

|                                         |                                                                                                                                                                                                                                                                                                                                                         |                                                   |
|-----------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|
| <b>SPECIFICATION SHEET NO.</b>          | S0217 – SS3150F000S150                                                                                                                                                                                                                                                                                                                                  |                                                   |
| <b>ORIGINAL MFG/PART NO.</b>            | MDD Diodes/SS3150F                                                                                                                                                                                                                                                                                                                                      |                                                   |
| <b>NEXTGEN PART CODE</b>                | SS3150F000S150                                                                                                                                                                                                                                                                                                                                          | Indicate This Code For <a href="#">RFQ</a> /Order |
| <b>DATE</b>                             | Feb. 17, 2025                                                                                                                                                                                                                                                                                                                                           |                                                   |
| <b>REVISION</b>                         | A2                                                                                                                                                                                                                                                                                                                                                      | Updated With Most Recent Data                     |
| <b>DESCRIPTION AND MAIN PARAMETRICS</b> | <p>SMD Schottky Barrier Rectifier 2 Pads, Case SMAF, SS3 Series,<br/> Average Forward Rectified Current 3.0A Max.<br/> RMS Voltage 105V Max.<br/> Repetitive Peak Reverse Voltage 150V Max.<br/> Operating Junction Temperature Range TJ: -55°C ~+150°C<br/> Package in Tape/Reel, 3000pcs/Reel<br/> RoHS III/REACH Compliant and Halogen Free (HF)</p> |                                                   |
| <b>CUSTOMER</b>                         |                                                                                                                                                                                                                                                                                                                                                         |                                                   |
| <b>CUSTOMER PART NUMBER</b>             |                                                                                                                                                                                                                                                                                                                                                         |                                                   |
| <b>CROSS REF. PART NUMBER</b>           |                                                                                                                                                                                                                                                                                                                                                         |                                                   |
| <b>MEMO</b>                             |                                                                                                                                                                                                                                                                                                                                                         |                                                   |

|                               |                                                                                     |                                                                                      |                                                                                       |
|-------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| <b>VENDOR APPROVE</b>         |                                                                                     |                                                                                      |                                                                                       |
| Issued/Checked/Approved       |  |  |  |
| Effective Date: Feb. 17, 2025 |                                                                                     |                                                                                      |                                                                                       |

|                         |
|-------------------------|
| <b>CUSTOMER APPROVE</b> |
|                         |
| Date:                   |

## MAIN FEATURE

- The Plastic Package Carries Underwriters Laboratory Flammability Classification 94V-0
- Low Power Loss and High Efficiency
- Metal Silicon Junction and Majority Carrier Conduction
- Built-in Strain Relief and Ideal For Automated Placement
- High Forward Surge Current Capability
- High Temperature Soldering Guaranteed: 250° C/10 Seconds At Terminals
- Surface Mount Package Ideally Suited for Automatic Insertion
- REACH/RoHS III Complaint and Halogen Free
- Cross Main Competitor Parts in Market



*Image shown is a representation only. Exact specifications should be obtained from the product dimension.*



## APPLICATION

- For SMD Application

## ELECTRICAL CHARACTERISTICS

- See Page 5 ~ Page 6
- All Products Parameters are Subject To NextGen Components' Final Confirmation.

## HOW TO ORDER

- Please Follow Up Part Code Guide And Indicate NextGen Part Code SS3150F000S150 For RFQ and Order.

## PART CODE GUIDE

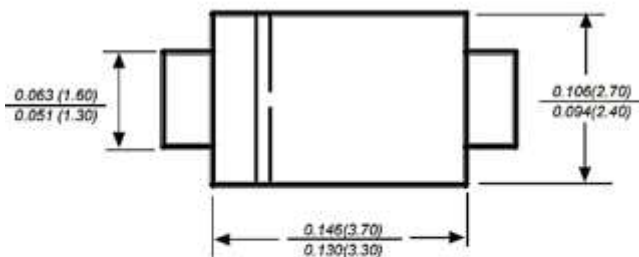
**RFQ**

[Request For Quotation](#)

