



DEQING HUAYING ELECTRONICS CO.,LTD.

# APPROVAL SHEET

**SAW BANDPASS FILTER**  
**PART NO.: NDFH005-0881SA**

|                            |  |                           |  |
|----------------------------|--|---------------------------|--|
| <b>Product Type:</b>       |  | <b>Customer:</b>          |  |
| SAW Filter                 |  |                           |  |
| <b>Part NO.:</b>           |  | <b>Customer Part NO.:</b> |  |
| NDFH005-0881SA             |  |                           |  |
| <b>Ver. Ctrl.:</b>         |  | <b>Issued Date:</b>       |  |
| SFH005-0881SA -180901-v2.0 |  |                           |  |

| <b>PREPARED BY</b> | <b>CHECKED BY</b> | <b>APPROVED BY</b> |
|--------------------|-------------------|--------------------|
|                    |                   |                    |

|          |   |                            |
|----------|---|----------------------------|
| Part No. | : | NDFH005-0881SA             |
| Pages    | : | 9                          |
| Data     | : | 2018-09-01                 |
| Revision | : | SFH005-0881SA -180901-v2.0 |

Add (Deqing): 188 Zhiyuan North Rd.Wukang Town Deqing County Zhejiang Province 313200,P.R.China  
Phone : +86-572-8281127  
Fax : +86-572-8281298  
E-mail : [sales@dquaying.com](mailto:sales@dquaying.com)  
Website : <http://www.dquaying.com>

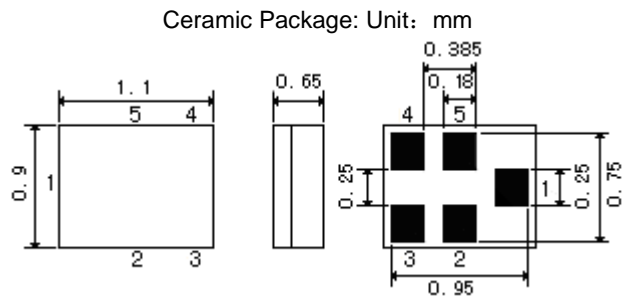


**Features**

SAW filter for GSM850/BAND5 Rx.

- 1 High stability and reliability with good performance and no adjustment.
- 2 Single ended to Single ended.
- 3 Narrow and sharp pass band characteristics. RoHS compatible.
- 4 Low insertion loss and deep stop band attenuation for interference.
- 5 Low – loss SAW filter for GSM850/BAND5 Rx.
- 6 Package size 1.1mm\*0.9mm

**Package Dimensions**



**Pin Configuration**

|       |        |
|-------|--------|
| 1     | Input  |
| 4     | Output |
| 2,3,5 | Ground |

**Marking**



Top View, Laser Marking

"H5": Part number

"1": Terminal1

The first "\*" : Month Code (The code shown below varies in a 4-year cycle)

| Month     | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|-----------|---|---|---|---|---|---|---|---|---|----|----|----|
| 2016/2020 | n | p | q | r | s | t | u | v | w | x  | y  | z  |
| 2017/2021 | A | B | C | D | E | F | G | H | J | K  | L  | M  |
| 2018/2022 | N | P | Q | R | S | T | U | V | W | X  | Y  | Z  |
| 2019/2023 | a | b | c | d | e | f | g | h | i | j  | k  | m  |

The second "\*" : Date Code

|             |      |      |      |      |      |      |      |      |      |      |      |
|-------------|------|------|------|------|------|------|------|------|------|------|------|
| <b>data</b> | 1st  | 2nd  | 3rd  | 4th  | 5th  | 6th  | 7th  | 8th  | 9th  | 10th |      |
| code        | A    | B    | C    | D    | E    | F    | G    | H    | J    | K    |      |
| <b>data</b> | 11th | 12th | 13th | 14th | 15th | 16th | 17th | 18th | 19th | 20th |      |
| code        | L    | M    | N    | P    | Q    | R    | S    | T    | U    | V    |      |
| <b>data</b> | 21st | 22nd | 23rd | 24th | 25th | 26th | 27th | 28th | 29th | 30th | 31st |
| code        | W    | X    | Y    | Z    | a    | b    | d    | e    | f    | g    | h    |

