




**SPECIFICATION SHEET**

|                                |  |
|--------------------------------|--|
| <b>SPECIFICATION SHEET NO.</b> | P1102- SOD123FK26S206  |
| <b>DATE</b>                    | Nov. 02, 2022  |
| <b>REVISION</b>                | A1   |
| <b>DESCRIPTION</b>             | SMD Schottky Barrier Rectifier, 2 Pads, SOD-123FL series, DSK26 Type<br>Reverse Voltage 60V Max. Forward Current 2.0A Max.<br>Operating Temp. Range -55°C ~+150°C<br>Package in Tape/Reel, 3000pcs/Reel<br>RoHS/RoHS III compliant |
| <b>CUSTOMER</b>                |  |
| <b>CUSTOMER PART NUMBER</b>    |  |
| <b>CROSS REF. PART NUMBER</b>  |  |
| <b>ORIGINAL PART NUMBER</b>    | MDD DSK26  |
| <b>PART CODE</b>               | SOD123FK26S206   |

|                         |   |  |   |
|-------------------------|---|--|---|
| <b>VENDOR APPROVE</b>   |   |  |   |
| Issued/Checked/Approved |  |  |  |
| DATE: Nov. 02, 2022     |   |  |   |

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

11/2/2022

**SMD SCHOTTKY BARRIER RECTIFIER SOD-123FL SERIES**

**MAIN FEATURE**



- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- Low reverse leakage
- Built-in strain relief
- Low power loss, high efficiency
- High forward surge current capability
- High temperature soldering guaranteed: 250°C/ 10 seconds at terminals
- Metal silicon junction, majority carrier conduction

**APPLICATION**

- For printed circuit board

**RFQ**  
Request For Quotation

**PART CODE GUIDE**

| SOD123F | K26 | S | 206 |
|---------|-----|---|-----|
| 1       | 2   | 3 | 4   |

- 1) **SOD123F**: SMD Schottky Barrier Rectifier, 2 Pads, SOD-123FL series,
- 2) **K26**: Type code for original part number DSK26
- 3) **S**: Package code, Tape/reel, 3000pcs/reel.
- 4) **206**: Specification code for Reverse Voltage 60V Max. Forward Current 2.0A Max

**MORE ITEMS AVAILABLE**

|                |                |                |                       |                |
|----------------|----------------|----------------|-----------------------|----------------|
| SOD123FK12S102 | SOD123FK13S103 | SOD123FK14S104 | SOD123FK16S106        | SOD123FK18S108 |
| SOD123FK1AS110 | SOD123FK1BS115 | SOD123FK1CS120 |                       |                |
| SOD123FK22S202 | SOD123FK23S203 | SOD123FK24S204 | <b>SOD123FK26S206</b> | SOD123FK28S208 |
| SOD123FK2AS210 | SOD123FK2BS215 | SOD123FK2CS220 |                       |                |
| SOD123FK32S302 | SOD123FK33S303 | SOD123FK34S304 | SOD123FK36S306        | SOD123FK38S308 |
| SOD123FK3AS310 | SOD123FK3BS315 | SOD123FK3CS320 |                       |                |
|                |                |                |                       |                |

