

# TDSEMIC

## 拓電半導體

自主封測 品質把控 售後保障

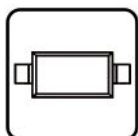
WEB | [WWW.TDSEMIC.COM](http://WWW.TDSEMIC.COM)



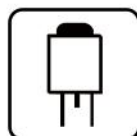
電源管理



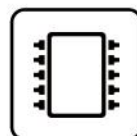
顯示驅動



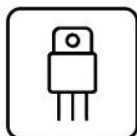
二三極管



LDO穩壓器



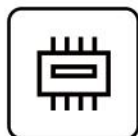
觸摸芯片



MOS管



運算放大器



存儲芯片



MCU



串口通信

## K220-TD

產品規格說明書

Surface Mount Schottky Barrier Rectifier  
Reverse Voltage - 20 to 200 V  
Forward Current - 2.0A

### Features

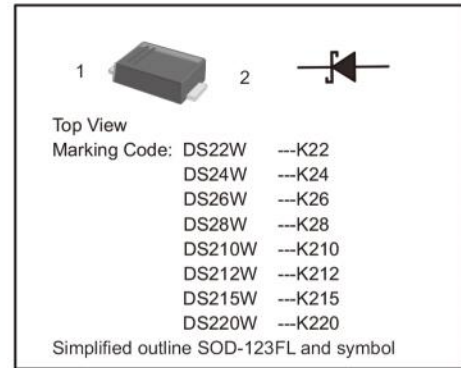
- Metal silicon junction, majority carrier conduction
- For surface mounted applications
- Low power loss, high efficiency
- High forward surge current capability
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications

### MECHANICAL DATA

- Case: SOD-123FL
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 15mg 0.00048oz

### PINNING

| PIN | DESCRIPTION |
|-----|-------------|
| 1   | Cathode     |
| 2   | Anode       |



### Absolute Maximum Ratings and Electrical characteristics

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

| Parameter                                                                                                   | Symbols            | DS22W      | DS24W | DS26W | DS28W    | DS210W | DS212W | DS215W | DS220W | Units |
|-------------------------------------------------------------------------------------------------------------|--------------------|------------|-------|-------|----------|--------|--------|--------|--------|-------|
| Maximum Repetitive Peak Reverse Voltage                                                                     | V <sub>RRM</sub>   | 20         | 40    | 60    | 80       | 100    | 120    | 150    | 200    | V     |
| Maximum RMS voltage                                                                                         | V <sub>RMS</sub>   | 14         | 28    | 42    | 56       | 70     | 84     | 105    | 140    | V     |
| Maximum DC Blocking Voltage                                                                                 | V <sub>DC</sub>    | 20         | 40    | 60    | 80       | 100    | 120    | 150    | 200    | V     |
| Maximum Average Forward Rectified Current                                                                   | I <sub>F(AV)</sub> | 2.0        |       |       |          |        |        |        |        | A     |
| Peak Forward Surge Current,8.3ms<br>Single Half Sine-wave Superimposed<br>on Rated Load (JEDEC method)      | I <sub>FSM</sub>   | 50         |       |       |          |        |        |        |        | A     |
| Max Instantaneous Forward Voltage at 2 A                                                                    | V <sub>F</sub>     | 0.55       |       | 0.70  | 0.85     |        | 0.95   |        |        | V     |
| Maximum DC Reverse Current<br>at Rated DC Reverse Voltage<br>T <sub>a</sub> = 25°C<br>T <sub>a</sub> =100°C | I <sub>R</sub>     | 0.5<br>5   |       |       | 0.3<br>3 |        |        |        | mA     |       |
| Typical Junction Capacitance <sup>(1)</sup>                                                                 | C <sub>j</sub>     | 220        |       | 80    |          |        |        |        |        | pF    |
| Typical Thermal Resistance <sup>(2)</sup>                                                                   | R <sub>θJA</sub>   | 85         |       |       |          |        |        |        |        | °C/W  |
| Operating Junction Temperature Range                                                                        | T <sub>j</sub>     | -55 ~ +125 |       |       |          |        |        |        |        | °C    |
| Storage Temperature Range                                                                                   | T <sub>stg</sub>   | -55 ~ +150 |       |       |          |        |        |        |        | °C    |

(1) Measured at 1 MHz and applied reverse voltage of 4 V D.C

(2) P.C.B. mounted with 2.0" X 2.0" (5 X 5 cm) copper pad areas.

