

1582.47 MHz SMD SAW Filter

ABSTS5A2-2HMM01MM

Request Samples



Check Inventory



1.1 x 0.9 x 0.55 mm
RoHS/RoHS II Compliant
MSL Level = 3

Features

- Low Insertion Loss
- High Out of Band Attenuation
- SMD Mount

Applications

- GNSS, GPS, GLONASS, BeiDou Filter
- Navigational and Positioning applications
- GPS Receivers, Mobile Phones

Electrical Specifications

| Parameters | | Specifications | | |
|--|-----------------------|----------------|---------|------|
| | | Min | Typ | Max |
| Nominal Center Frequency (Fc) (MHz) | | | 1582.47 | |
| Insertion Loss (dB) | 1574.42 ~ 1576.42 MHz | | 1.2 | 1.7 |
| | 1597.55 ~ 1605.89 MHz | | 2.0 | 2.5 |
| | 1559.05 ~ 1563.14 MHz | | 1.7 | 2.5 |
| Amplitude Ripple (dB _{p-p}) | 1574.42 ~ 1576.42 MHz | | 0.1 | 0.8 |
| | 1597.55 ~ 1605.89 MHz | | 0.55 | 1.4 |
| | 1559.05 ~ 1563.14 MHz | | 0.2 | 1.2 |
| Group Delay Ripple (nsec) | 1574.42 ~ 1576.42 MHz | | 1.0 | 6.0 |
| | 1597.55 ~ 1605.89 MHz | | 6.0 | 12.5 |
| | 1559.05 ~ 1563.14 MHz | | 5.0 | 16.0 |
| VSWR | 1574.42 ~ 1576.42 MHz | | 1.5 | 2.1 |
| | 1597.55 ~ 1605.89 MHz | | 1.4 | 2.0 |
| | 1559.05 ~ 1563.14 MHz | | 1.5 | 2.0 |
| Attenuation (dB) (Reference level from 0dB) | 699 ~ 716 MHz | 37 | 42 | |
| | 777 ~ 787 MHz | 37 | 42 | |
| | 814 ~ 849 MHz | 37 | 42 | |
| | 880 ~ 915 MHz | 37 | 42 | |
| | 1427.9 ~ 1446.9 MHz | 43 | 48 | |
| | 1447.9 ~ 1462.9 MHz | 45 | 50 | |
| | 1710 ~ 1785 MHz | 40 | 47 | |
| | 1850 ~ 1915 MHz | 40 | 46 | |
| | 1920 ~ 1980 MHz | 40 | 46 | |
| | 2400 ~ 2500 MHz | 37 | 42 | |
| 2500 ~ 2570 MHz | 37 | 42 | | |
| Terminating Source & Load Impedance (Ω) | | | 50 | |
| Maximum Input Power (dBm) | | | | 15 |
| DC Voltage (V) | | | | 3 |

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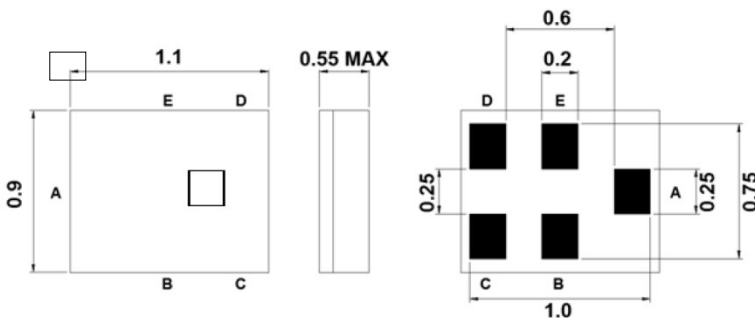
Mechanical Specifications

| Parameters | Specifications |
|------------------|---------------------|
| Filter Dimension | 1.1 x 0.9 x 0.55 mm |
| Mounting Type | SMD Mount |

