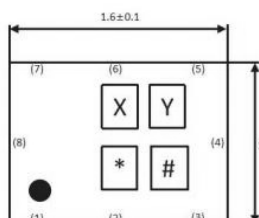


# Specification Sheet

|               |              |             |                     |
|---------------|--------------|-------------|---------------------|
| Customer Name | XXXX         | CUST P/N    | NA                  |
| Approval No.  | PD           | Temwell P/N | STSD-793-763-S1612W |
| Lot No.       |              | Date        | 2025.04.17          |
| Description   | SAW Duplexer | Version     | A1                  |

## (1)Size Diagram ( Unit : MM )

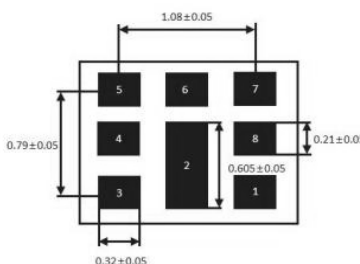
Top View



Side View



Bottom View



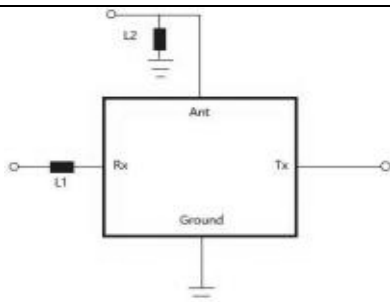
| PinNo.    | Description |
|-----------|-------------|
| 1         | Rx          |
| 3         | Tx          |
| 6         | Antenna     |
| 2,4,5,7,8 | Ground      |
| Tolerance | ±0.1mm      |

## (2)Electrical Specifications

| Item                  |                                  |      | Specification |           |      |
|-----------------------|----------------------------------|------|---------------|-----------|------|
| Parameter             | MHz                              | Unit | Min.          | Typical   | Max. |
| Center Frequency      | -                                | MHz  | -             | 793 / 763 | -    |
| Insertion Loss        | 788-798                          | dB   | -             | 1.9       | 2.2  |
|                       | 758-768                          | dB   | -             | 2.0       | 2.5  |
| Ripple Deviation      | 788-795                          | dB   | -             | 0.5       | 1.0  |
|                       | 758-768                          | dB   | -             | 0.5       | 1.0  |
| VSWR of Tx Port       | 788-798                          | -    | -             | 1.5       | 1.8  |
| VSWR of Rx Port       | 758-768                          | -    | -             | 1.3       | 1.6  |
| VSWR of Ant Port      | 788-798                          | -    | -             | 1.3       | 1.6  |
|                       | 758-768                          | -    | -             | 1.3       | 1.6  |
| Attenuation (788-798) | 758-768                          | dB   | 55            | 64        | -    |
|                       | 869-894                          | dB   | 37            | 42        | -    |
|                       | 1559-1563                        | dB   | 44            | 50        | -    |
|                       | 1574.42-1576.42                  | dB   | 48            | 50        | -    |
|                       | 1576-1596                        | dB   | 45            | 50        | -    |
|                       | 1805-1880                        | dB   | 45            | 56        | -    |
|                       | 1930-2000                        | dB   | 53            | 61        | -    |
|                       | 2364-2394                        | dB   | 45            | 60        | -    |
|                       | 3152-3192                        | dB   | 40            | 47        | -    |
| Attenuation (758-768) | 4900-5950                        | dB   | 30            | 39        | -    |
|                       | 1-698                            | dB   | 41            | 47        | -    |
|                       | 698-716                          | dB   | 40            | 46        | -    |
|                       | 716-728                          | dB   | 40            | 47        | -    |
|                       | 776-787                          | dB   | 14            | 24        | -    |
|                       | 788-798                          | dB   | 45            | 54        | -    |
|                       | 798-6000                         | dB   | 20            | 23        | -    |
|                       | 2274-2304                        | dB   | 40            | 50        | -    |
|                       | 2400-2500                        | dB   | 40            | 49        | -    |
| Isolation             | 4900-5950                        | dB   | 40            | 49        | -    |
|                       | 758-768                          | dB   | 55            | 60        | -    |
| Operation Temperature | 788-798                          | dB   | 53            | 56        | -    |
|                       | -20℃~+85℃                        | ℃    | -             | -         | -    |
| Storage Temperature   | -40℃~+85℃                        | ℃    | -             | -         | -    |
| RF Power Dissipation  | +29                              | dBm  | -             | -         | -    |
| Remark                | Note 1: Test Temperature: 25℃±2℃ |      |               |           |      |