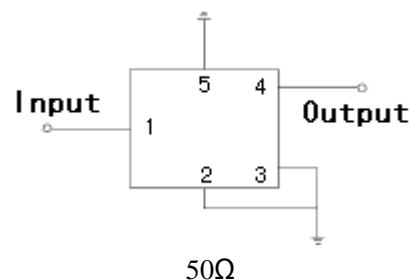
**Maximum Ratings**

| Rating                             |           | Value               | Unit |
|------------------------------------|-----------|---------------------|------|
| DC Voltage (between any Terminals) | $V_{DC}$  | 10                  | V    |
| RF Power (in BW)                   | $P$       | 10 dBm /3000hr@50°C |      |
| Operating Temperature Range        | $T_A$     | -30 ~ +85           | °C   |
| Storage Temperature Range          | $T_{stg}$ | -40 ~ +85           | °C   |
| ESD Voltage (HB)                   | $V_{ESD}$ | >150V               |      |
| Moisture Sensitivity Levels        | $MSL$     | 2A                  |      |

**Electrical Characteristics:**

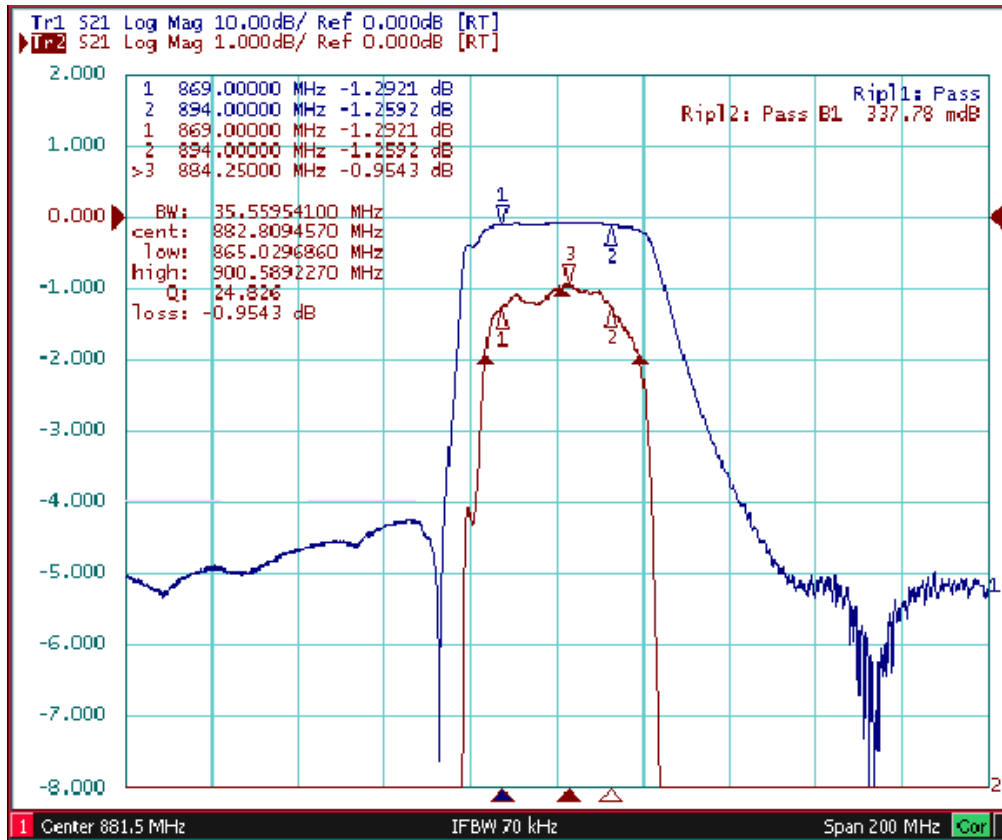
| Item                               |           | Minimum            | Typical | Maximum | Unit     |    |
|------------------------------------|-----------|--------------------|---------|---------|----------|----|
| Insertion Loss                     | $IL$      |                    |         |         |          |    |
|                                    |           | 869 ... 894 MHz    |         | 1.3*)   | 1.8*)    | dB |
|                                    |           |                    | 1.3     | 2.0     | dB       |    |
| Passband Ripple                    | $Pr$      |                    |         |         |          |    |
|                                    |           | 869 ... 894 MHz    |         | 0.4     | 1.0      | dB |
| VSWR                               | $V_{swr}$ |                    |         |         |          |    |
|                                    |           | 869 ... 894 MHz    |         | 1.5     | 2.0      |    |
| Absolute Attenuation               | $\alpha$  |                    |         |         |          |    |
|                                    |           | 45 MHz             | 60      | 77      |          | dB |
|                                    |           | 779 .... 804 MHz   | 40      | 49      |          | dB |
|                                    |           | 824 .... 849 MHz   | 40      | 43      |          | dB |
|                                    |           | 1710 .... 1980 MHz | 35      | 37      |          | dB |
|                                    |           | 2400 .... 2483 MHz | 33      | 36      |          | dB |
|                                    |           | 2500 .... 2690 MHz | 30      | 35      |          | dB |
|                                    |           | 3476 .... 3576 MHz | 25      | 33      |          | dB |
|                                    |           | 5150 .... 5850 MHz | 20      | 22      |          | dB |
| Input / Output Impedance (Nominal) |           | 50                 |         |         | $\Omega$ |    |

