prior written consent of SUZHOU SPEED Communication Technology.

CONTENT

ANTENNA SPECIFICATIONS	1
1. PROJECT OVERVIEW	3
2. ANTENNA SPECIFICATION	3
3. TEST	4
3.1 TEST CONDITIONS	4
3.2 TEST ENVIROMENT	4
4. TEST RESULTS	5
4.1 ELECTRICAL PROPERTIES PERFORMANCE	5
4.2 RETURN LOSS AND VSWR	5
5. STRUCTURE DIAGRAM	6

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

www.speed-hz.com

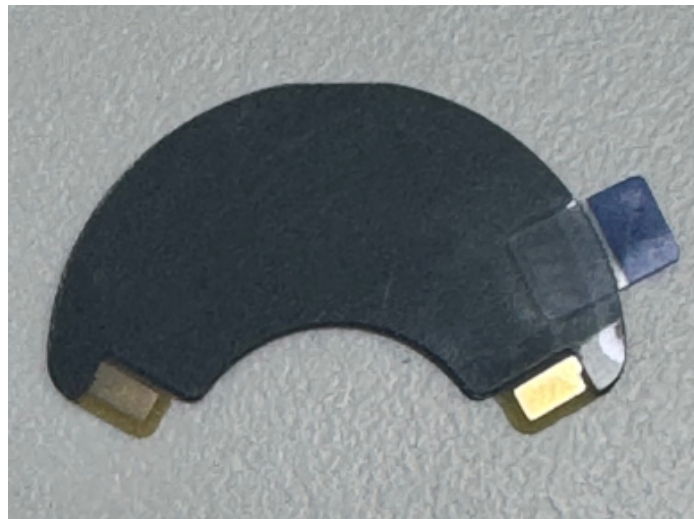
SPEED has possession of proprietary information provided in this presentation and this proprietary information shall be kept in strict confidence and not disclosed to any person or firm without the prior written consent of SUZHOU SPEED Communication Technology

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	$30.59 \times 18.81\text{mm}$
Working Frequency	13.56 MHz
Return loss	$<-2\text{dB}$

www.speed-hz.com

SPEED has possession of proprietary information provided in this presentation and this proprietary information shall be kept in strict confidence and not disclosed to any person or firm without the prior written consent of SUZHOU SPEED Communication Technology

3. TEST

3.1 Test Conditions

Antenna is installed inside the plastic fixture.

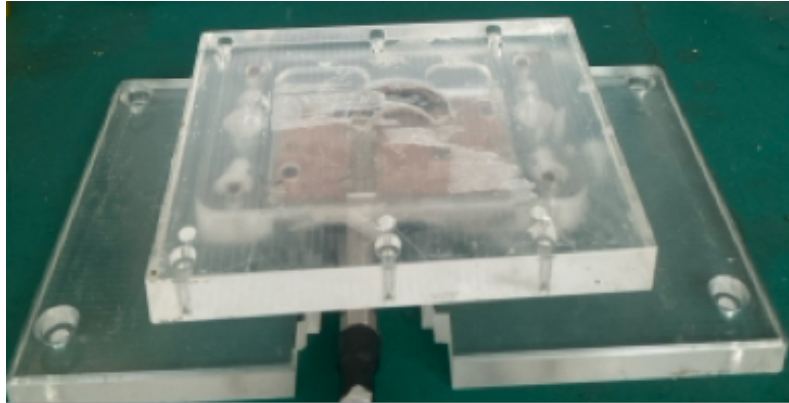


Figure 2 plastic fixture

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

www.speed-hz.com

SPEED has possession of proprietary information provided in this presentation and this proprietary information shall be kept in strict confidence and not disclosed to any person or firm without the prior written consent of SUZHOU SPEED Communication Technology