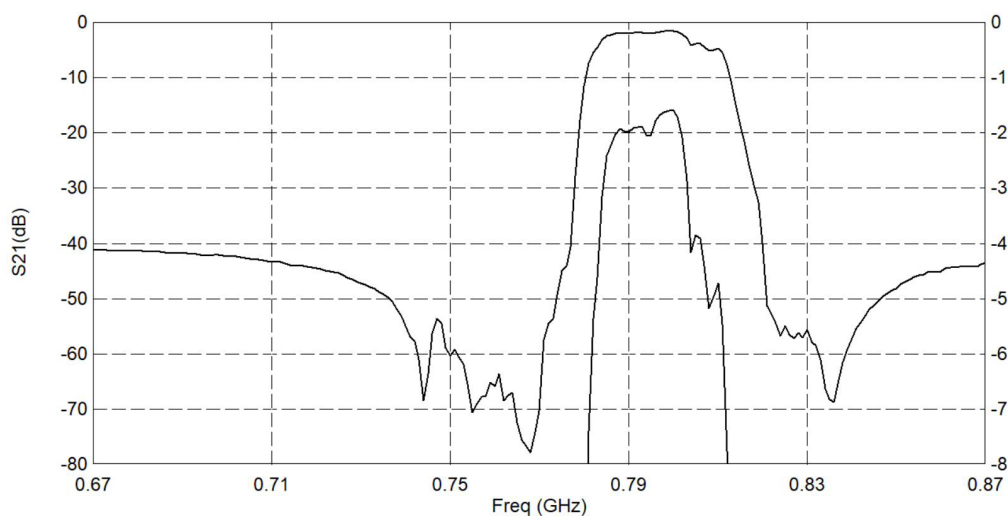
Note 2: Terminating source impedance: 50Ω. Terminating load impedance: 50Ω

### (3) Test Circuit

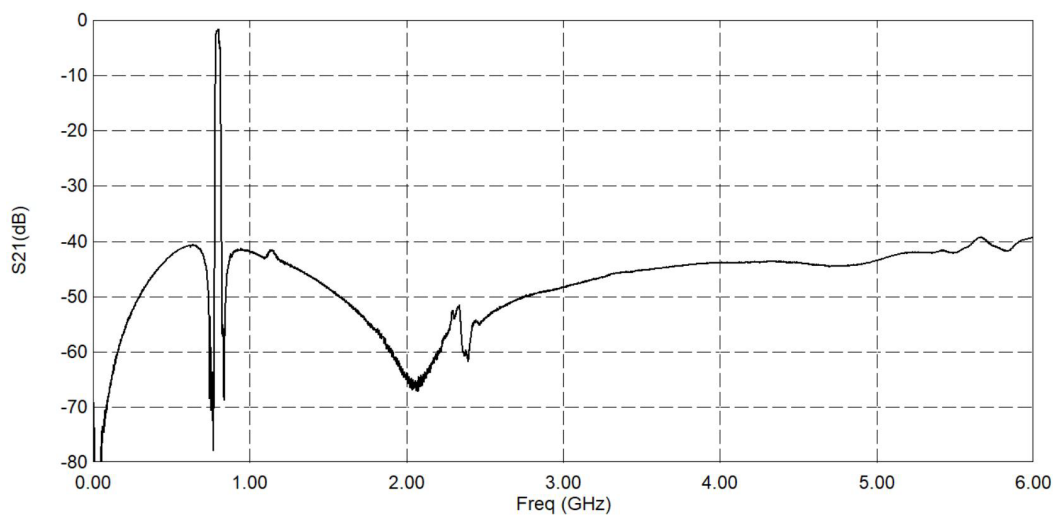


| Port | Matching Component            |
|------|-------------------------------|
| Rx   | L1 :3.5 nH ( Ideal inductor ) |
| Ant  | L2 : 12 nH ( Ideal inductor ) |