\*) :Typical value at 25°C

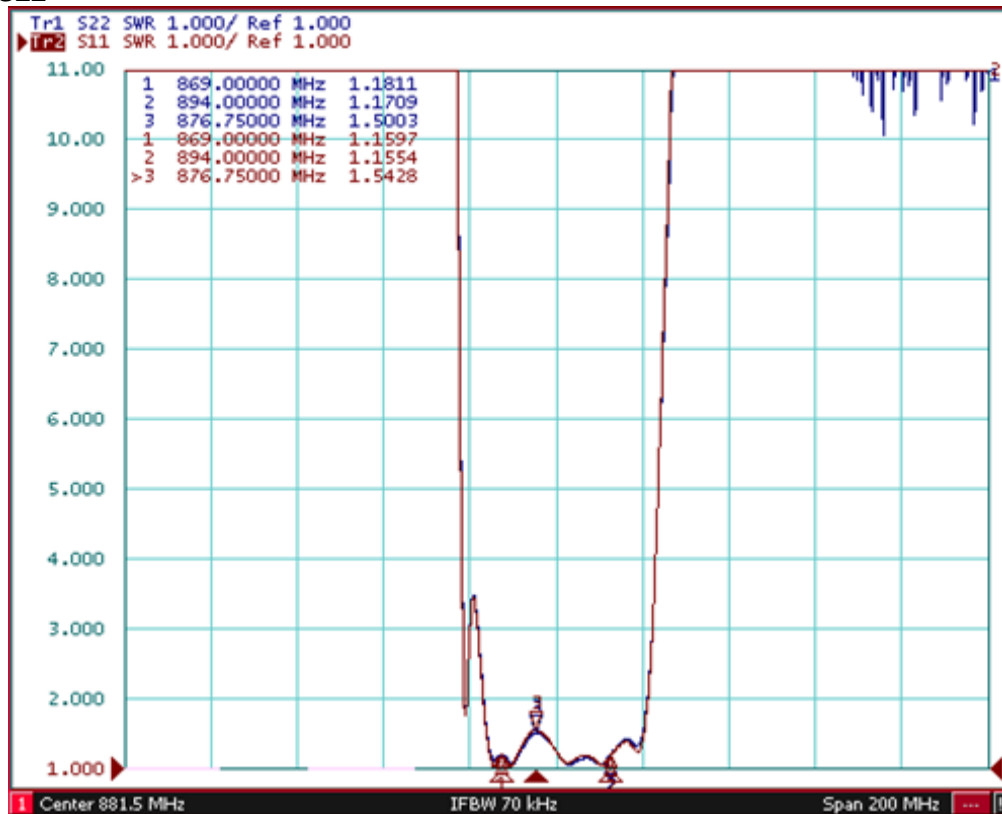
 **RoHS Compliant**
 **Electrostatic Sensitive Device**
**Test Circuit**

