

# APPROVAL SHEET

Customer Name: Advantech Co., Ltd.

Date: 2022/03/14

Doc. Version: 1.1

Customer P/N	1751000354-01
Smart Approach P/N	SR-RAM78-001
Product Description	NFC Antenna

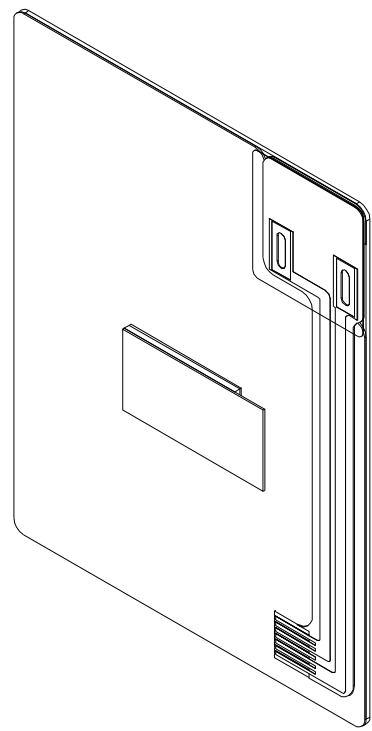
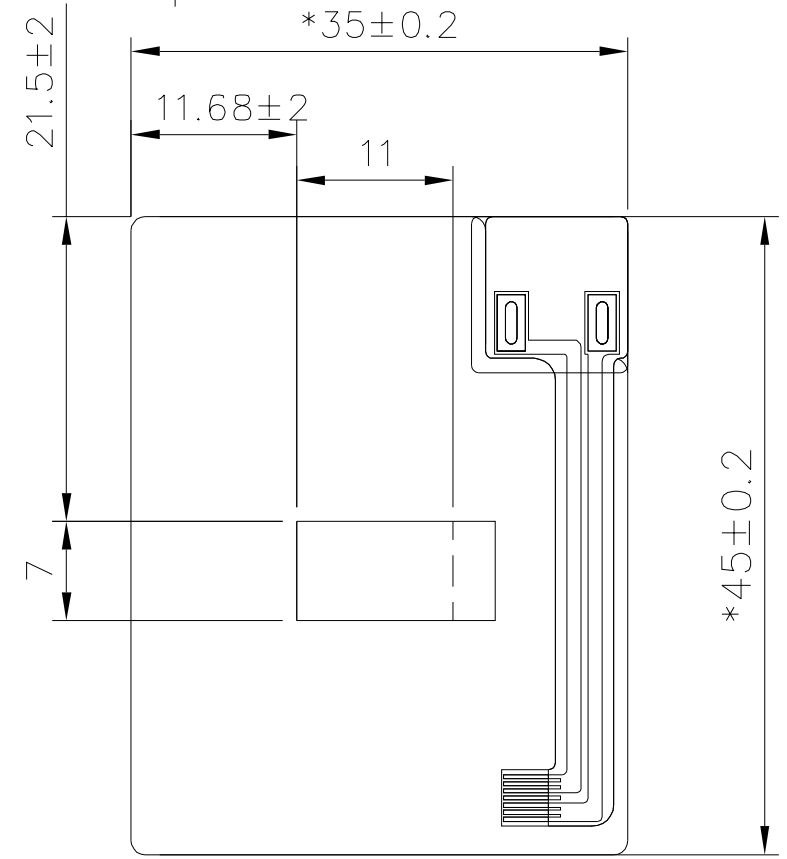
Provided By Smart Approach	Reviewed By Smart Approach	Approved By Customer
RD <i>Poe</i>	RD 主管 <i>Duncan</i>	
業務 <i>Adma</i>	QA 主管 <i>Liya</i>	

# Index

Item	Page
1. Mechanical Specifications(尺寸圖)	3
2. Antenna Performance(電特性)	4~6
3. Green Data	7

CLIENT PART NO. 1751000354-01		REV -	CLIENT REV -				REV 0.1	DESCRIPTION NEW RELEASE	DATE 12/23/21	ECN NO. N/A
							0.2	Add Client Part No.	01/06/21	N/A

Mark "\*" is process control dimension.



Notes

1. 產品用途: NFC天線
2. 材質:  
 板材—PCB  
 排線—FPC
3. 圖面中\* 為重點管制尺寸, 未標尺寸按公差表進行管控

Tolerance unless otherwise specified				
Class	A grade	B grade	C grade	D grade
0-10	±0.05	±0.1	±0.2	±1.0
10-50	±0.1	±0.2	±0.3	±1.5
50-100	±0.2	±0.3	±0.5	±2.0
100-250	±0.2	±0.4	±0.8	±3.0
250-500	±0.5	±1.2	±3.0	±3.0
ANGLE	±1/2	±1	~	~

