



NFC Antenna Specification

Customer Name: Lockin Technology (Beijing) Co., Ltd.
LOCKIN (U.S.) INC.

Part Name : NFC Antenna

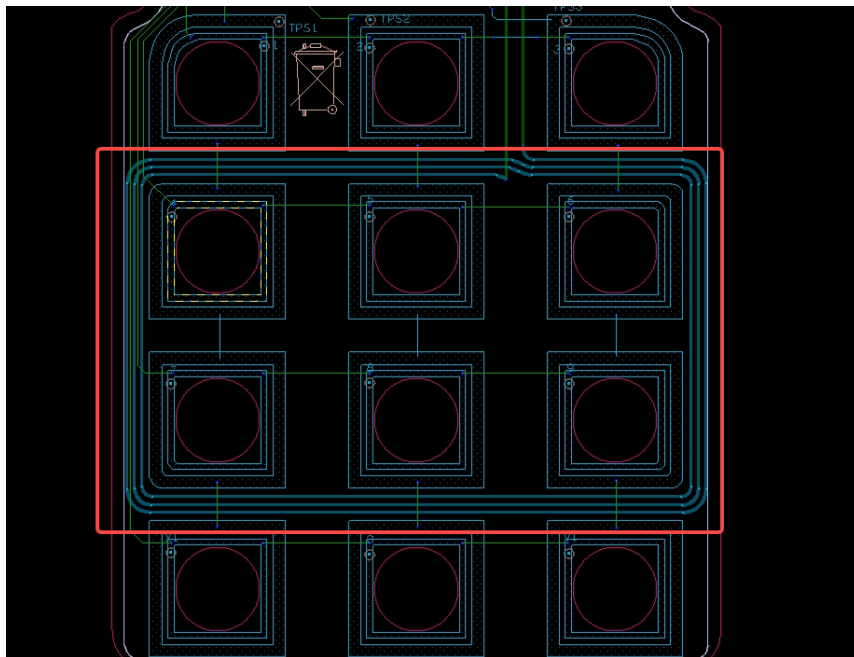
Size: 29.3mm x 48.2mm

Antenna type: Onboard Antenna

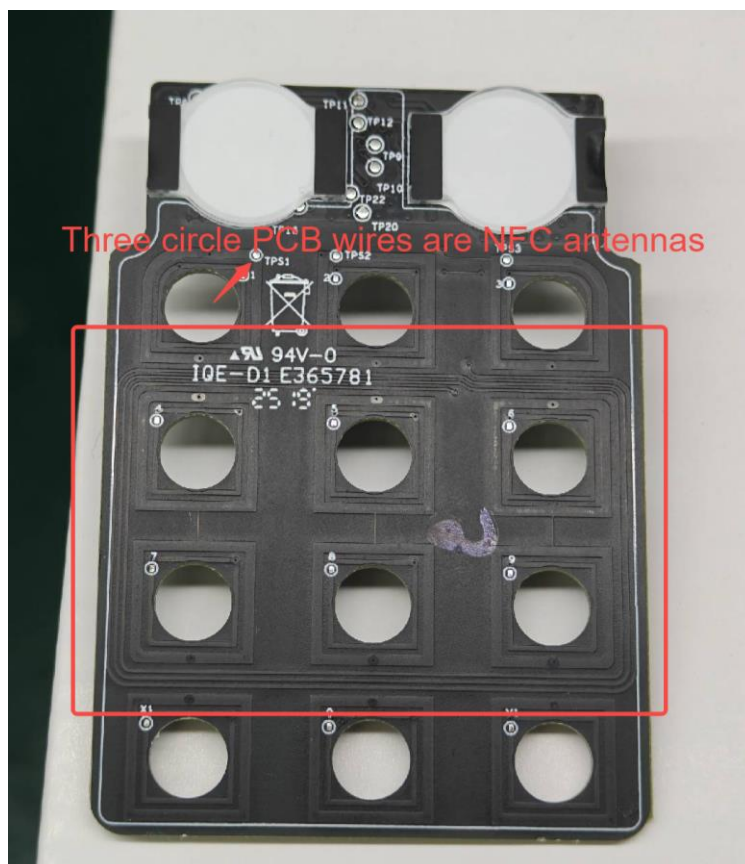
Name of Contractor: Chongqing Wenquan Intelligent
Technology Co., Ltd