Environmental Specifications

| Parameters | Specifications |
|-----------------------------|----------------------|
| Operating Temperature Range | -30°C ~ +85°C |
| Storage Temperature Range | -40°C ~ +85°C |
| MSL level | 3 |
| ESD | 50V (MM), 100V (HBM) |

Package Dimensions



| Pin No. | Symbol | Function |
|---------|--------|----------|
| A | IN | Input |
| B | GND | Ground |
| C | GND | Ground |
| D | OUT | Output |
| E | GND | Ground |

All tolerances are +/-0.1 mm unless otherwise specified.
 Unit: mm

Marking Description

: Year/Month Code (Follow the table)

| YEAR/Month | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 2019 | <u>a</u> | <u>b</u> | <u>c</u> | <u>d</u> | <u>e</u> | <u>f</u> | <u>g</u> | <u>h</u> | <u>i</u> | <u>k</u> | <u>l</u> | <u>m</u> |
| 2020 | <u>n</u> | <u>p</u> | <u>q</u> | <u>r</u> | <u>s</u> | <u>t</u> | <u>u</u> | <u>v</u> | <u>w</u> | <u>x</u> | <u>y</u> | <u>z</u> |
| 2021 | A | B | C | D | E | F | G | H | J | K | L | M |
| 2022 | N | P | Q | R | S | T | U | V | W | X | Y | Z |
| 2023 | a | b | c | d | e | f | g | h | j | k | l | m |
| 2024 | n | p | q | r | s | t | u | v | w | x | y | z |
| 2025 | <u>A</u> | <u>B</u> | <u>C</u> | <u>D</u> | <u>E</u> | <u>F</u> | <u>G</u> | <u>H</u> | <u>J</u> | <u>K</u> | <u>L</u> | <u>M</u> |
| 2026 | <u>N</u> | <u>P</u> | <u>Q</u> | <u>R</u> | <u>S</u> | <u>T</u> | <u>U</u> | <u>V</u> | <u>W</u> | <u>X</u> | <u>Y</u> | <u>Z</u> |