**SMD SCHOTTKY BARRIER RECTIFIER SOD-123FL SERIES**

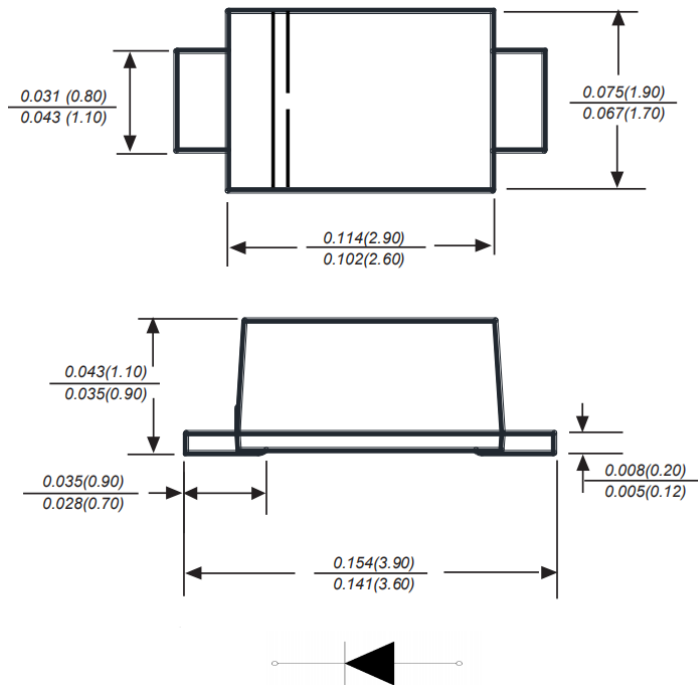
**DIMENSION (Unit: Inch/mm)**

Image for reference

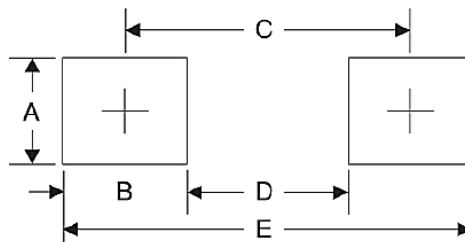


Marking: K26

SOD-123FL



Recommend Pad Layout



| Symbol | Unit (Inch) | Unit (mm) |
|--------|-------------|-----------|
| A      | 0.047       | 1.20      |
| B      | 0.047       | 1.20      |
| C      | 0.126       | 3.20      |
| D      | 0.079       | 2.00      |
| E      | 0.173       | 4.40      |

**SMD SCHOTTKY BARRIER RECTIFIER SOD-123FL SERIES**
**MECHANICAL DATA**

| Case                                | Terminals  | Polarity                       | Mounting Position | Weight per piece            |
|-------------------------------------|--|--------------------------------|-------------------|-----------------------------|
| JEDEC SOD-123FL molded plastic body | Solder plated, Solderable per MIL-STD-750, Method 2026 | Color band denotes cathode end | Any               | 0.00048 Ounce, 0.0150 grams |

**MAX. RATING & CHARACTERISTICS**

| Parameter  | SYMBOLS          | VALUE |         |      | UNITS |
|--|------------------|-------|---------|------|-------|
|  |                  | Min.  | Typical | Max. |       |
| Repetitive peak reverse voltage  | V <sub>RRM</sub> |       |         | 60   | Volts |
| RMS voltage  | V <sub>RMS</sub> |       |         | 42   | Volts |
| DC blocking voltage  | V <sub>DC</sub>  |       |         | 60   | Volts |
| Average forward output rectified current at TL (see fig.1)                                       | I <sub>AV</sub>  |       |         | 2.0  | A     |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) | I <sub>FSM</sub> |       | 50      |      | A     |
| Instantaneous forward voltage at 2.0A  | V <sub>F</sub>   |       |         | 0.70 | Volts |
| DC reverse current at rated DC blocking voltage  | I <sub>R</sub>   |       |         | 0.5  | mA    |
|  |                  |       |         | 5.0  | mA    |
| Junction capacitance (Note 2)  | C <sub>J</sub>   |       | 80      |      | pF    |
| Thermal resistance (Note 3)  | R <sub>QJA</sub> |       | 85      |      | °C/W  |
| Operating junction temperature range   | T <sub>J</sub>   | -55   |         | +150 | °C    |
| Storage temperature range  | T <sub>STG</sub> | -55   |         | +150 | °C    |

**Note**

1. 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%.
2. Measured at 1.0MHz and applied reverse voltage of 4.0Voltage
3. P.C.B. mounted with 0.2x0.2"(5.0x5.0mm) copper pad areas.