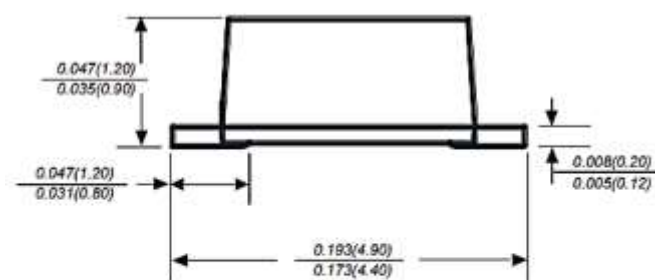
| CODE | NAME                                 | KEY SPECIFICATION OPTION                                                                                                                        |
|------|--------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| SS3  | Product Series Code                  | SMD Schottky Barrier Rectifier, Forward Current 3.0A                                                                                            |
| 150  | Repetitive Peak Reverse Voltage Code | 2: 20V Max. ; 3: 30V Max. ; 4: 40V Max.; 5: 50V Max.; 6: 60V Max.;<br>8: 80V Max.; 10: 100V Max.; 150: 150V Max.; 200: 200V Max                 |
| F0   | Case Code                            | A0: Case DO-214AC/SMA; B0: Case DO-214AA/SMB; BF: Case SMBF;<br>C0: Case SMC/DO-214AB ; F0: Case SMAF; W0: Case SMF/SOD-123FL                   |
| 00S  | Internal Control Code                | 00S: Letter A~Z, a-z or Digits (0-9)                                                                                                            |
| 150  | DC Blocking Voltage Code             | 020: 20V Max. ; 030: 30V Max. ; 040: 40V Max.; 050: 50V Max.;<br>060: 60V Max.; 080: 80V Max.; 100: 100V Max.; 150: 150V Max.;<br>200: 200V Max |
| XX   | Special/Custom Parameters            | Blank: N/A;<br>XX: Letter A~Z, a~z or digits (0~9) for Special/Custom Parameters                                                                |

**DIMENSION** - Unit: Inch (mm), Case SMAF Outline

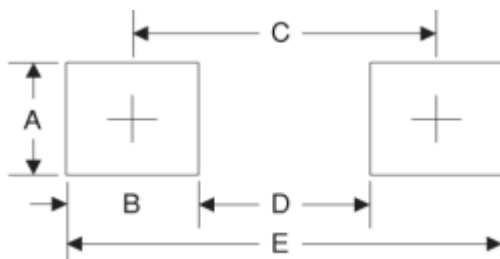
Top View



Side View



Recommend Pad Layout



| SYMBOL      | A     | B     | C     | D     | E     |
|-------------|-------|-------|-------|-------|-------|
| Unit (inch) | 0.071 | 0.063 | 0.150 | 0.087 | 0.213 |
| Unit (mm)   | 1.80  | 1.60  | 3.80  | 2.20  | 5.40  |

## MECHANICAL DATA

| CASE                                 | TERMINALS                                                    | POLARITY                                      | MOUNTING POSITION | WEIGHT PER PIECE                |
|--------------------------------------|--------------------------------------------------------------|-----------------------------------------------|-------------------|---------------------------------|
| JEDEC<br>SMAF Molded<br>Plastic Body | Solder plated, Solderable per<br>MIL-STD-750,<br>Method 2026 | Color band<br>denotes cathode<br>end Mounting | Any               | 0.00095 Ounce,<br>0.02700 Grams |

## MAX. RATINGS & ELECTRICAL CHARACTERISTICS

- Ratings at 25 °C ambient temperature unless otherwise specified.
- Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

| PARAMETER                                                                                        | SYMBOLS | VALUE       | UNITS |
|--------------------------------------------------------------------------------------------------|---------|-------------|-------|
| Maximum Average Forward Rectified Current                                                        | I (AV)  | 3.0         | A     |
| Peak Forward Surge Current 8.3ms Single Half Sine-wave Superimposed On Rated Load (JEDEC Method) | I FSM   | 80          | A     |
| Typical Thermal Resistance (Note 2)                                                              | R θJA   | 70          | °C/W  |
|                                                                                                  | R θJC   | 18          |       |
| Operating Junction Temperature Range                                                             | T J     | -55 to +150 | °C    |
| Storage Temperature Range                                                                        | T STG   | -55 to +150 | °C    |

Note:

1. Measured at 1MHz And Applied Reverse Voltage Of 4.0V D.C
2. P.C.B. Mounted With 0.2"x0.2"(5.0 x 5.0 mm) Copper Pad Areas

**MAX. RATINGS & ELECTRICAL CHARACTERISTICS** - FOR DIFFERENT PART CODE

- Ratings At 25 °C Ambient Temperature Unless Otherwise Specified.
- Single Phase Half-wave 60Hz, resistive Or Inductive Load, For Capacitive Load Current Derate By 20%.