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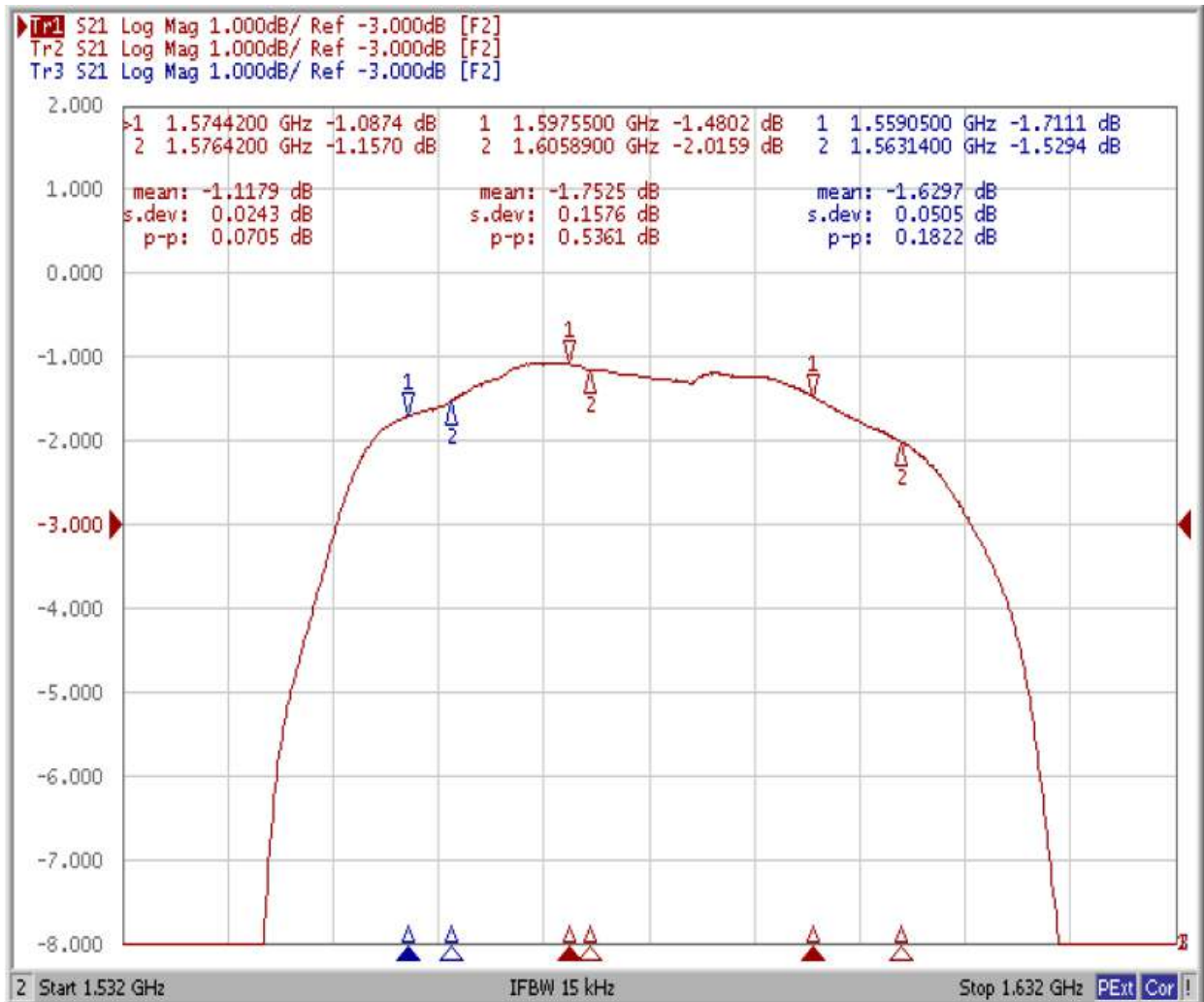
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Transmission Characteristics

S21 Response (Narrowband)