Address: No. 50 Industrial Avenue, Pulu Street, Tongliang
District, Chongqing (Self Committed)

一、2D Drawings

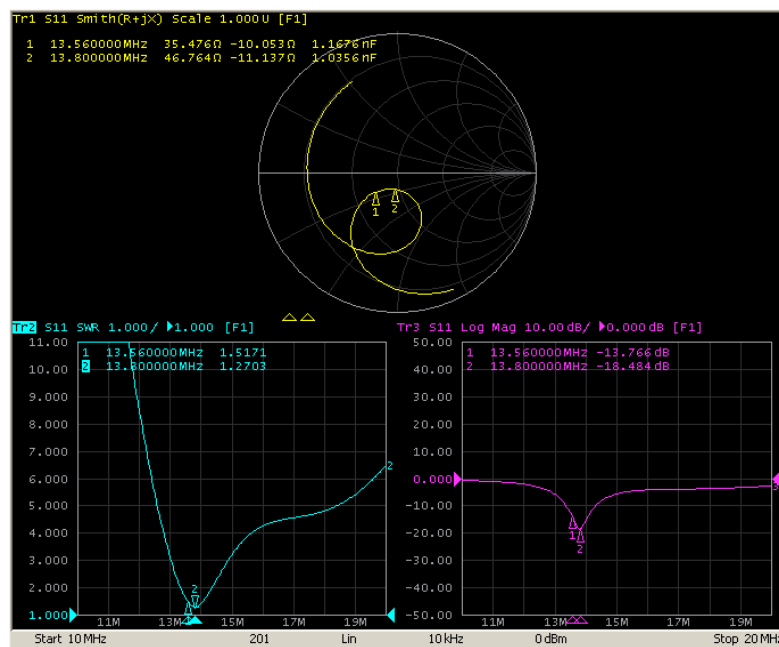


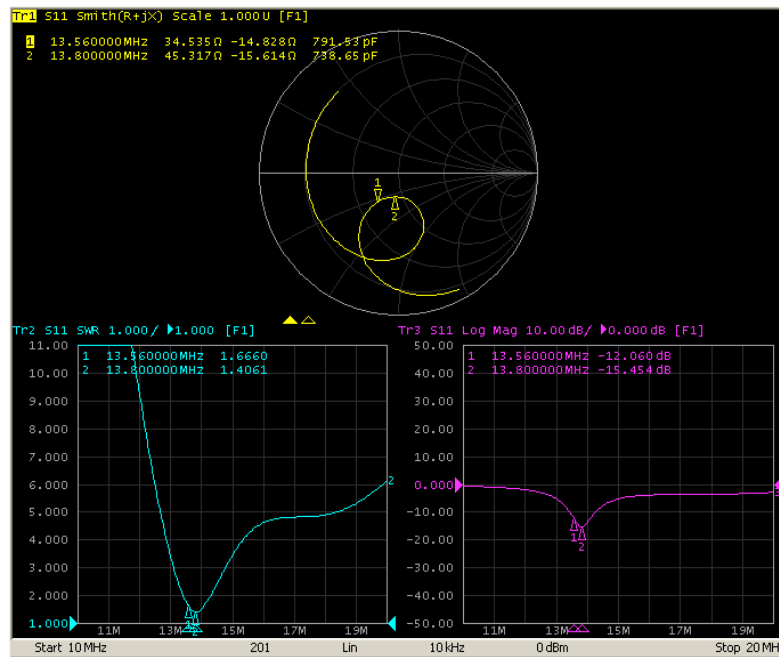
二、Physical picture



三、 NFC Whole Machine Test Report

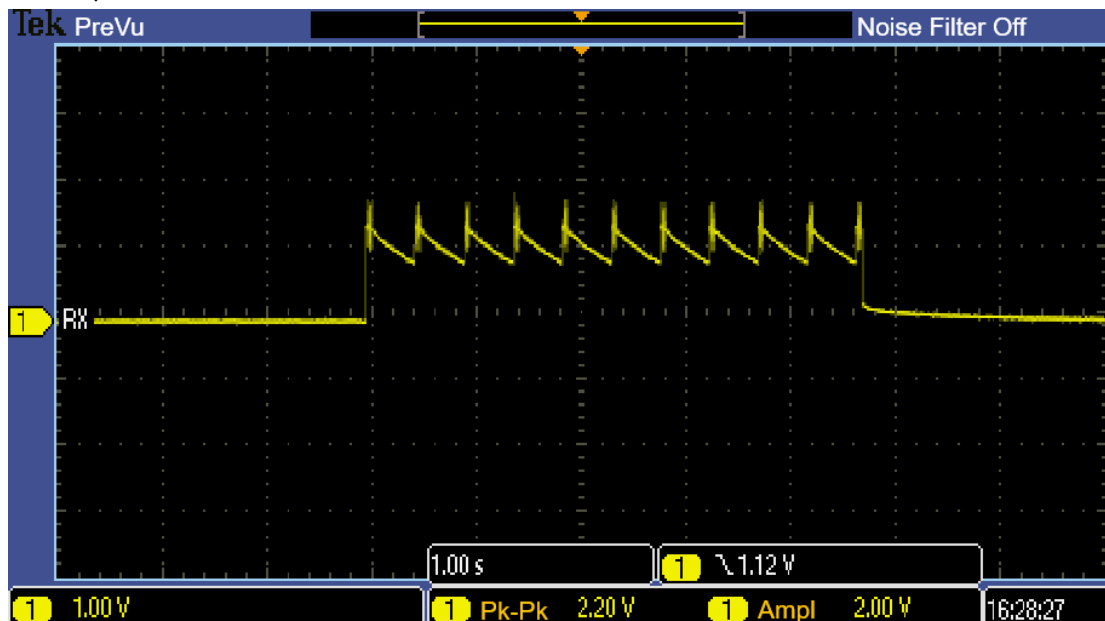
NFC S11Parameter testing			
Test purpose	Verify NFC RF impedance matching parameters		
Test topology	Test S11 parameters through network partitioning		
Test equipment	1. Sample lock 2. Vector network analyzer		
test method	1. Capture S11 parameters through web segmentation, smith, swr		
Result analysis		Test by	Liang Kangning
test conclusion	Pass	Test date	2021.11.17