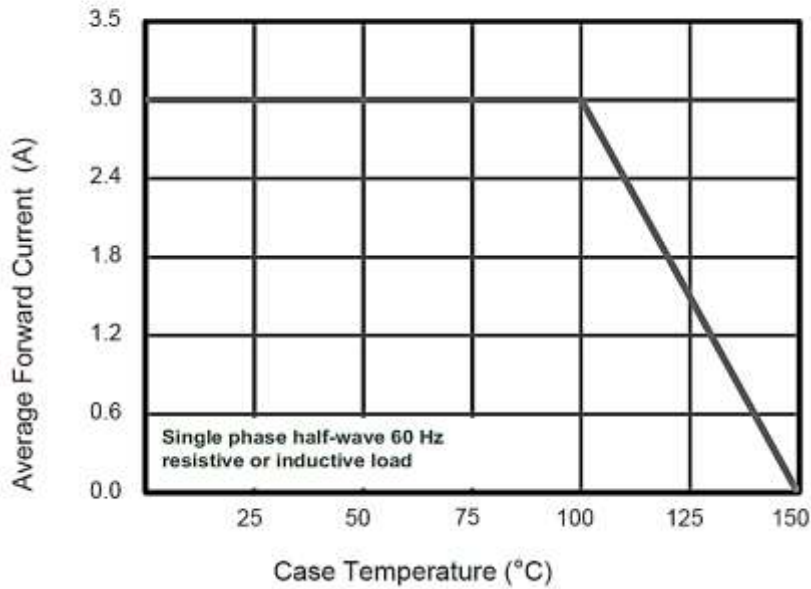
| PART CODE      | Max.<br>Repetitive<br>Peak<br>Reverse<br>Voltage | Max.<br>RMS<br>Voltage | Max.<br>DC<br>Blocking<br>Voltage | Max.<br>Inst.<br>Forward<br>Voltage<br>@<br>3.0A | Maximum<br>DC Reverse<br>Current<br>At Rated<br>DC<br>Blocking<br>Voltage |                | Typical<br>Junction<br>Cap.<br>(Note 1) | Marking<br>List |
|----------------|--------------------------------------------------|------------------------|-----------------------------------|--------------------------------------------------|---------------------------------------------------------------------------|----------------|-----------------------------------------|-----------------|
|                |                                                  |                        |                                   |                                                  | @<br>25<br>°C                                                             | @<br>100<br>°C |                                         |                 |
|                |                                                  |                        |                                   |                                                  |                                                                           |                |                                         |                 |
|                | V <sub>RRM</sub>                                 | V <sub>RMS</sub>       | V <sub>DC</sub>                   | V <sub>F</sub>                                   | I <sub>R</sub>                                                            | C <sub>J</sub> |                                         |                 |
| V              | V                                                | V                      | V                                 | V                                                | mA                                                                        | pF             |                                         |                 |
| SS32F00000S020 | 20                                               | 14                     | 20                                | 0.55                                             | 0.5                                                                       | 5              | 250                                     | SS32F           |
| SS33F00000S030 | 30                                               | 21                     | 30                                | 0.55                                             | 0.5                                                                       | 5              | 250                                     | SS33F           |
| SS34F00000S040 | 40                                               | 28                     | 40                                | 0.55                                             | 0.5                                                                       | 5              | 250                                     | SS34F           |
| SS35F00000S050 | 50                                               | 35                     | 50                                | 0.70                                             | 0.5                                                                       | 5              | 180                                     | SS35F           |
| SS36F00000S060 | 60                                               | 42                     | 60                                | 0.70                                             | 0.5                                                                       | 5              | 180                                     | SS36F           |
| SS38F00000S080 | 80                                               | 56                     | 80                                | 0.85                                             | 0.3                                                                       | 3              | 180                                     | SS38F           |
| SS310F0000S100 | 100                                              | 70                     | 100                               | 0.85                                             | 0.3                                                                       | 3              | 180                                     | SS310F          |
| SS3150F000S150 | 150                                              | 105                    | 150                               | 0.95                                             | 0.3                                                                       | 3              | 180                                     | SS3150F         |
| SS3200F000S200 | 200                                              | 140                    | 200                               | 0.95                                             | 0.3                                                                       | 3              | 180                                     | SS3200F         |