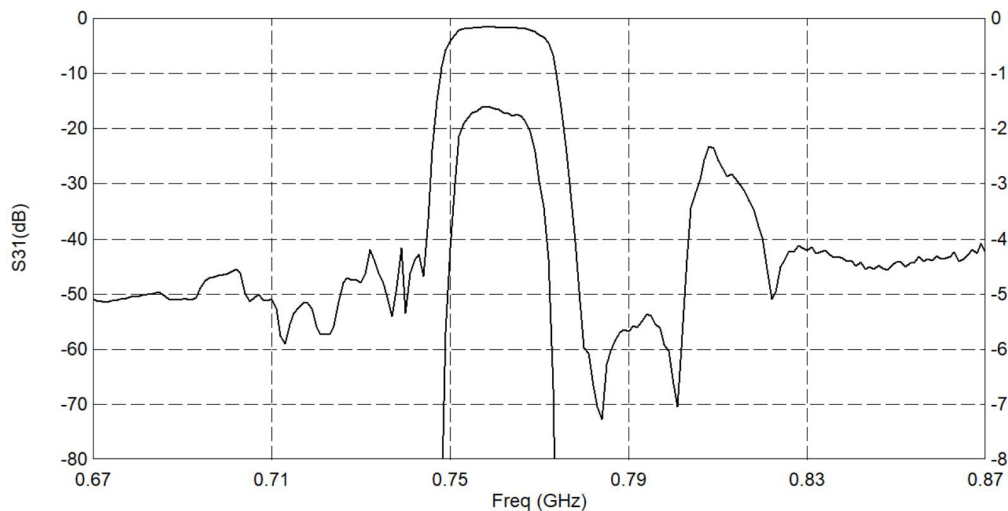
**Figure 1 Electrical Characteristics: Tx to Ant.**



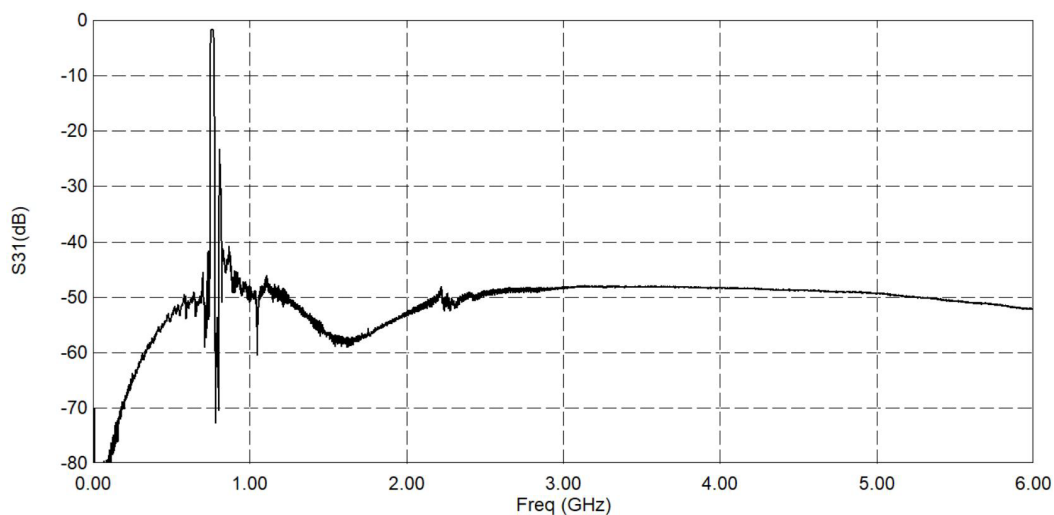
**Figure 2 Electrical Characteristics: Tx to Ant.**