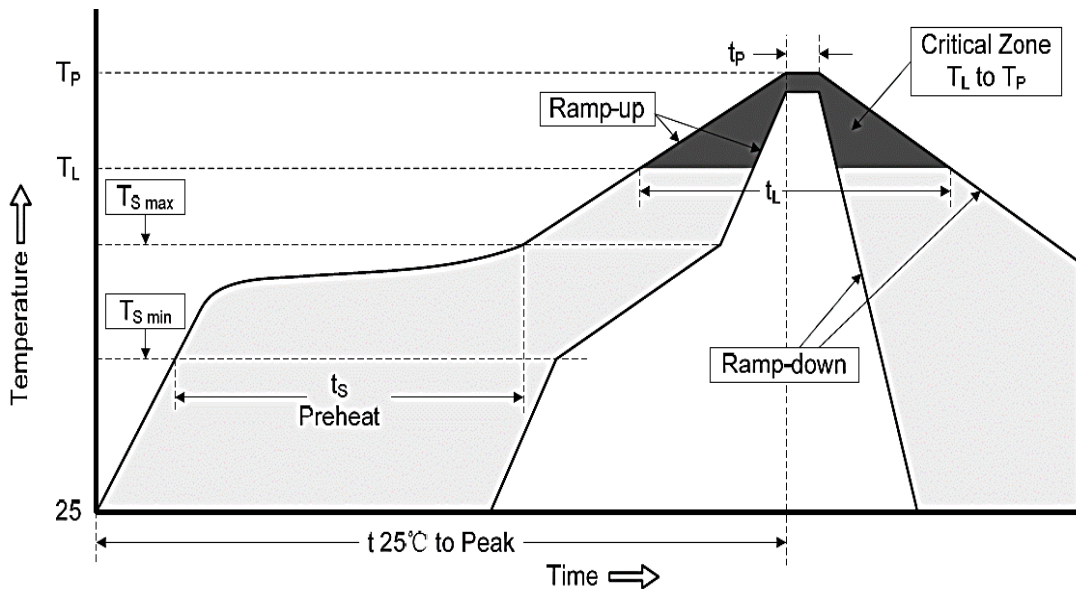
11/2/2022

**SMD SCHOTTKY BARRIER RECTIFIER SOD-123FL SERIES**
**RELIABILITY**

| Number | Experiment Items                   | Experiment Method And Conditions   | Reference Documents             |
|--------|------------------------------------|--|---------------------------------|
| 1      | Solder Resistance Test             | Test 260°C± 5°C for 10 ± 2 sec.<br>Immerse body into solder 1/16" ± 1/32"                                      | MIL-STD-750D<br>METHOD-2031.2   |
| 2      | Solderability Test                 | 230°C ±5°C for 5 sec.  | MIL-STD-750D<br>METHOD-2026.1 0 |
| 3      | Pull Test                          | 1 kg in axial lead direction for 10 sec.   | MIL-STD-750D<br>METHOD-2036.4   |
| 4      | Bend Test                          | 0.5Kg Weight Applied To Each Lead,<br>Bending Arcs 90 °C ± 5 °C For 3 Times                                    | MIL-STD-750D<br>METHOD-2036.4   |
| 5      | High Temperature Reverse Bias Test | TA=100°C for 1000 Hours at VR=80%<br>Rated VR  | MIL-STD-750D<br>METHOD-1038.4   |
| 6      | Forward Operation Life Test        | TA=25°C Rated Average Rectified<br>Current   | MIL-STD-750D<br>METHOD-1027.3   |
| 7      | Intermittent Operation Life Test   | On state: 5 min with rated IRMS Power<br>Off state: 5 min with Cool Forced Air.<br>On and off for 1000 cycles. | MIL-STD-750D<br>METHOD-1036.3   |
| 8      | Pressure Cooker Test               | 15 PSIG, TA=121°C, 4 hours   | MIL-S-19500<br>APPENOIXC        |
| 9      | Temperature Cycling Test           | -55°C~+125°C; 30 Minutes For Dwelled<br>Time 5 minutes for transferred time.<br>Total: 10 cycles.              | MIL-STD-750D<br>METHOD-1051.7   |
| 10     | Thermal Shock Test                 | 0°C for 5 minutes., 100°C for 5minutes,<br>Total: 10 cycles  | MIL-STD-750D<br>METHOD-1056.7   |
| 11     | Forward Surge Test                 | 8.3ms Single Sale Sine-wave One Surge.   | MIL-STD-750D<br>METHOD-4066.4   |
| 12     | Humidity Test                      | TA=65°C, RH=98% for 1000 hours.  | MIL-STD-750D<br>METHOD-1021.3   |
| 13     | High Temperature Storage life Test | 150°C for 1000 Hours   | MIL-STD-750D<br>METHOD-1031.5   |

**SMD SCHOTTKY BARRIER RECTIFIER SOD-123FL SERIES**

**SUGGESTED REFLOW PROFILE (For Reference Only)**



|  |                                  |                   |
|--|----------------------------------|-------------------|
| <b>Profile Feature</b>                                 |                                  | Pb-Free Assembly  |
| <b>Average Ramp-up Rate (Ts Max to Tp)</b>             |                                  | 3°C/second Max    |
| <b>Preheat</b>   | <b>Temperature Min (Ts Min.)</b> | 150°C             |
|  | <b>Temperature Max (Ts Max.)</b> | 200°C             |
|  | <b>Time (ts Min. to ts Max.)</b> | 60 ~ 180 seconds  |
| <b>Time maintained above</b>                           | <b>Temperature (Tl)</b>          | 217°C             |
|  | <b>Time (tl)</b>                 | 60 ~ 150 seconds  |
| <b>Peak/Classification Temperature (Tp)</b>            |                                  | 250 °C            |
| <b>Time within 5°C of actual Peak Temperature (tp)</b> |                                  | 10 seconds        |
| <b>Ramp-down rate</b>                                  |                                  | 6 °C /Second Max. |
| <b>Time 25 °C to Peak Temperature</b>                  |                                  | 6 minutes Max.    |
| <b>Suggest reflow times</b>                            |                                  | 3 Times Max.      |