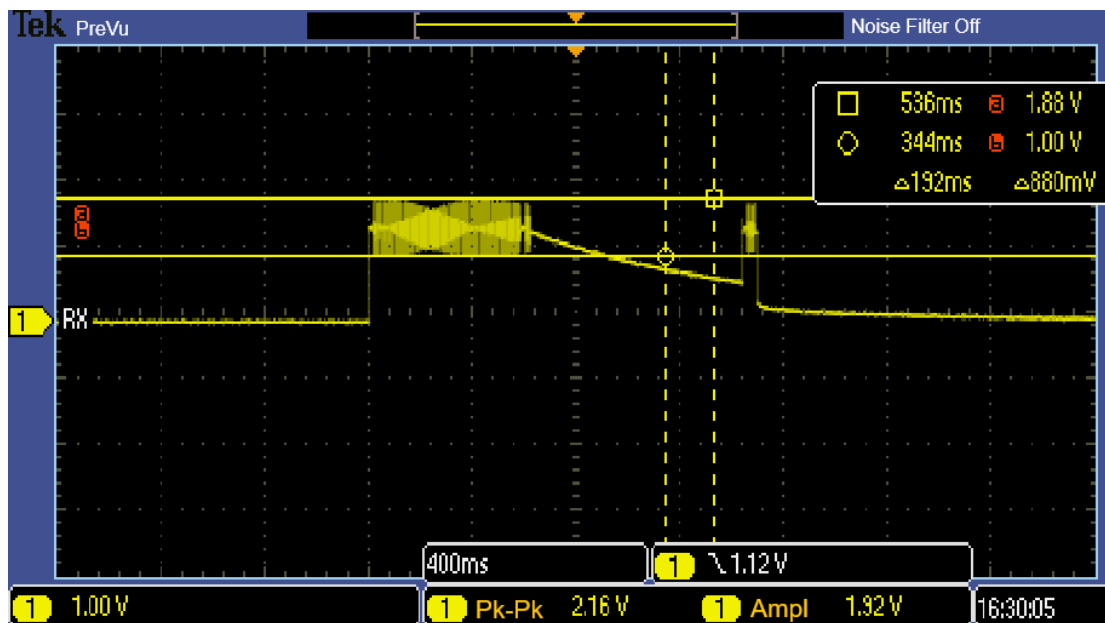
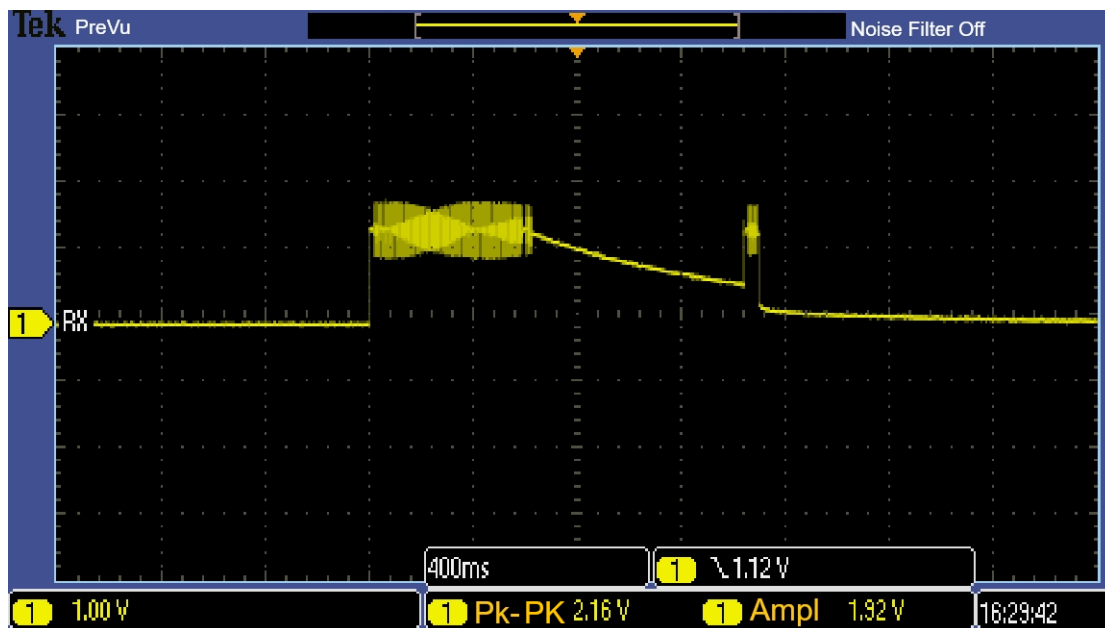


NFC electrical signal testing		
Test purpose	Verify the compatibility between NFC module and touch module design	
Test topology	Oscilloscope captures the waveform of electrical signals	
Test equipment	1. Sample lock oscilloscope 3. Battery	
test method	Capture NFC card swiping waveform and touch waveform through oscilloscope	
Result analysis		
test conclusion	Pass	Test by: Liang Kangning
		Test date: 2022/11/17

