

# APPROVAL SHEET

Customer Name: Advantech Co., Ltd.

Date: 2022/03/14

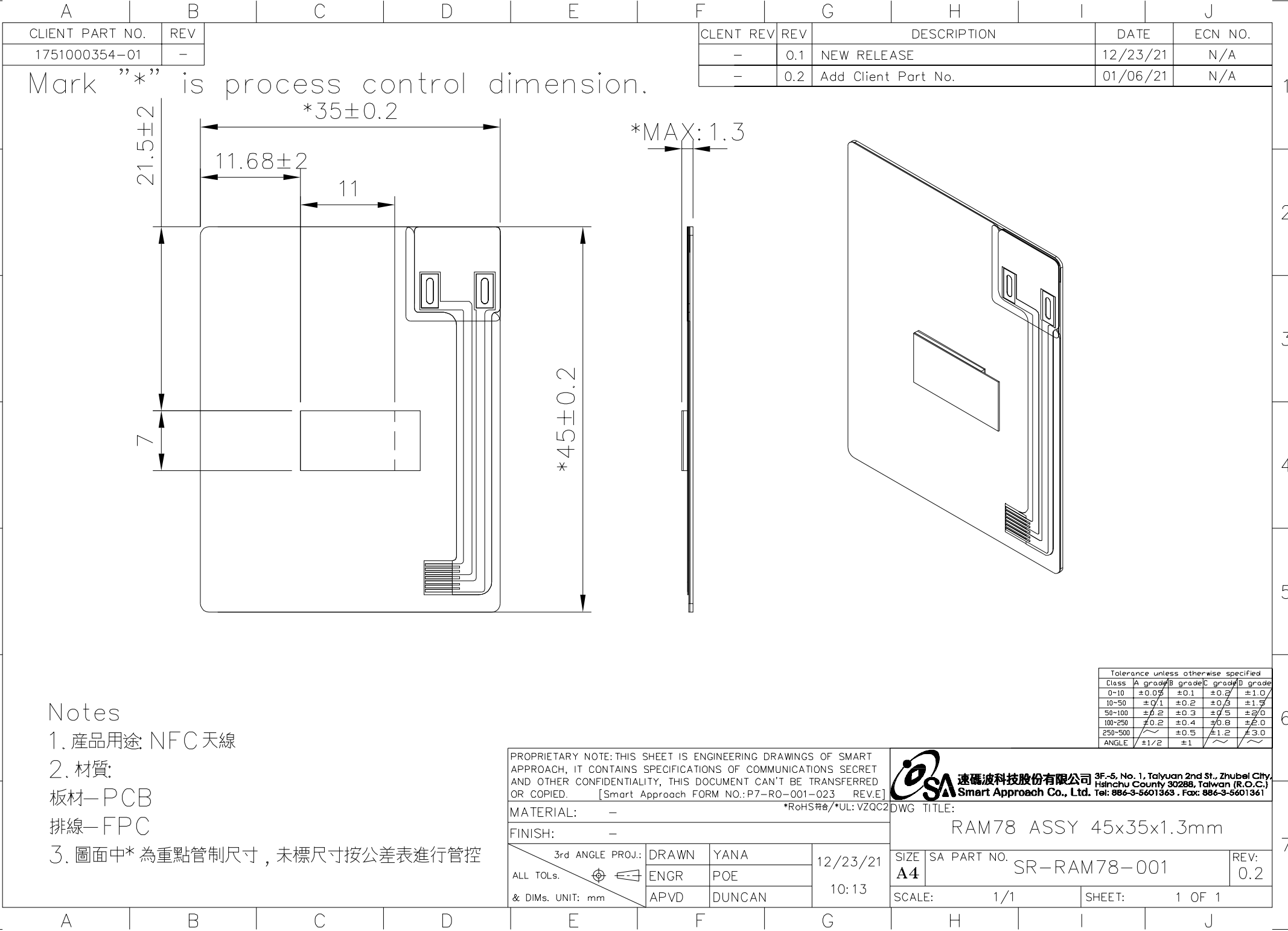
Doc. Version: 1.1

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

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

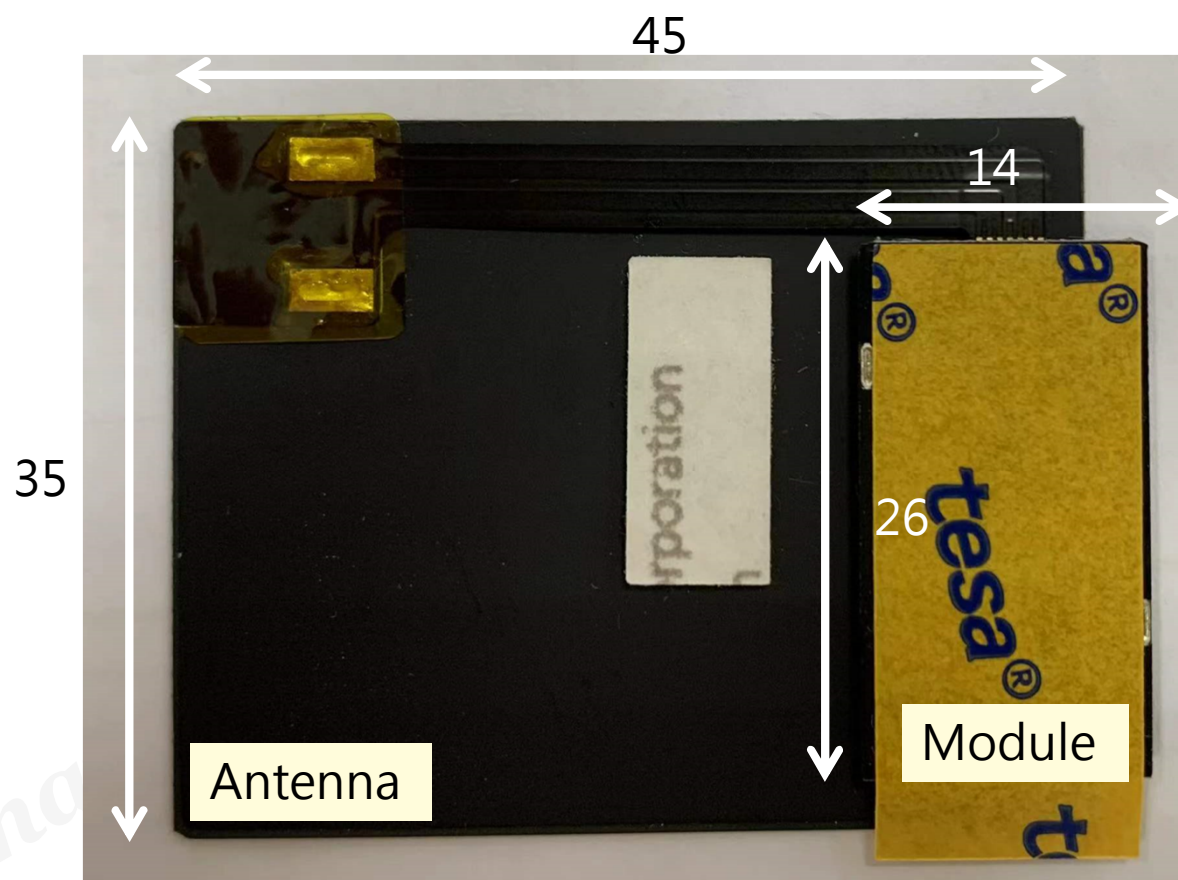
# Index

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





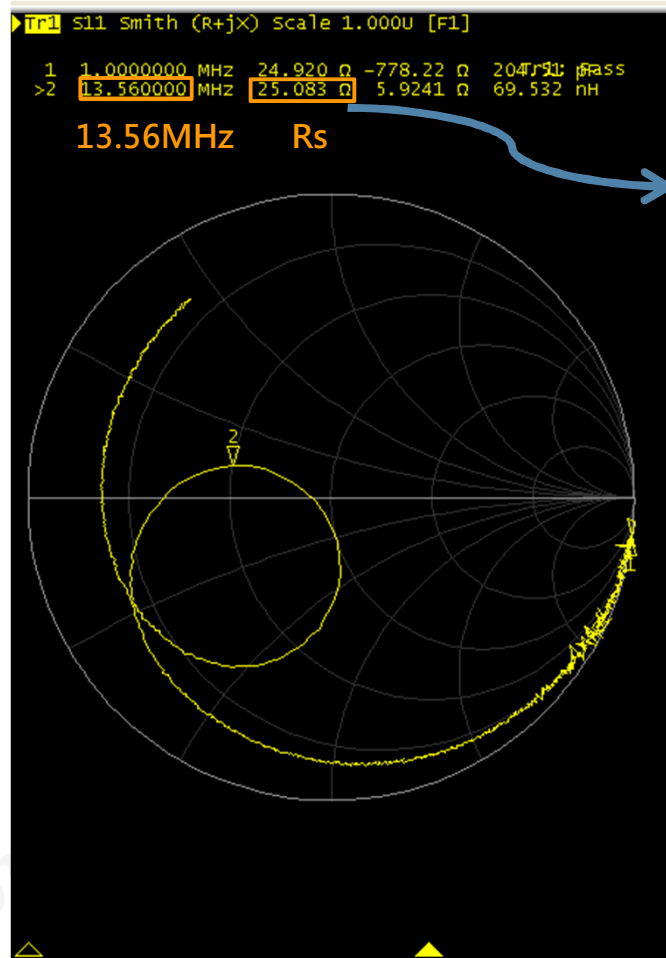
# 1-1 Antenna photo



單位:mm



# 1-2 NFC Matching - Smith Chart

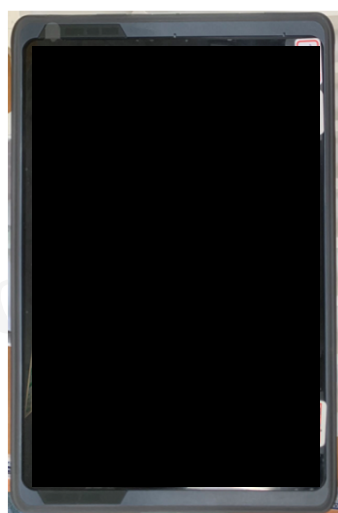


天線調適於25歐姆處