Typical Frequency Response

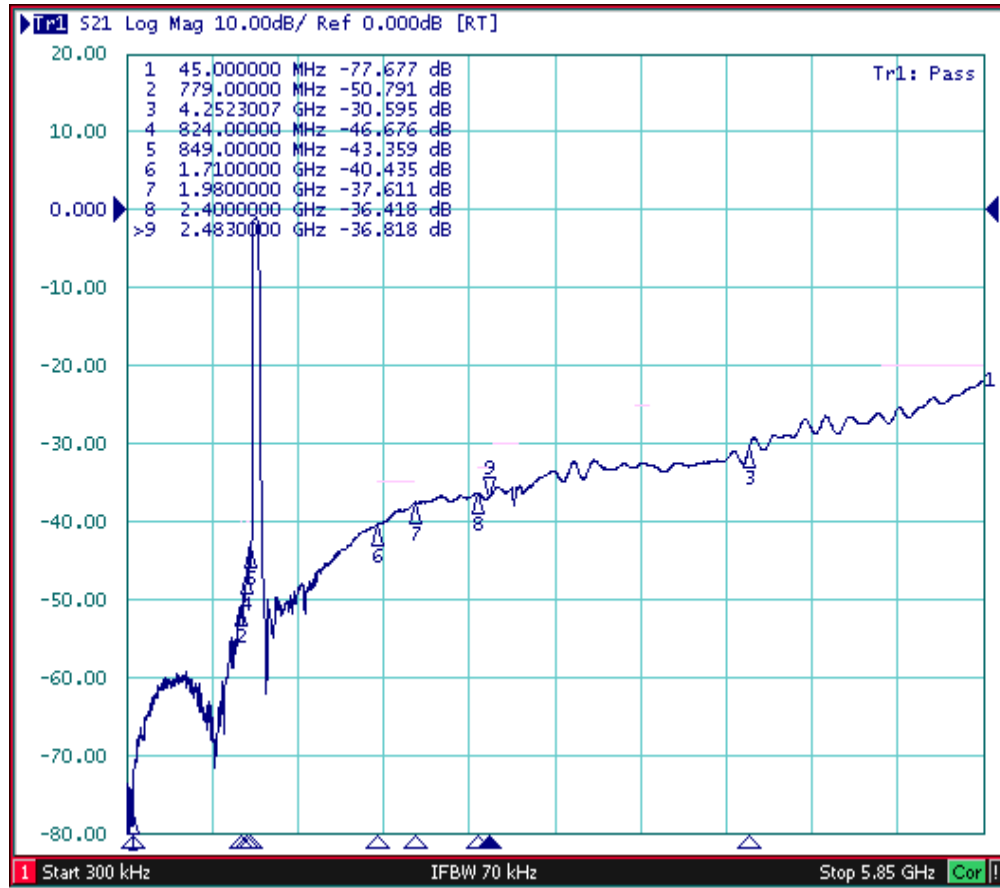
S21



VSWR S11 S22



Far side



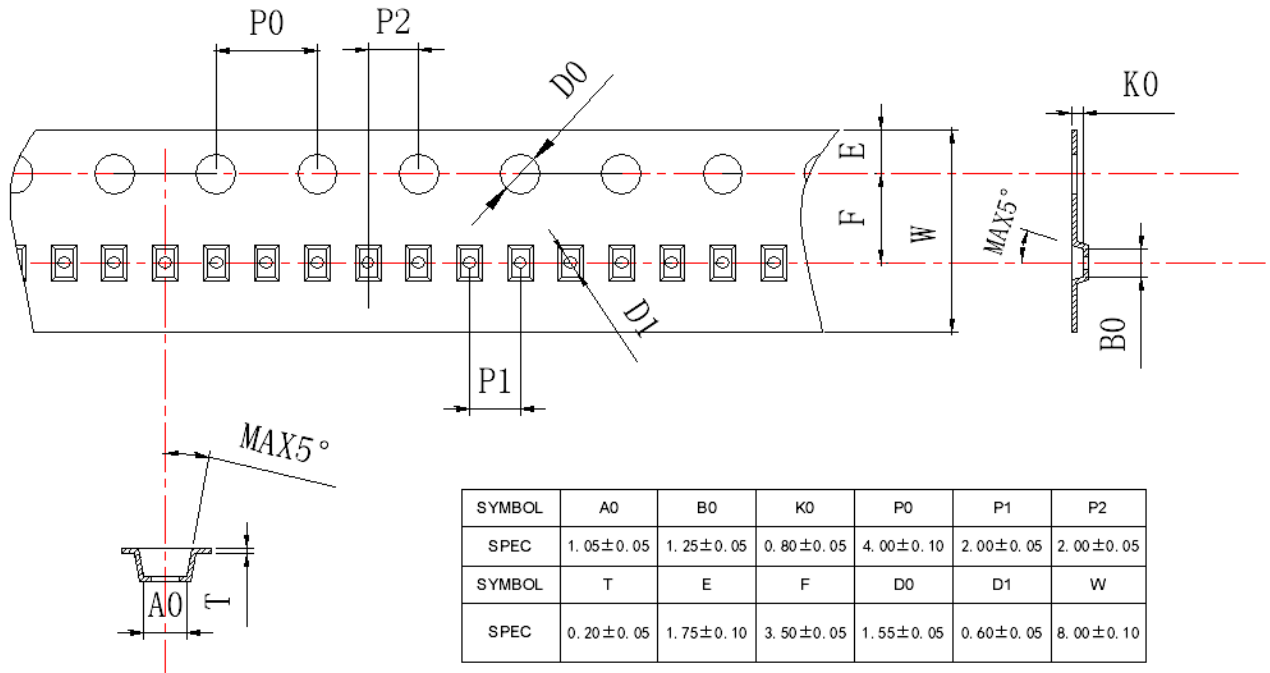
**Stability Characteristics**

| Item No. | Test Item                     | STD Reference | Test Conditions   | per lot |
|----------|-------------------------------|---------------|---|---------|
|          | Preconditioning               | JESD22-A113   | 1) Temperature Cycling, 5 cycles<br>-40°C to 85°C<br>2) Bake, 24 hrs @125±5°C;<br>3) Reflow, 3 reflow cycles<br>4) Drying, Room ambient temperature | 177     |
| 1        | Temperature Cycling           | JESD22-A104   | -40 °C / +85 °C ,40min dwell,<1 min transfer time,500cycles   | 23      |
| 2        | High Temperature Storage      | JESD22-A103   | 85°C,240hr  | 23      |
| 3        | Low Temperature Storage       | JESD22-A119   | -40°C, 240hr  | 23      |
| 4        | Temperature Humidity bias     | JESD22-A106B  | 85°C 85%RH 240hr  | 23      |
| 5        | Unbiased Temperature/Humidity | JESD22-A102C  | +121°C 100%RH 96hr  | 23      |
| 6        | Human Body Mode ESD           | JESD22-A114F  | Ta=25°C, ≥150V  | 5       |
| 7        | Drop Test                     | IEC 68-2-32   | 100cm , 3times Steel floor JIG(110g~150g)   | 6       |
| 8        | Solderability                 | JESD22-B102   | Characterization per JESD22-B102  | 5       |
| 9        | Vibration, Variable Frequency | JESD22-B103   | 20 Hz to 2 kHz (log variation) in > 4 minutes, 4X in each orientation, 20g peak acceleration  | 23      |
| 10       | Mechanical Shock              | JESD22-B104   | Y1 plane only, 5 pulses, 0.5 ms duration, 1500 g peak acceleration  | 23      |