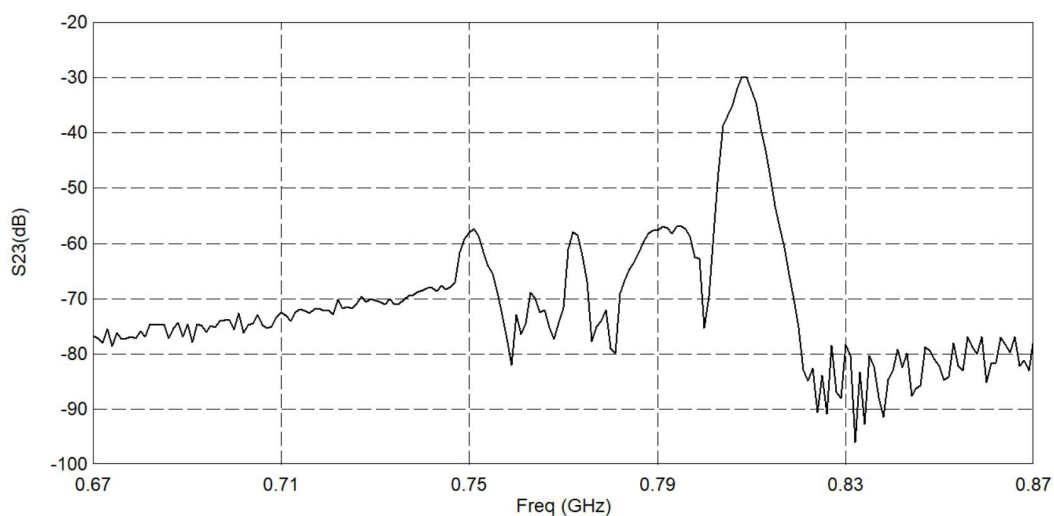
**Figure 3 Electrical Characteristics: Ant to Rx.**



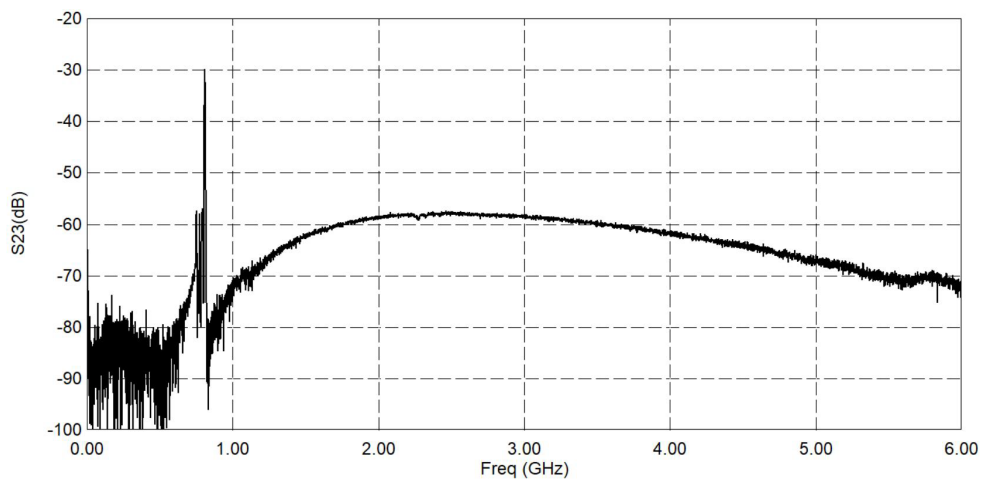
**Figure 4 Electrical Characteristics: Ant to Rx.**