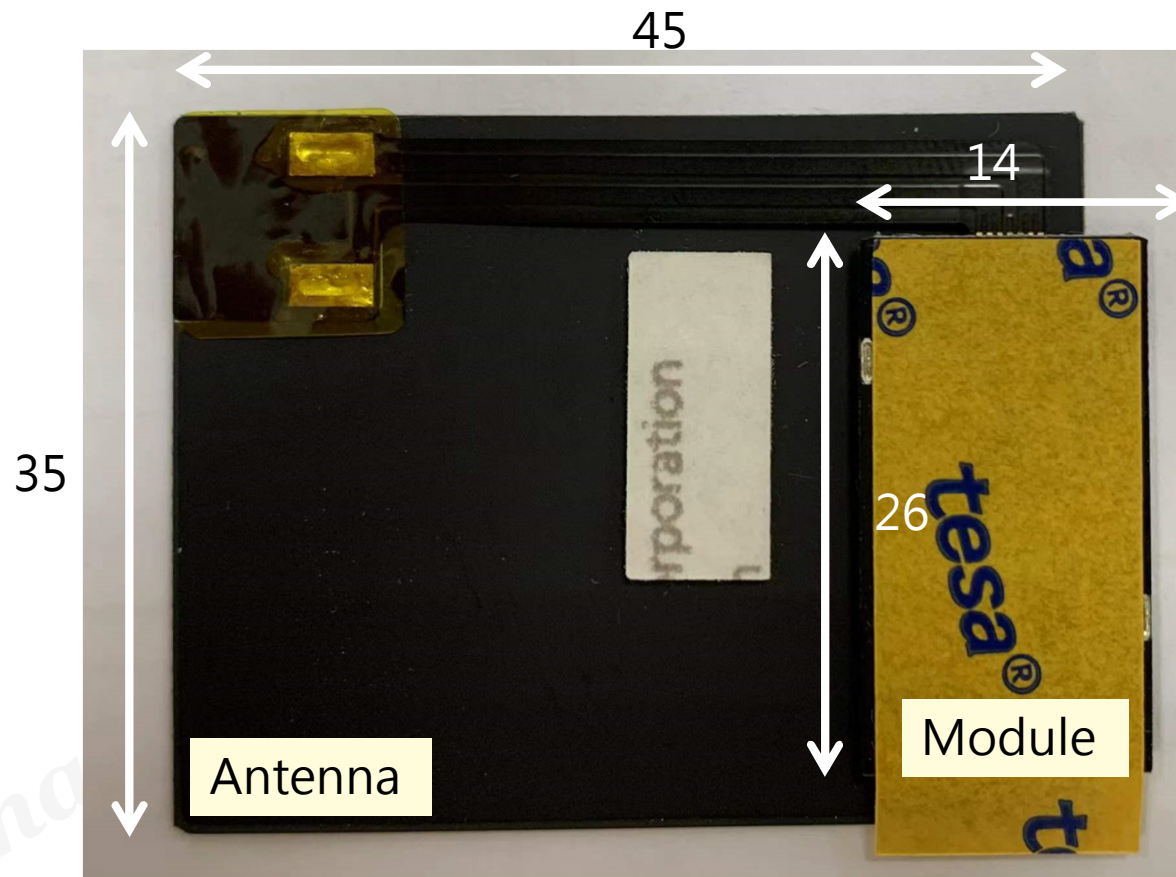
PROPRIETARY NOTE: THIS SHEET IS ENGINEERING DRAWINGS OF SMART APPROACH, IT CONTAINS SPECIFICATIONS OF COMMUNICATIONS SECRET AND OTHER CONFIDENTIALITY, THIS DOCUMENT CAN'T BE TRANSFERRED OR COPIED. [Smart Approach FORM NO.: P7-RO-001-023 REV.E]

速碼波科技股份有限公司 3F.-5, No. 1, Talyuan 2nd St., Zhubei City, Hsinchu County 30288, Taiwan (R.O.C.)  
 Smart Approach Co., Ltd. Tel: 886-3-5601363 Fax: 886-3-5601361

MATERIAL:	-			*RoHS#:	*UL:	VZQC2
FINISH:	-			DWG TITLE:		
3rd ANGLE PROJ.:	DRAWN	YANA	12/23/21	RAM78 ASSY 45x35x1.3mm		
	ENGR	POE				
	APVD	DUNCAN				
ALL TOLs.			10:13	SIZE	SA PART NO.	SR-RAM78-001
& DIMs. UNIT: mm				REV:	0.2	
				SCALE:	1/1	SHEET: 1 OF 1