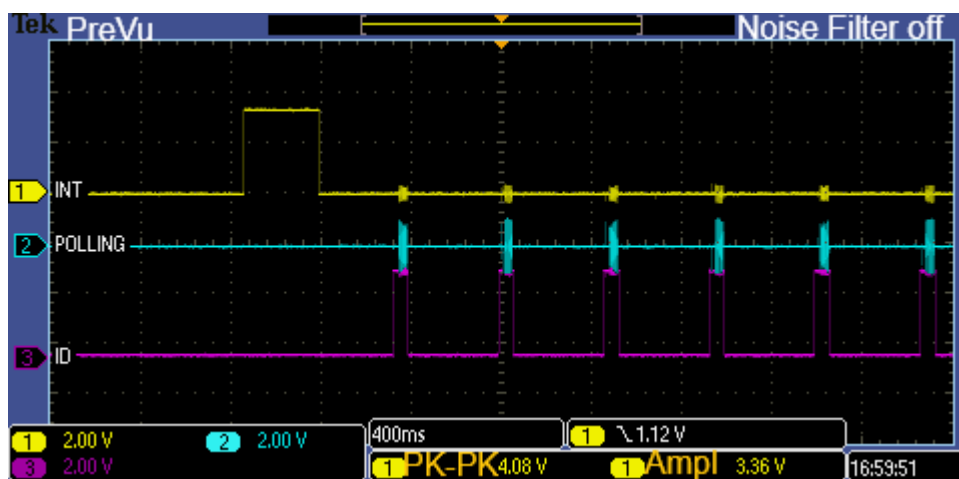
Wake up NFC POLLING waveform after door lock

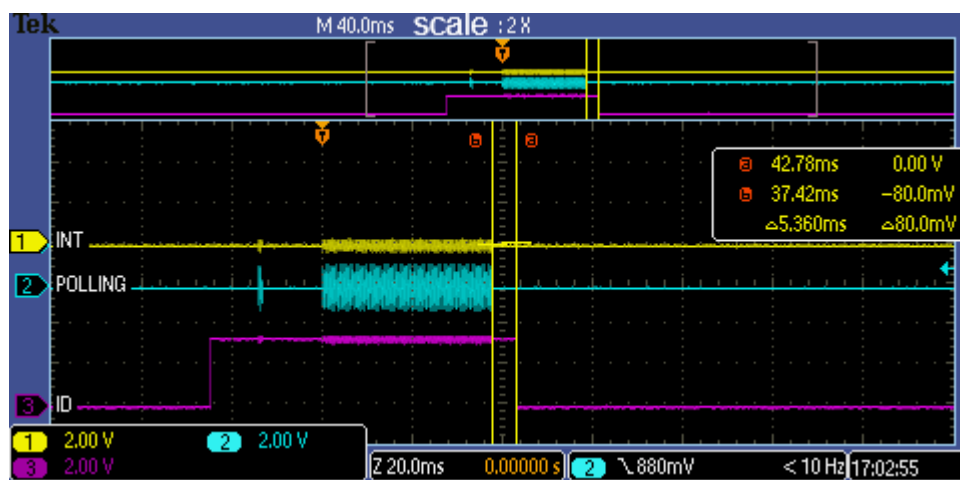
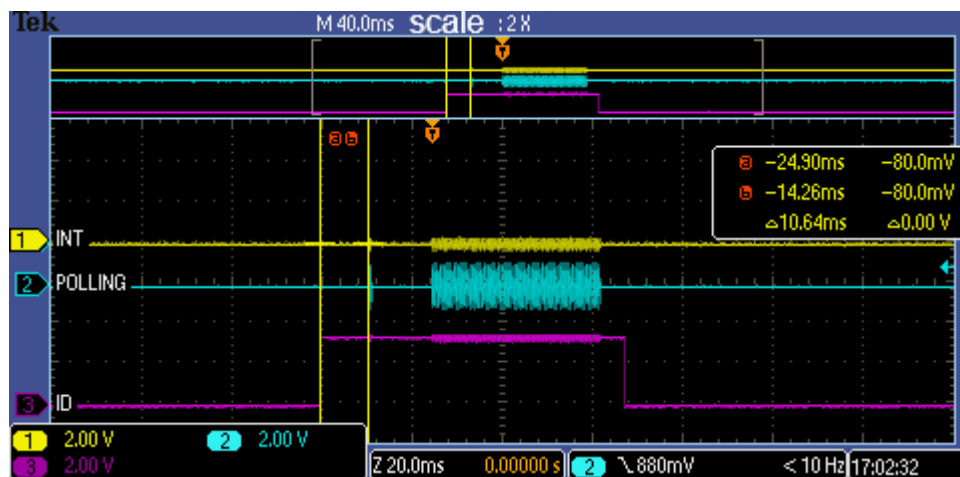