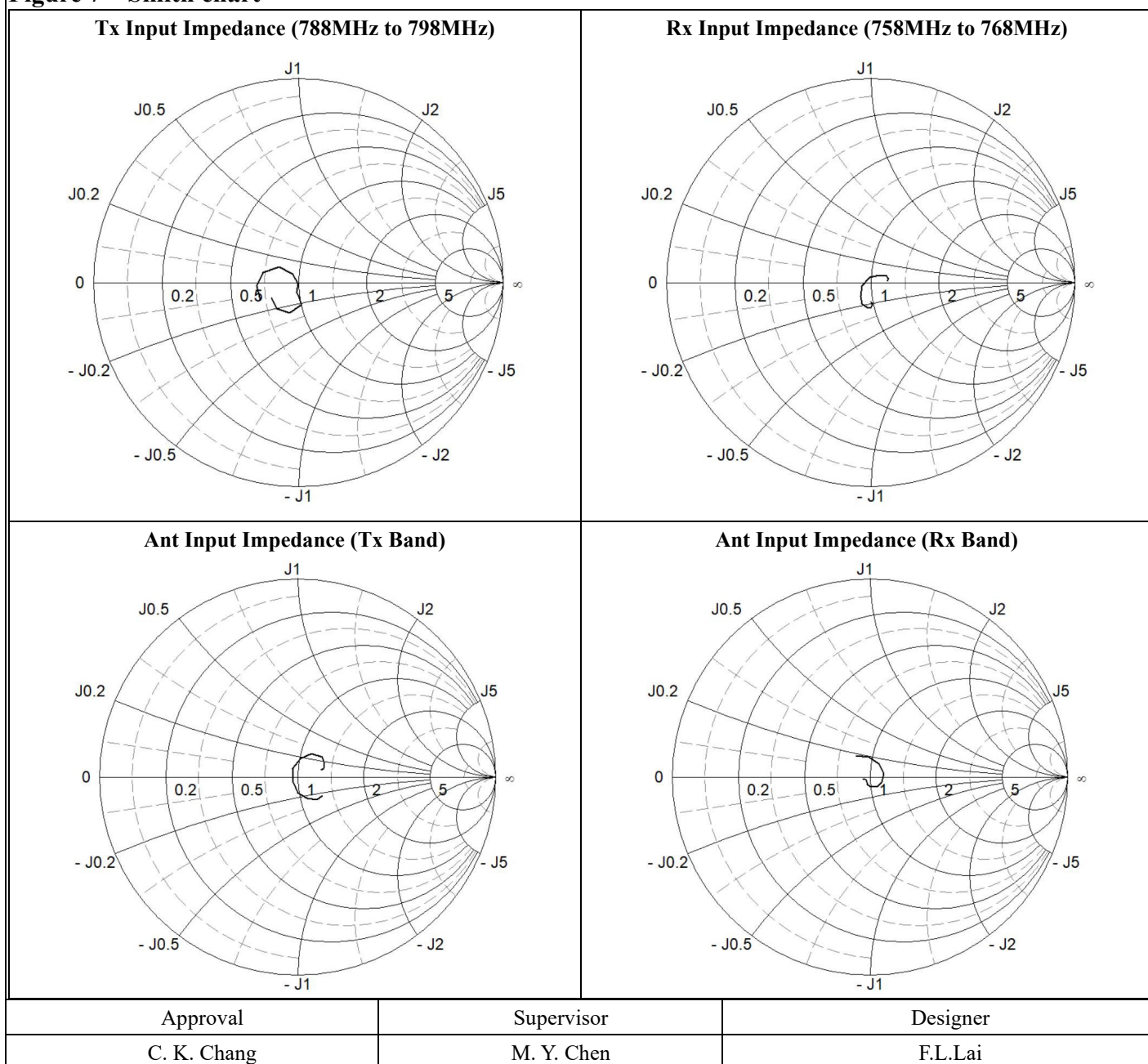
**Figure 5 Electrical Characteristics: Tx to Rx.**