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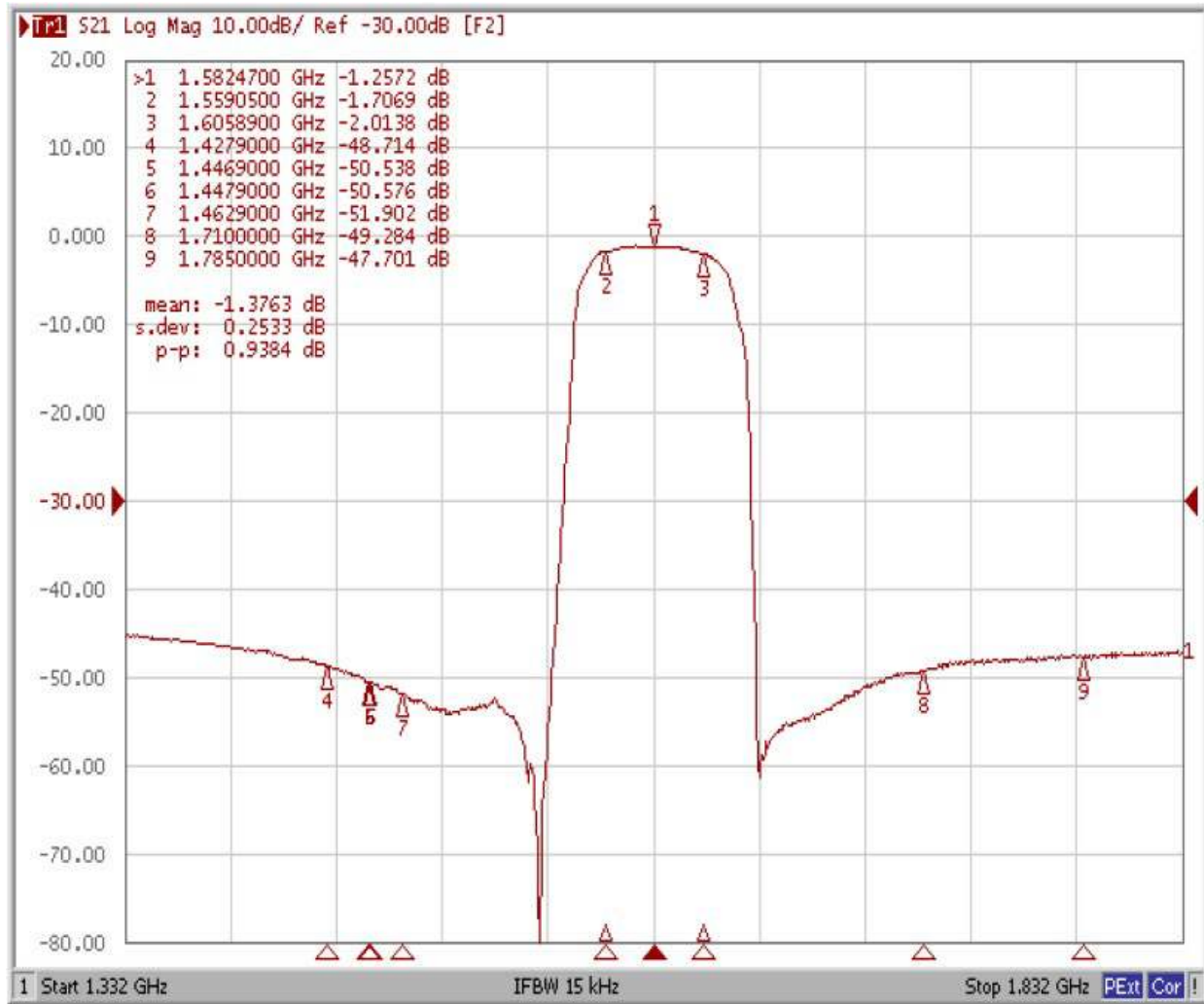
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S21 Response (Wideband)