**SMD SCHOTTKY BARRIER RECTIFIER SOD-123FL SERIES**

**RATINGS AND CHARACTERISTIC CURVES (For Reference Only)**

Fig.1 Forward Current Derating Curve

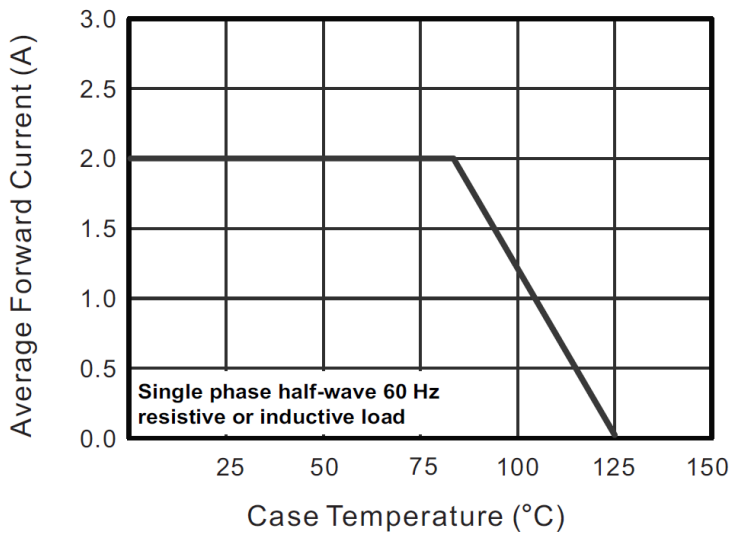
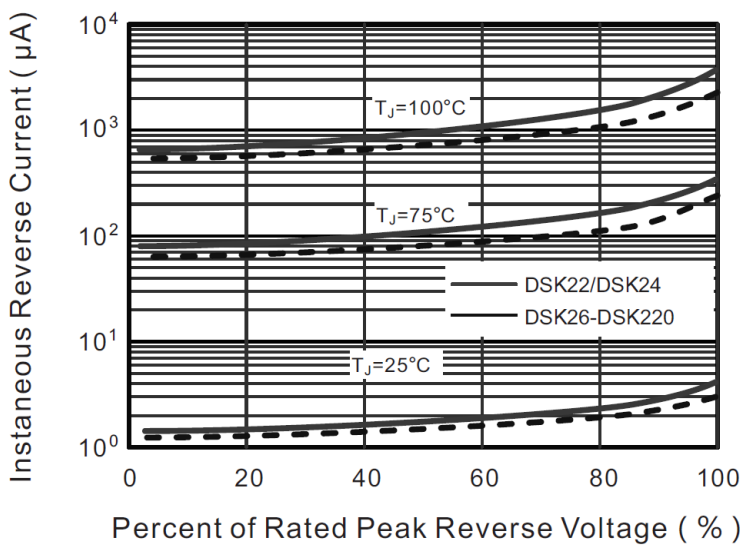