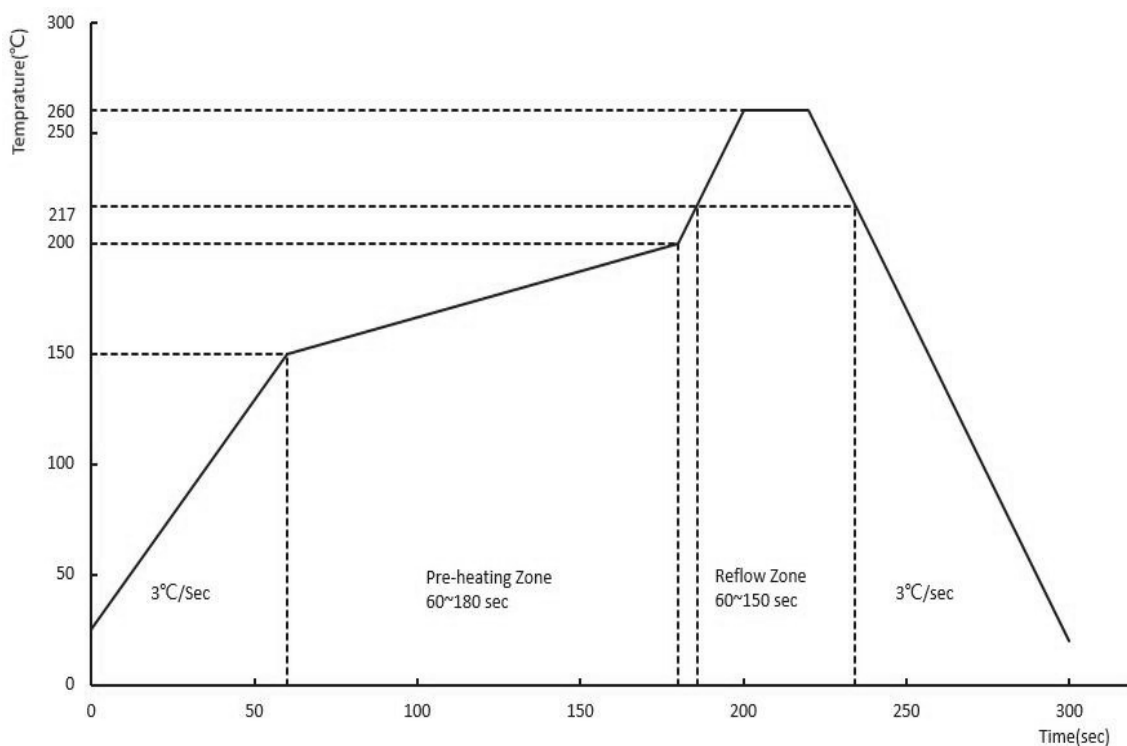
**Figure 6 Electrical Characteristics: Tx to Rx.**



**Figure 7 Smith chart**



## Recommended SMT Solder Profile



## Reliability

| No. | Test item                    | Test condition                                                                                                                                             |                                 |
|-----|------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|
| 1   | Temperature Storage          | Temperature: 85°C±2°C , Duration: 250h , Recovery time: 2h±0.5h<br>Temperature: -40°C±3°C , Duration: 250h ,Recovery time: 2h±0.5h                         |                                 |
| 2   | Humidity Test                | Conditions: 60°C±2°C ,90~95%RH                                                                                                                             | Duration:250h                   |
| 3   | Thermal Shock                | Heat cycle conditions: TA=-40°C±3°C, TB=85°C±2°C, t1=t2=30min,<br>Switch time: ≤3min, Cycle time: 100 times, Recovery time: 2h±0.5h.                       |                                 |
| 4   | Vibration Fatigue            | Frequency of vibration:10~55Hz<br>Directions: X,Y and Z                                                                                                    | Amplitude:1.5mm<br>Duration: 2h |
| 5   | Drop Test                    | Cycle time:10times                                                                                                                                         | Height:1.0m                     |
| 6   | Solder Ability Test          | Temperature:245°C±5°C<br>Depth: DIP--2/3, SMD--1/5                                                                                                         | Duration:3.0s--5.0s             |
| 7   | Resistance to Soldering Heat | Thickness of PCB:1mm , Solder condition: 260°C±5°C , Duration:10±1s<br>Temperature of Soldering Iron: 350°C±10°C, Duration: 3~4s, Recovery time : 2 ± 0.5h |                                 |