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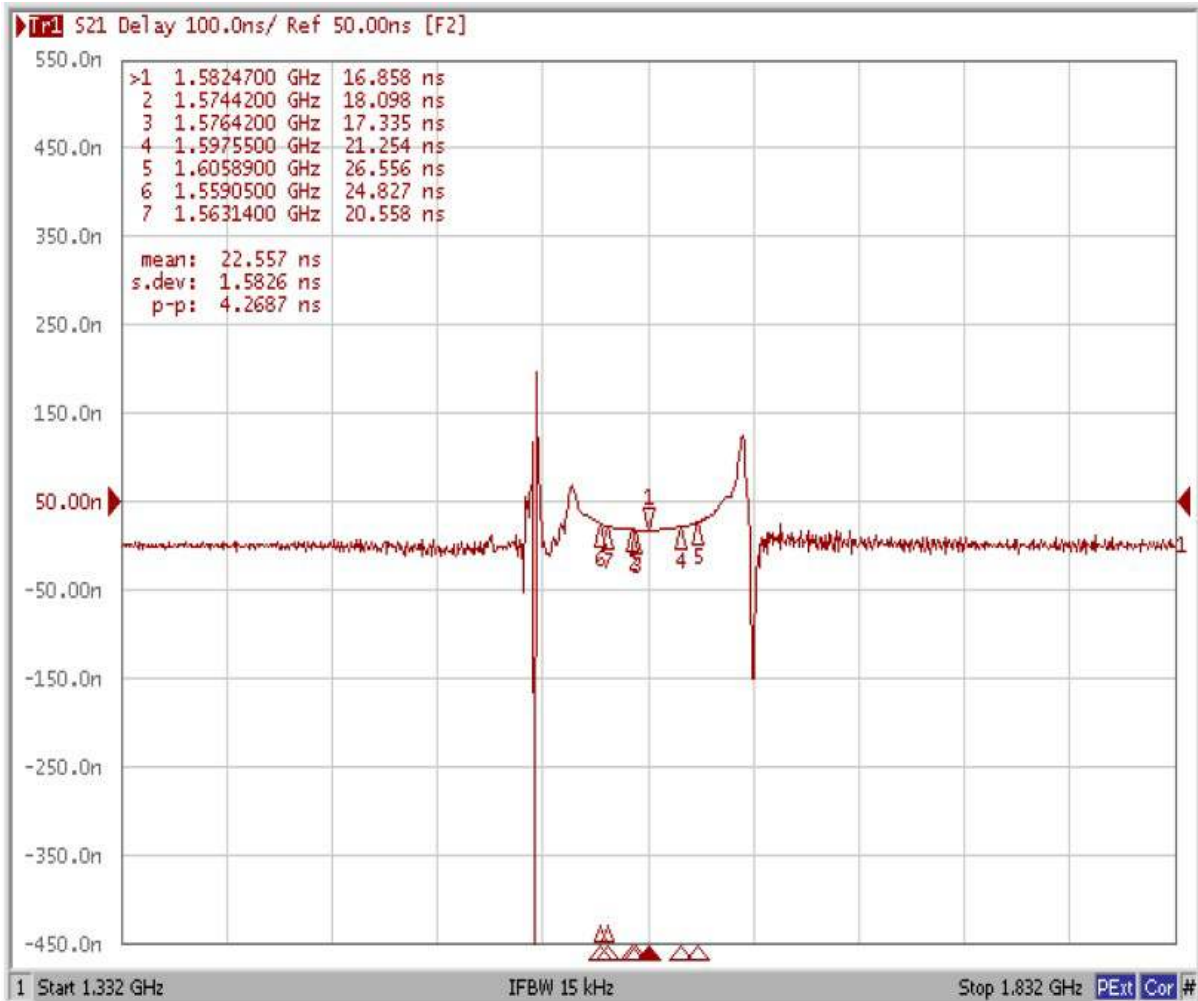