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

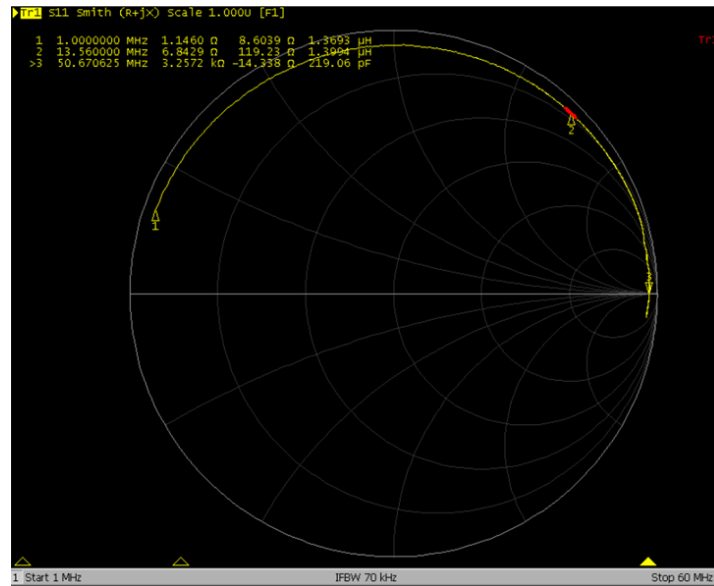


Figure 4 Electrical Properties Performance

4.2 Return loss and VSWR

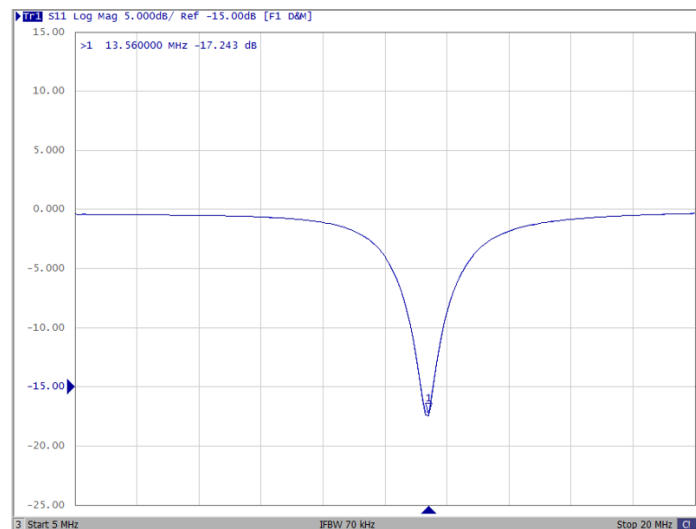


Figure5 Return Loss

www.speed-hz.com

SPEED has possession of proprietary information provided in this presentation and this proprietary information shall be kept in strict confidence and not disclosed to any person or firm without the prior written consent of SUZHOU SPEED Communication Technology

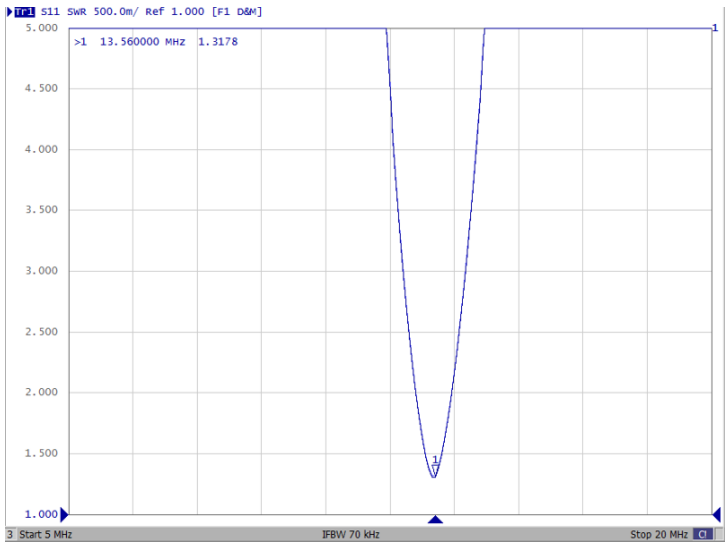


Figure 6 VSWR

5. Structure Diagram

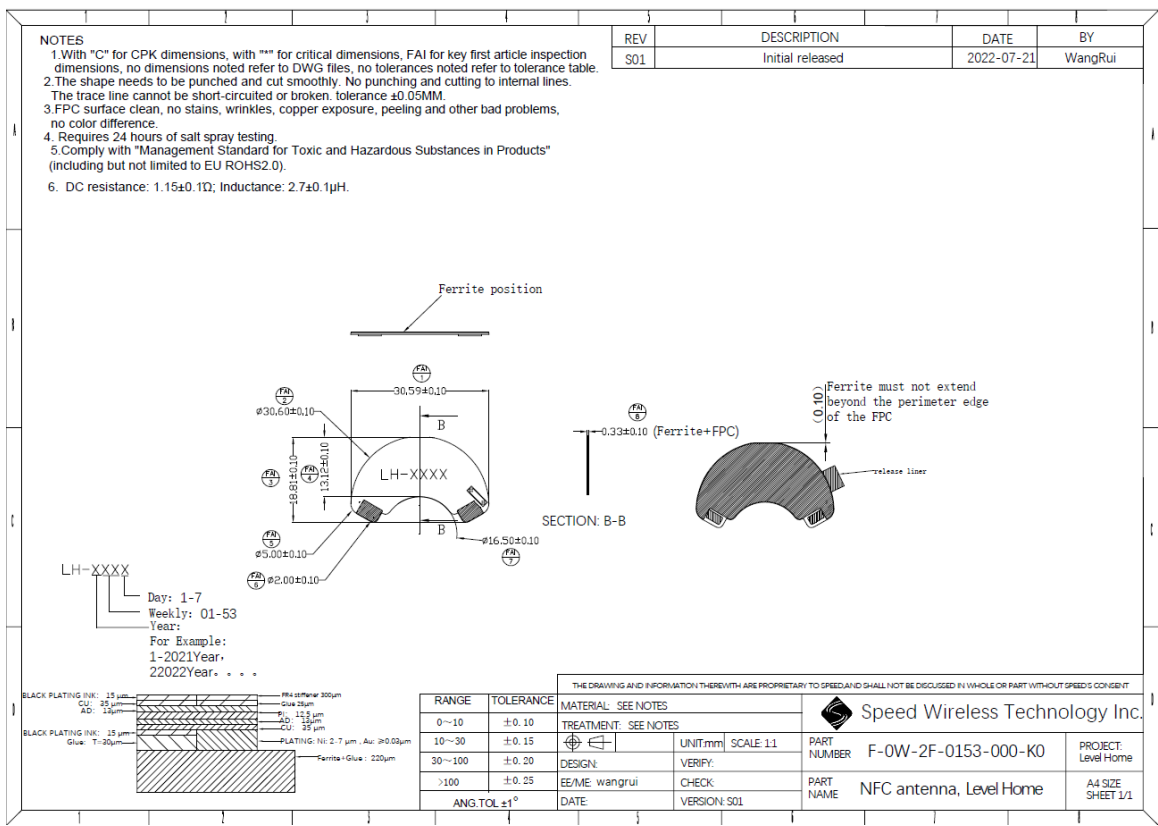


Figure 7 Antenna structure diagram

www.speed-hz.com

SPEED has possession of proprietary information provided in this presentation and this proprietary information shall be kept in strict confidence and not disclosed to any person or firm without the prior written consent of SUZHOU SPEED Communication Technology