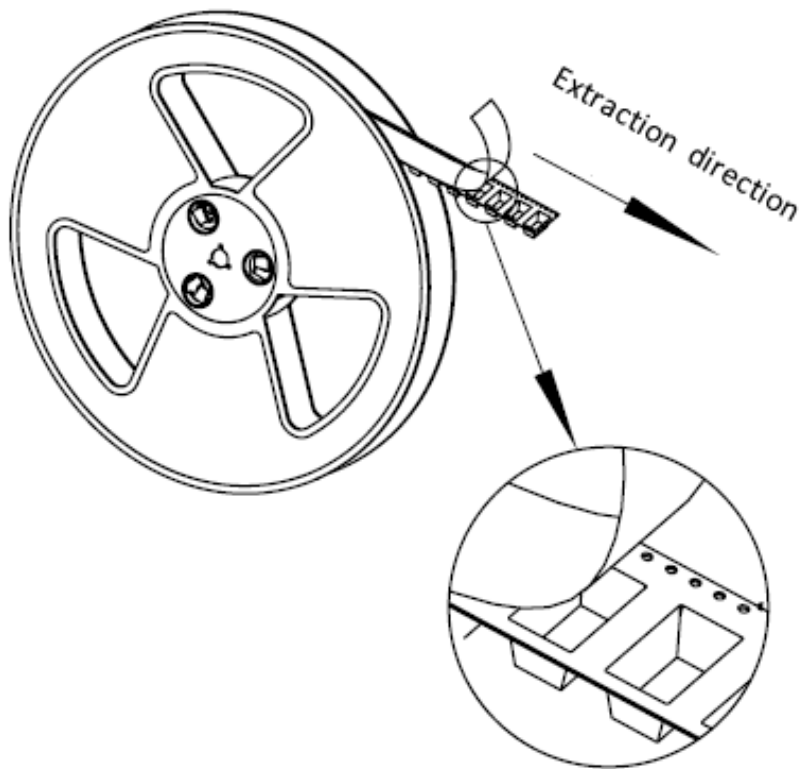
**Requirements:** The SAW filer shall remain within the electrical specifications after tests.

**Packing Information**

Carrier Tape



Reel Dimensions



|           |            |
|-----------|------------|
| Material  | PS         |
| Unit      | mm         |
| Tolerance | ±0.20 mm   |
| Quantity  | 10000/reel |



Outer Packing

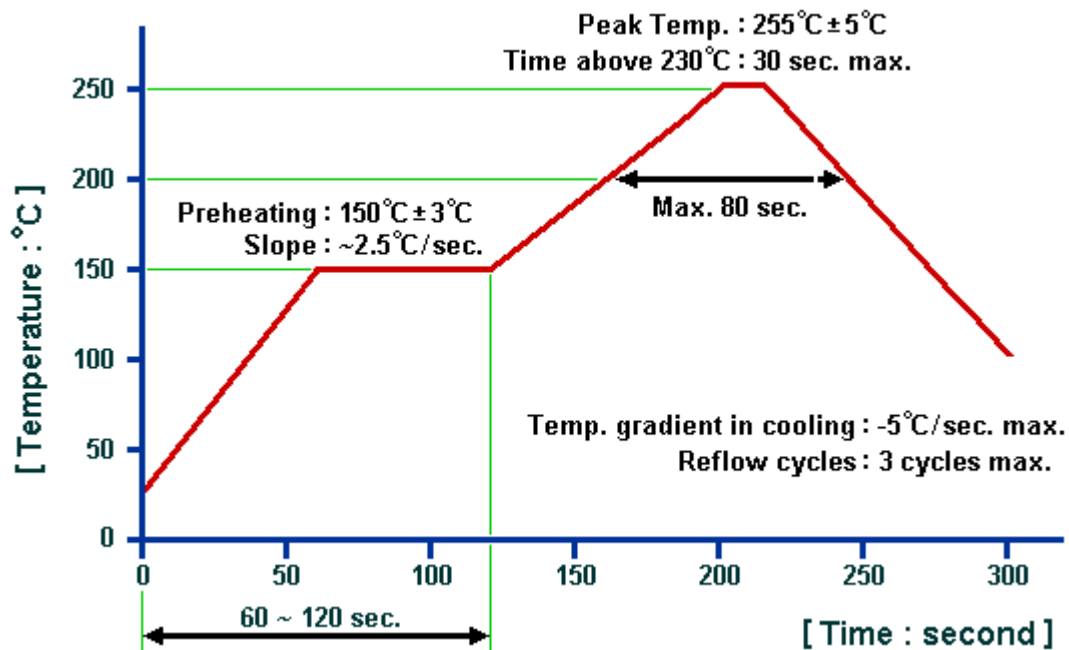
| Type          | Quantity | Dimension   | Description  | Weight |
|---------------|----------|-------------|--|--------|
| Carton Box I  | 10000    | 200×200×100 | anti-static plastic bag & carton box<br>1 reel / bag<br>5 bags / box (50000 pcs)<br>10 bags / box (100000 pcs) | 0.85   |
| Carton Box II | 20000    | 200×200×200 |  | 1.80   |