Note:

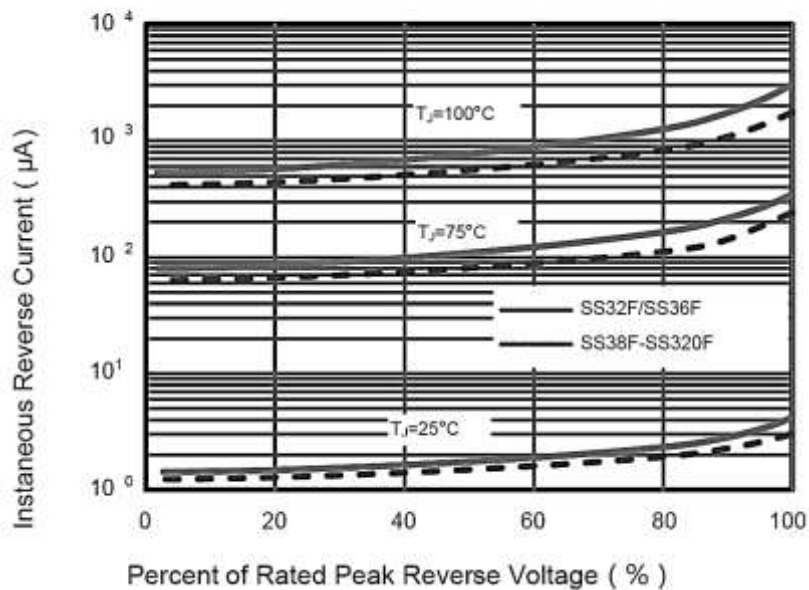
1. Measured at 1MHz And Applied Reverse Voltage Of 4.0V D.C
2. P.C.B. mounted with 0.20"x0.20" (5.0 x 5.0 mm) Copper Pad Areas