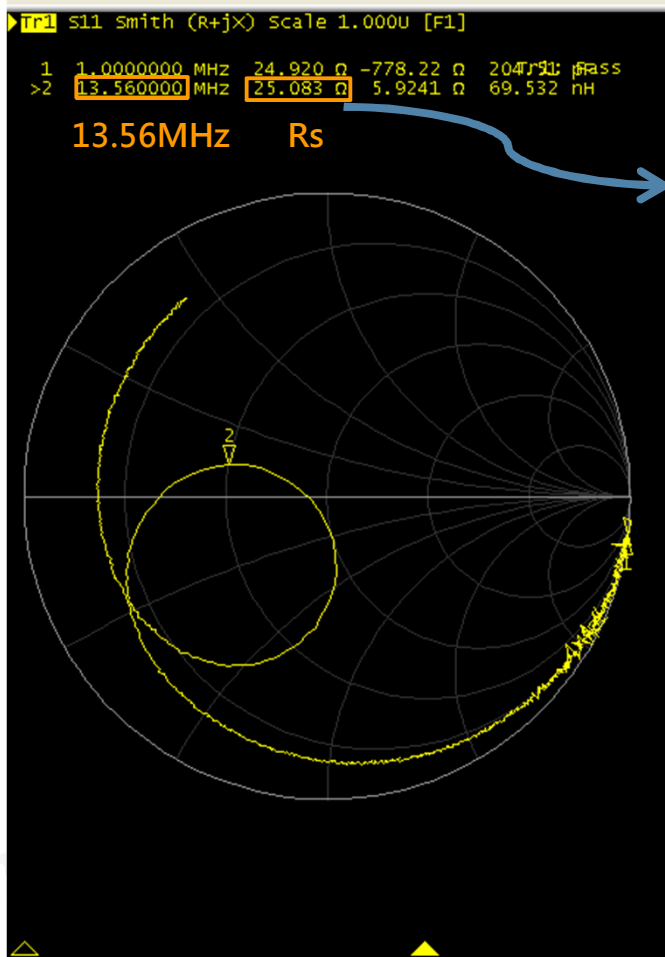
# 1-1 Antenna photo



單位:mm



# 1-2 NFC Matching - Smith Chart



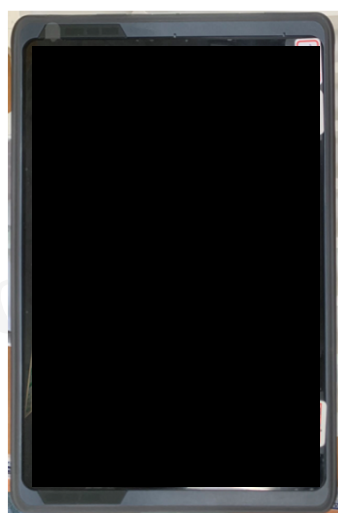
天線調適於25歐姆處

Location: SA (Test time:2022/01/22)  
 Equipment: ENA E5071C



# 1-3 NFC Specifications

NFC components	Description
SA NFC Module	SN-NSN32-C01 (NXP PN7150)
NFC Antenna Size	天線 45*35 (mm)天線有效面積 :1575 mm <sup>2</sup>
Setting Environment	Setting as follow page



正面



背面



AIM78

**MATERIAL COMPOSITION DECLARATION**

材料成份表

Supplier name (供應商) : 速碼波科技股份有限公司

Date (日期) : 2022/03/07

Part Name (品名) : SR-RAM78-001

Subassembly 組件	Composition part 構成部件	Homogeneous Material Name 均質材料名稱	Homogeneous Material Type Name 均質材料型號	Material Mass (mg) 材質重量	Material mass (%) 材質重量百分比	ICP Test data											Report No. 報告編號	Test Date. 檢驗日期	
						Pb	Cd	Hg	Cr+6	PBBs	PBDEs	BBP	DBP	DEHP	DIBP	Cl			Br
ANT PCB	PWB Dielectric	FR-4	NP-140	736	88.67	5.98	ND	ND	ND	ND	ND	ND	ND	ND	ND	371	58500	ETR21803174	2021/08/19
	PWB Copper Foil	CU	Cu	57	6.87	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ETR21504089	2021/05/27
	PWB Solder Resist	S/M	R-500 4KH	36	4.34	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	520	ND	ETR21800839	2021/08/10
	Legend	Silk	692-W	0.4	0.05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	237	ND	EKR21901031	2021/09/24
	Finish-Au	Finish-Au	AU	0.1	0.01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	(6221)049-0087	2021/03/02
	Finish-Ni	Finish-Ni	KG-530	0.5	0.06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ETR21B04718	2021/12/02
Ferrite Sheet	Ferrite Sheet	Ferrite	A3-33	520	88.14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	CANEC2123302003	2021/12/16
	TAPE	PET BLACK	6406BN	30	5.08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	95	ND	A2210424239101001E	2021/10/19
	TAPE	PET	8210	40	6.78	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	A2210123904101001E	2021/04/12
Antenna Exwire	FCCL	FCCL	SHIS	555	95.69	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	SHAEC2202460504	2022/02/21
	PI Coverlay	PI Coverlay	3025H	10	1.72	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	234	ND	A2210213468101005E	2021/06/09
	Plating Au	Plating Au	Plating Au	5	0.86	ND	ND	ND	ND	ND	ND	ND	ND	ND				XKS2021R09260141E	2021/09/29
	Double Tape	Double Tape	3M467MP	10	1.72	ND	ND	ND	ND	ND	ND	ND	ND	ND	170	ND		ETR20C04811	2020/12/29
ttl wt (mg)=				2000.0															
Approved by (核准):						Reviewed by(審查):						Initiated by(製作人) : Mia							