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Group Delay Ripple



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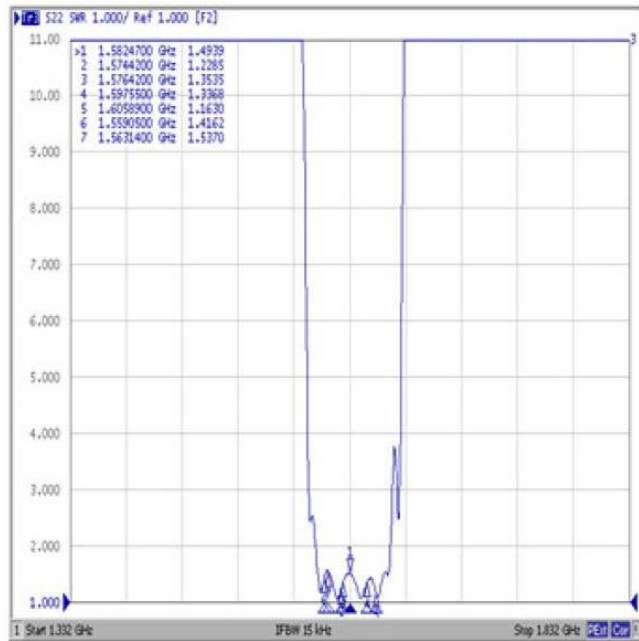
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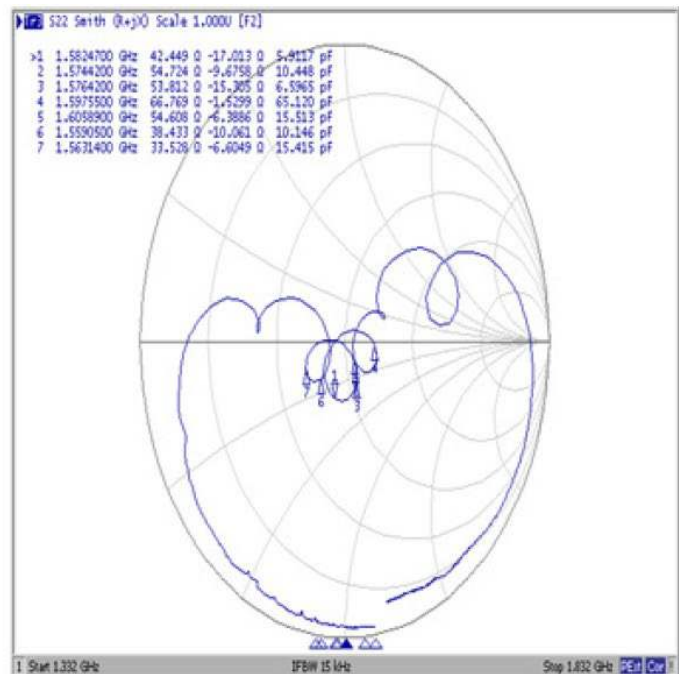
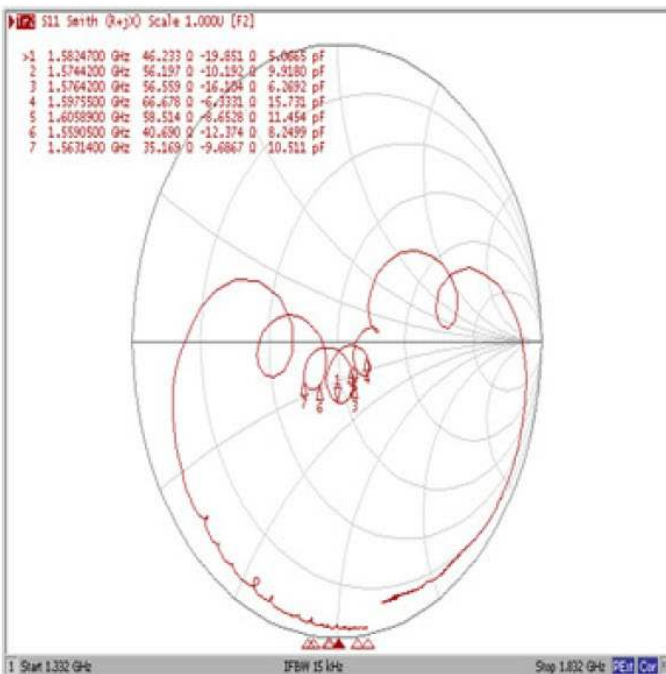
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Reflection Characteristics

S11 & S22 VSWR



S11 & S22 Smith Chart



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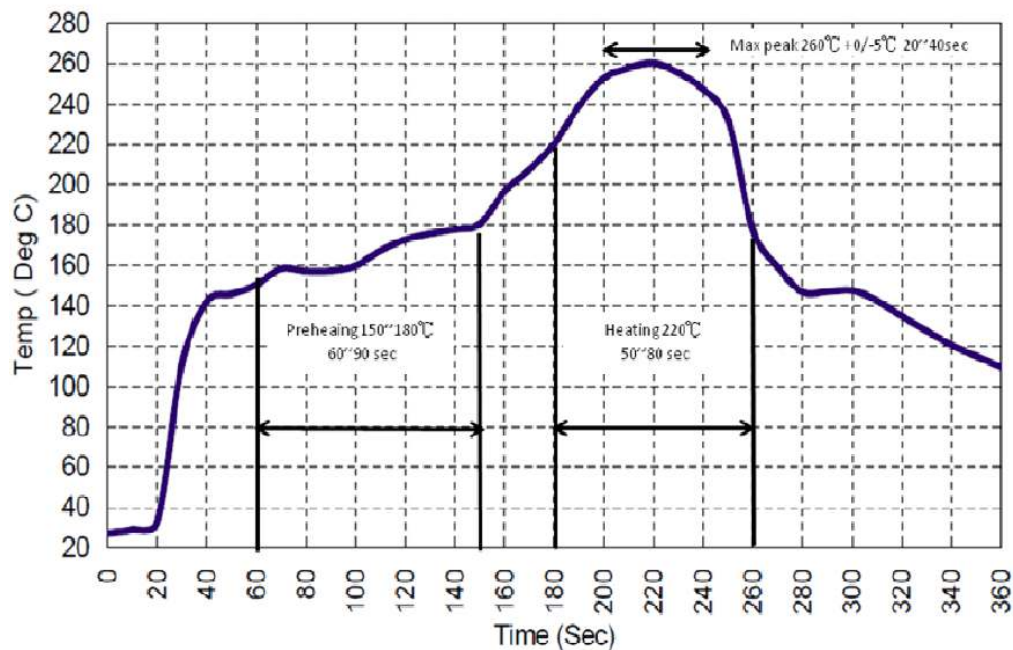
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Recommended Reflow Profile