Fig.2 Typical Reverse Characteristics



**SMD SCHOTTKY BARRIER RECTIFIER SOD-123FL SERIES**

**RATINGS AND CHARACTERISTIC CURVES (For Reference Only)**

Fig.3 Typical Forward Characteristic

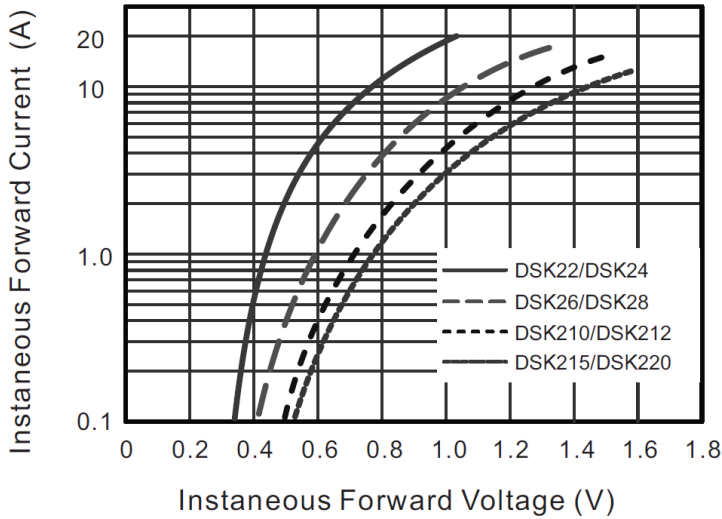
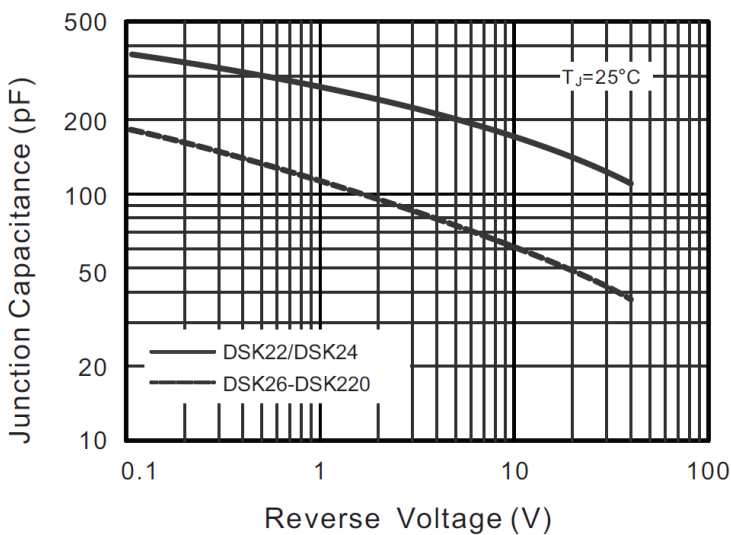