**RATINGS & CHARACTERISTIC CURVES** - For Reference Only

**Fig.1 Forward Current Derating Curve**

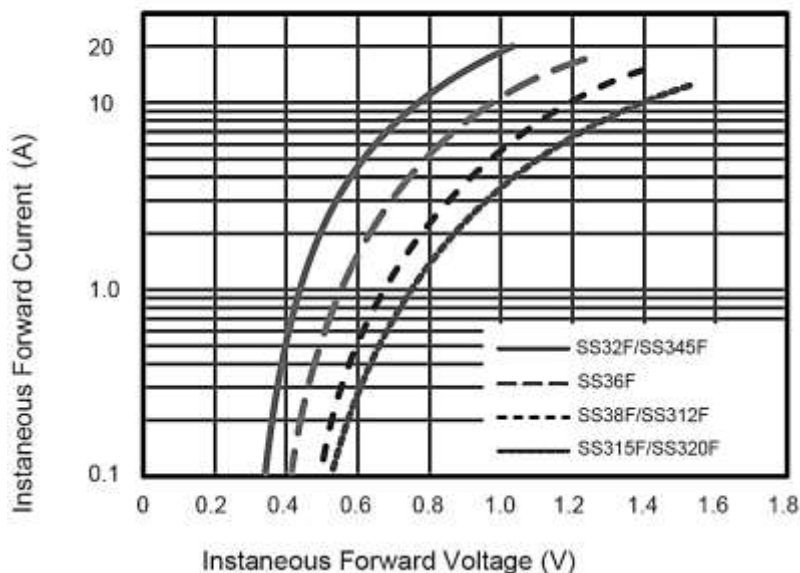


**Fig.2 Typical Reverse Characteristics**

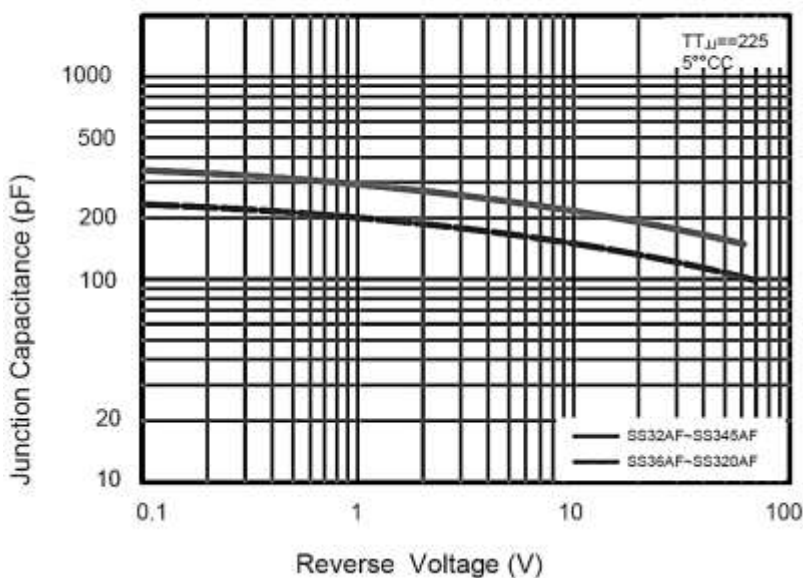


**RATINGS & CHARACTERISTIC CURVES** - For Reference