1. Preheating shall be fixed at 150~180°C for 60~90 seconds.
2. Ascending time to preheating temperature 150°C shall be 30 seconds minimum.
3. Heating shall be fixed at 220°C for 50~80seconds and at 260°C+0/-5°C peak (20~40sec)
4. Time: 2 times



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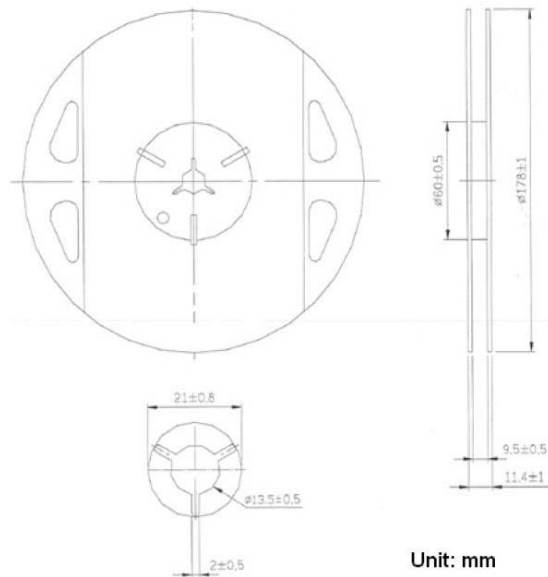


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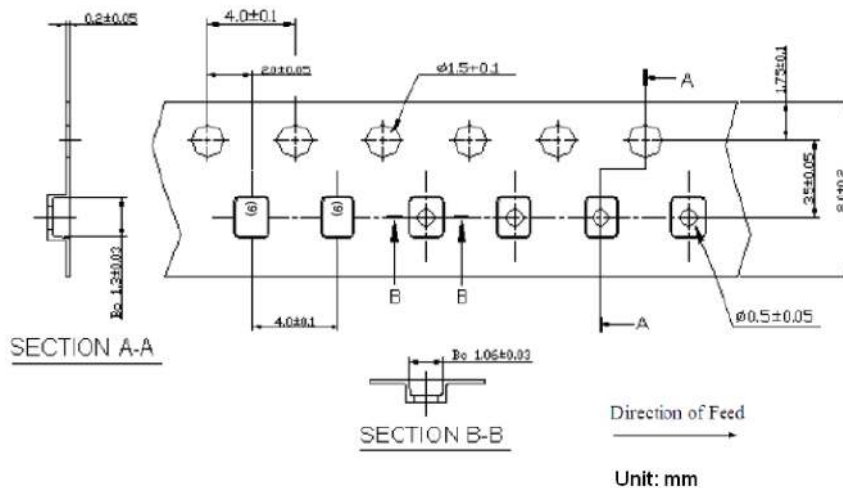
Packaging

1. Reel Dimension

Number of pieces/reel:5k



2. Tape Dimension



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