Fig.4 Typical Junction Capacitance

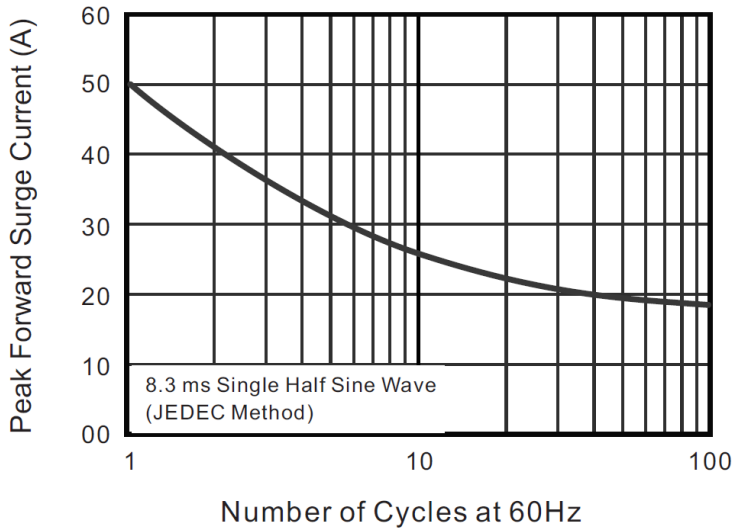




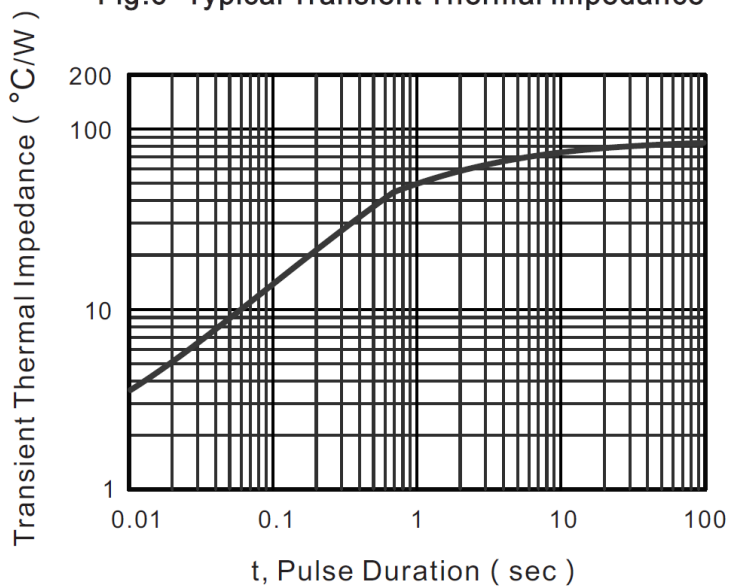
**SMD SCHOTTKY BARRIER RECTIFIER SOD-123FL SERIES**

**RATINGS AND CHARACTERISTIC CURVES (For Reference Only)**

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



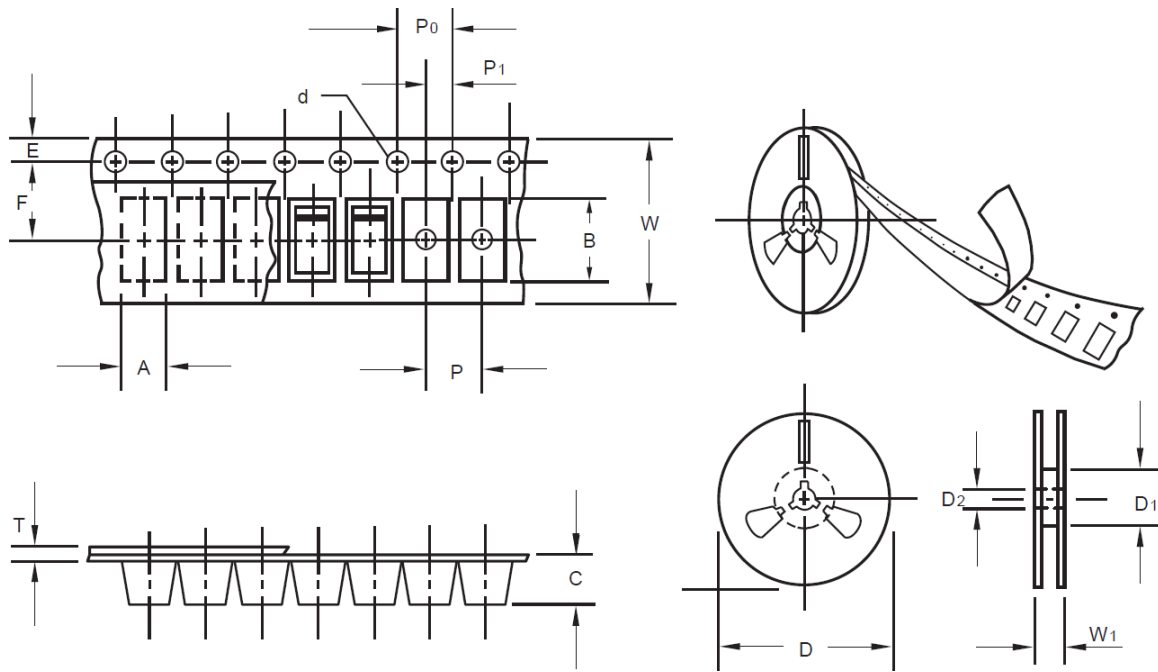
**Fig.6- Typical Transient Thermal Impedance**



**SMD SCHOTTKY BARRIER RECTIFIER SOD-123FL SERIES**

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

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



| Item                    | Symbol | Tolerance | SOD-123FL |
|-------------------------|--------|-----------|-----------|
| Carrier width           | A      | 0.1       | 2.10      |
| Carrier Length          | B      | 0.1       | 4.00      |
| Carrier Depth           | C      | 0.1       | 1.60      |
| Sprocket hole           | d      | 0.05      | 1.55      |
| 7"Reel outside diameter | D      | 2.0       | 178.00    |
| 7"Reel inner diameter   | D1     | Min.      | 50.00     |
| Feed hole diameter      | D2     | 0.5       | 13.00     |
| Sprocket hole position  | E      | 0.1       | 1.75      |
| Punch hole position     | F      | 0.1       | 3.50      |
| 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       | 0.25      |
| Tape width              | W      | 0.3       | 8.15      |
| Reel width              | W1     | 1.0       | 10.50     |

**SMD SCHOTTKY BARRIER RECTIFIER SOD-123FL SERIES**

**PACKAGE For Reference**

|                  |           |
|------------------|-----------|
| <b>Case Code</b> | SOD-123FL |
| Reel Size        | 7"        |
| Reel Size        | 178 mm    |
| MPQ/Reel         | 3000 pcs  |
| Qty. /Box        | 6000 pcs  |
| G.W/Box          | 1 lbs     |

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