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

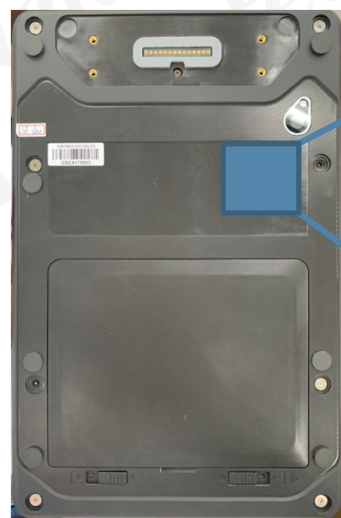
# 1-3 NFC Specifications

| 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

AIM78



背面



# 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<br>組件 | Composition part<br>構成部件 | Homogeneous<br>Material Name<br>均質材料名稱 | Homogeneous<br>Material Type Name<br>均質材料型號 | Material Mass<br>(mg)<br>材質重量 | Material mass<br>(%)<br>材質重量百分比 | ICP Test data    |    |    |      |      |       |     |     |      |      |     |       | Report No.<br>報告編號     | Test Date.<br>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<br>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   | ND   |     |       | XKS2021R09260141E      | 2021/09/29         |
|                   | Double Tape              | Double Tape                            | 3M467MP                                     | 10                            | 1.72                            | ND               | 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 |                    |