NFC POLLING waveform after NFC lock

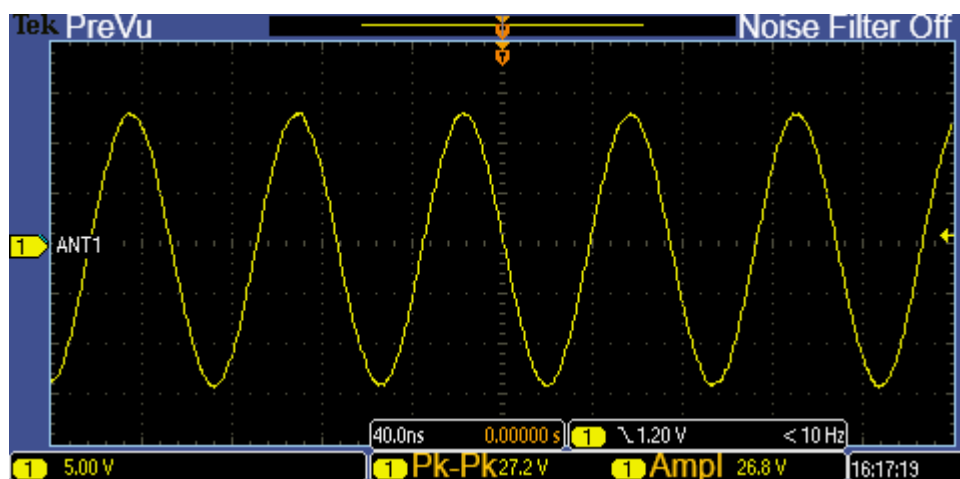


NFC_POLING and TX-ID timing

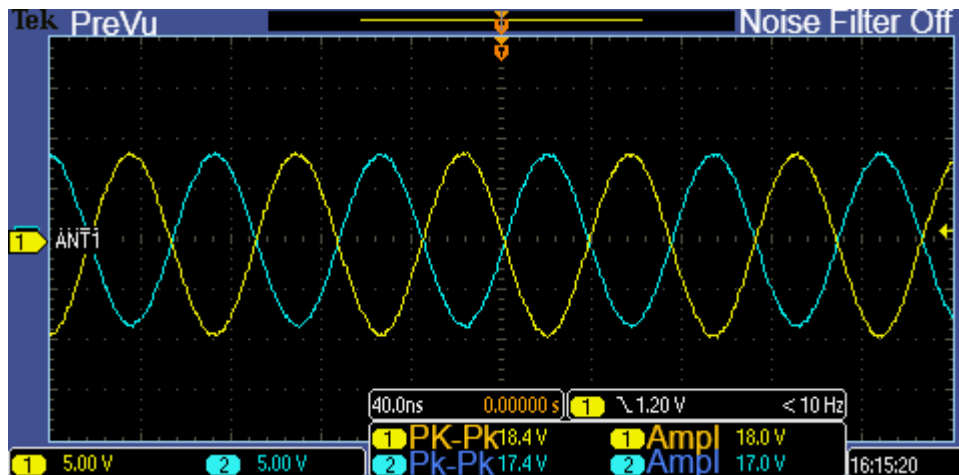




NFC_ANT differential signal



NFC_ANT single-ended



NFC card swiping distance test&proximity wake-up distance test				
Test purpose	Verify NFC card swiping distance through testing			
Test topology	1. Sample lock filled with battery, sample lock pressed card swiping test			
Test equipment	1. Sample lock 2. Battery 3. NFC card 4. Transparent blocking plate			
test method	1. Test the maximum card swiping distance through a transparent barrier			
Result analysis				
test conclusion	PASS		Test by	Liang Kangning
			Test date	2022.12.29
test item	test method	test result	test conclusion	notes
NFC card swiping distance	Place a transparent stopper in the card swiping area and test the card swiping distance on the stopper	11.46mm	PASS	