Unit: mm

Unit: kg

**Remarks**

- SAW devices should not be used in any type of fluid such as water, oil, organic solvent, etc.
- Be certain not to apply voltage exceeding the rated voltage of components.
- Do not operate outside the recommended operating temperature range of components.
- Sudden change of temperature shall be avoided, deterioration of the characteristics can occur.
- Be careful of soldering temperature and duration of components when soldering.
- Do not place soldering iron on the body of components.
- Be careful not to subject the terminals or leads of components to excessive force.
- SAW devices are electrostatic sensitive. Please avoid static voltage during operation and storage.
- Ultrasonic cleaning shall be avoided. Ultrasonic vibration may cause destruction of components.

**Recommended Soldering Profile**

© DQUAYING 2018. All Rights Reserved.

1. The specifications of this device are subject to change or obsolescence without notice.
2. Typically, equipment utilizing this device requires emissions testing and government approval, which is the responsibility of the equipment manufacturer.
3. Our liability is only assumed for the Surface Acoustic Wave (SAW) component(s) per se, not for applications, processes and circuits implemented within components or assemblies.
4. For questions on technology, prices and delivery, please contact our sales offices or e-mail [sales@dquaying.com](mailto:sales@dquaying.com).

## X-ON Electronics

Largest Supplier of Electrical and Electronic Components

*Click to view similar products for [Signal Conditioning](#) category:*

*Click to view products by [HUAYING](#) manufacturer:*

Other Similar products are found below :

[MAPDCC0001](#) [MAPDCC0004](#) [PD0409J5050S2HF](#) [HHS-109-PIN](#) [AFS14A30-2185.00-T3](#) [AFS14A35-1591.50-T3](#) [DS-323-PIN](#) [DSS-313-PIN](#) [B39321R801H210](#) [1A0220-3](#) [JP510S](#) [LFB212G45SG8C341](#) [LFB322G45SN1A504](#) [LFL182G45TC3B746](#) [SF2159E](#) [30057](#)  
[AFS1575.42S4-T](#) [FM-104-PIN](#) [CER0813B](#) [MAPDCC0005](#) [3A325](#) [40287](#) [41180](#) [ATB3225-75032NCT](#) [BD0810N50100AHF](#) [JHS-115-PIN](#)  
[DC0710J5005AHF](#) [DC2327J5005AHF](#) [43020](#) [LFB2H2G60BB1C106](#) [LFL15869MTC1B787](#) [X3C19F1-20S](#) [XC3500P-20S](#) [10013-20](#)  
[SF2194E](#) [CDBLB455KCAX39-B0](#) [TGL2208-SM, EVAL](#) [RF1353C](#) [051157-0000](#) [PD0922J5050D2HF](#) [1E1305-3](#) [1F1304-3S](#) [1G1304-30](#)  
[B0922J7575AHF](#) [10017-3](#) [TP-103-PIN](#) [BD1222J50200AHF](#) [BD1722J50100AHF](#) [2450DP39K5400E](#) [BD0810J50150AHF](#)