Only

**Fig.3 Typical Forward Characteristic**



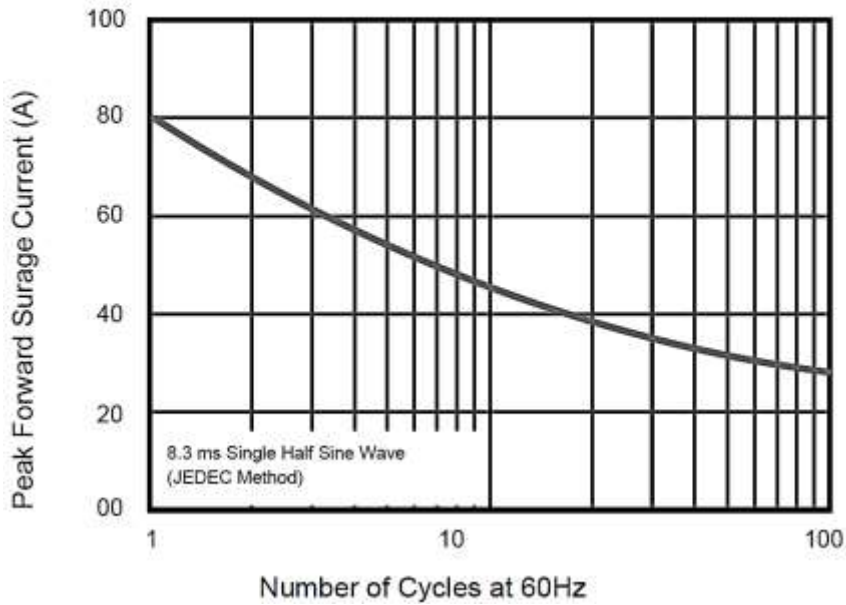
**Fig.4 Typical Junction Capacitance**



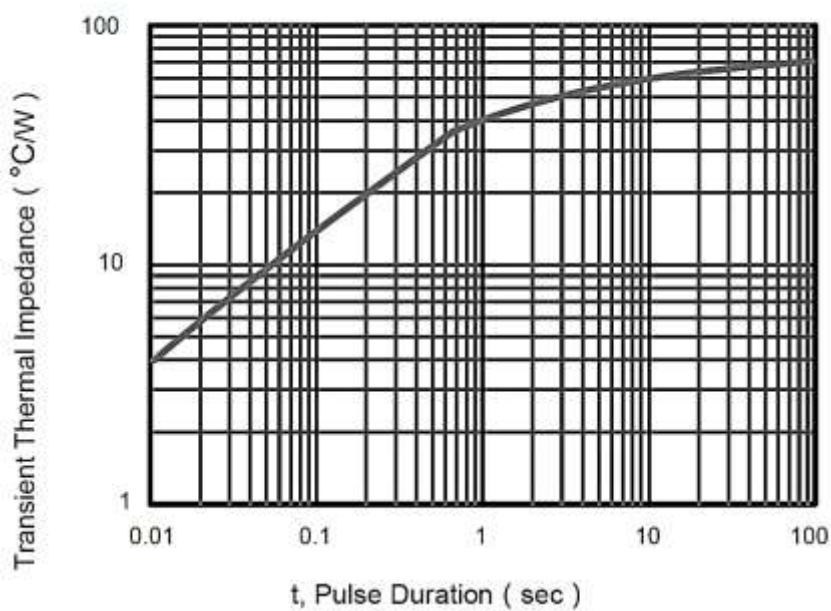


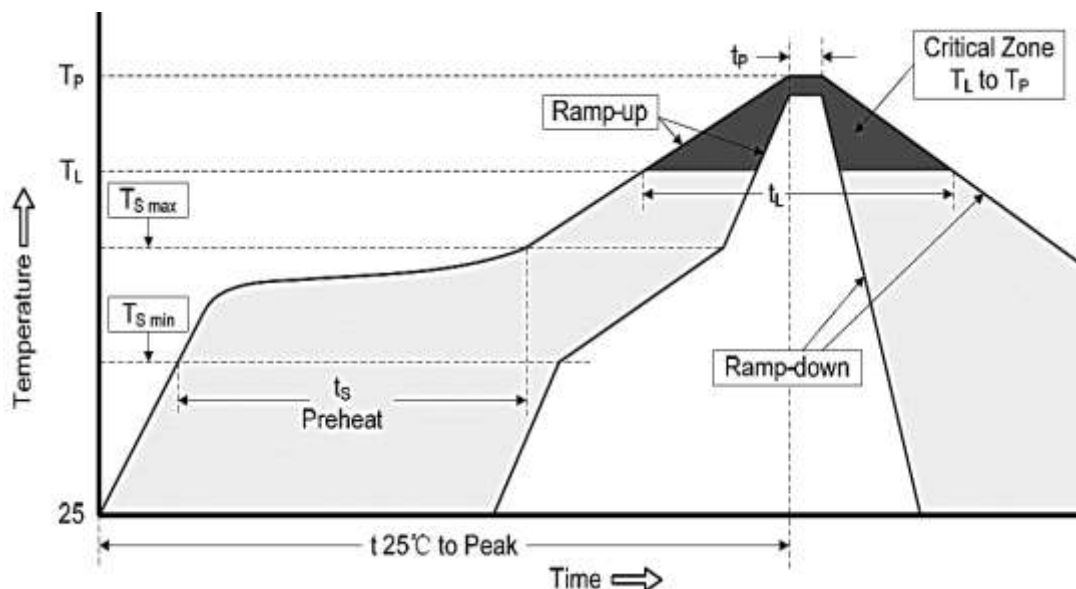
**RATINGS & CHARACTERISTIC CURVES** - For Reference Only

**Fig.5 Maximum Non-Repetitive Peak Forward Surge Current**



**Fig.6- Typical Transient Thermal Impedance**

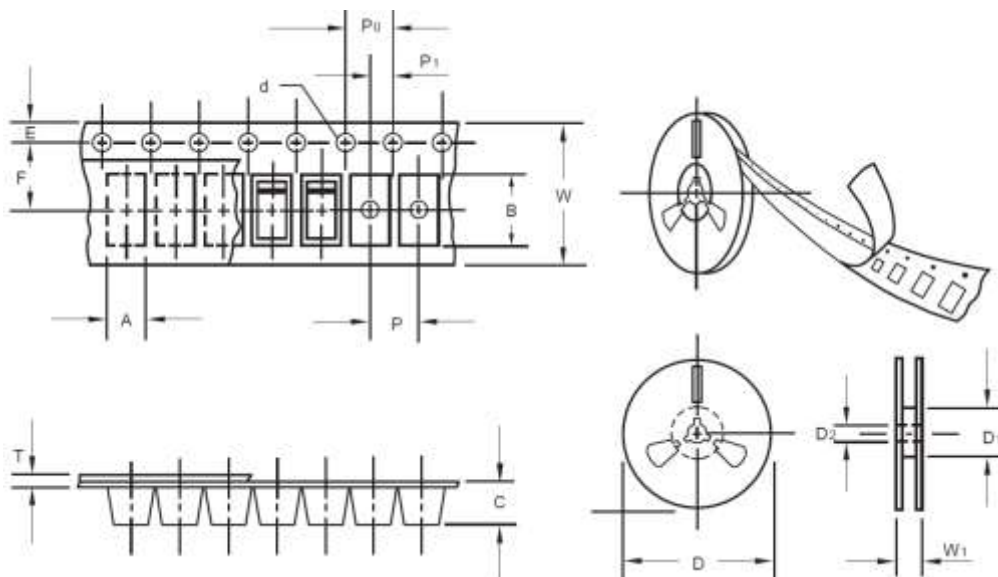


**SUGGESTED REFLOW PROFILE - For Reference Only**


| PROFILE FEATURE                                 |                           | PB-FREE ASSEMBLY  |
|-------------------------------------------------|---------------------------|-------------------|
| Average Ramp-up Rate (Ts Max to Tp)             |                           | 3°C/second Max    |
| Preheat                                         | Temperature Min (Ts Min.) | 150°C             |
|                                                 | Temperature Max (Ts Max.) | 200°C             |
|                                                 | Time (ts Min. to ts Max.) | 60 ~ 180 seconds  |
| Time maintained above                           | Temperature (Tl)          | 217°C             |
|                                                 | Time (tl)                 | 60 ~ 150 seconds  |
| Peak/Classification Temperature (Tp)            |                           | 260 °C            |
| Time within 5°C of actual Peak Temperature (tp) |                           | 20 ~ 40 seconds   |
| Ramp-down rate                                  |                           | 6 °C /Second Max. |
| Time 25 °C to Peak Temperature                  |                           | 8 minutes Max.    |
| Suggest reflow times                            |                           | 3 Times Max.      |

**TAPE AND REEL (Unit: mm)**

- All Devices are packed in accordance with EIA standard RS-481-A and specifications.



| ITEM                     | SYMBOL       | TOLERANCE | SMAF   |
|--------------------------|--------------|-----------|--------|
| Carrier width            | A            | 0.1       | 2.80   |
| Carrier Length           | B            | 0.1       | 4.75   |
| Carrier Depth            | C            | 0.1       | 1.42   |
| Sprocket hole            | d            | 0.05      | 1.50   |
| 7" Reel outside diameter | D            | 2.0       | 178.00 |
| 7" Reel inner diameter   | D1           | Min.      | 54.40  |
| Feed hole diameter       | D2           | 0.5       | 13.00  |
| Sprocket hole position   | E            | 0.1       | 1.75   |
| Punch hole position      | F            | 0.1       | 5.05   |
| Punch hole pitch         | P            | 0.1       | 4.00   |
| Sprocket hole pitch      | P0           | 0.1       | 4.00   |
| Embossment center        | P1           | 0.1       | 2.00   |
| Overall tape thickness   | T            | 0.1       | 0.30   |
| Tape width               | W            | 0.3       | 8.00   |
| Reel width               | W1           | 1.0       | 12.30  |
| MPQ/Reel                 | 3000pcs/Reel |           |        |

## IMPORTANT NOTES AND DISCLAIMER

1. **ROHS COMPLIANCE:** The levels of RoHS restricted materials in this product are below the maximum concentration values (also referred to as the threshold limits) permitted for such substances, or are used in an exempted application, in accordance with EU RoHS Directive (EU) 2015/863 EC (RoHS3). RoHS Test Report for this product can be obtained at Download Center.
2. **REACH COMPLIANCE:** REACH substances of high concern (SVHCs) information is available for this product. Since the European Chemical Agency (ECHA) has published notice of their intent to frequently revise the SVHC listing for the foreseeable future, REACH Test Report for this product can be obtained at Download Center.
3. All Product parametric performance is indicated in the Electrical Characteristics for the listed herein test conditions, unless otherwise noted. Product performance may not be indicated by the Electrical Characteristics if operated under different conditions.
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