Fig.1 Forward Current Derating Curve

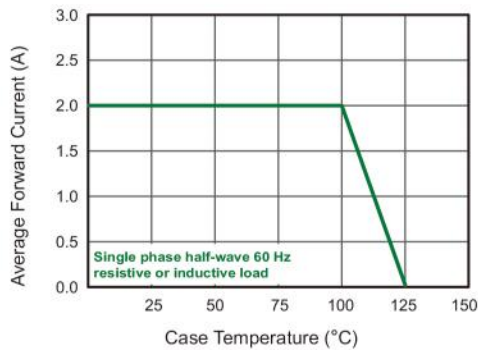


Fig.2 Typical Reverse Characteristics

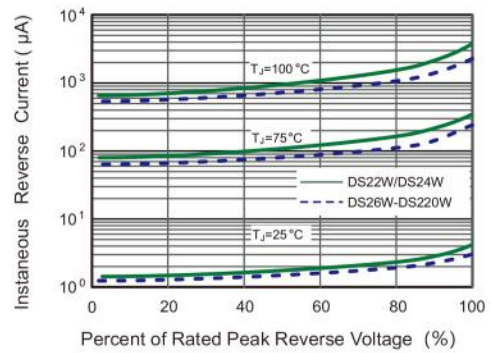


Fig.3 Typical Forward Characteristic

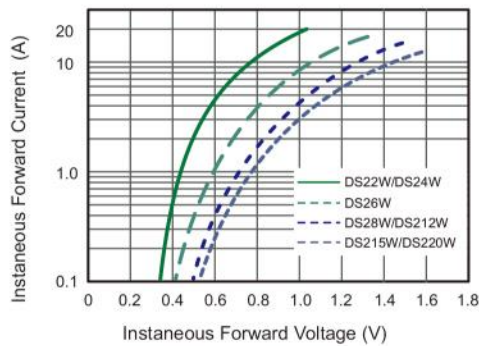


Fig.4 Typical Junction Capacitance

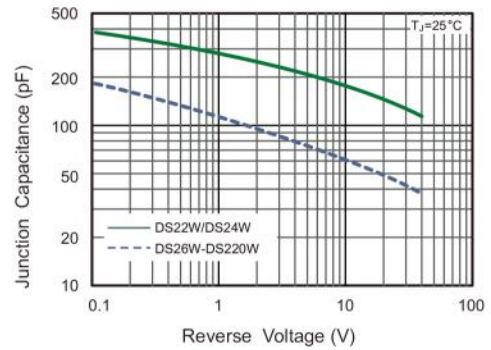


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

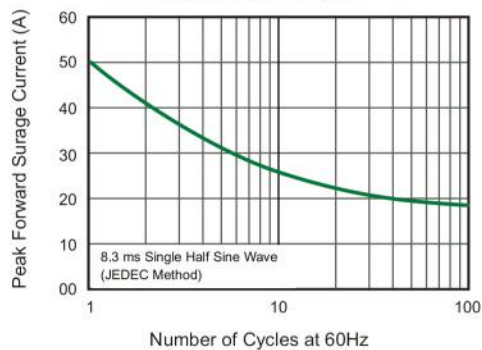
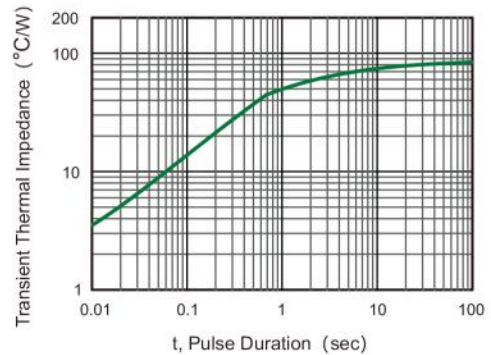


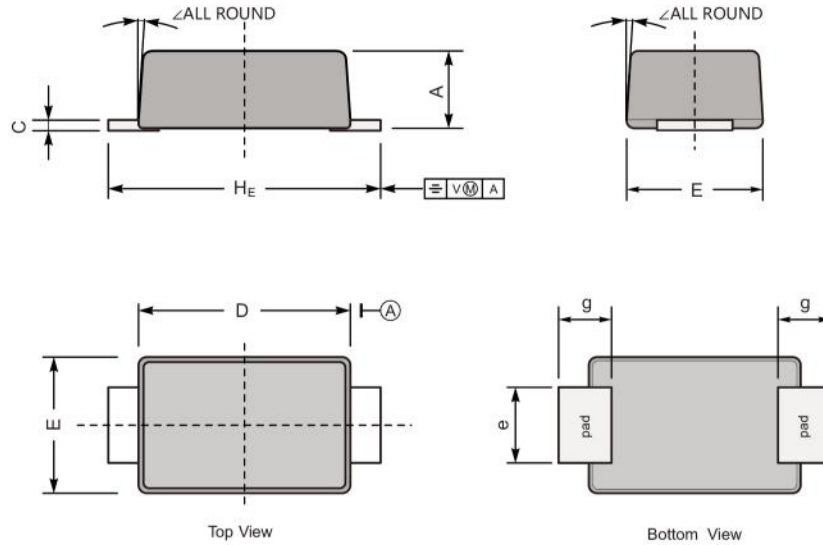
Fig.6 Typical Transient Thermal Impedance



### PACKAGE OUTLINE

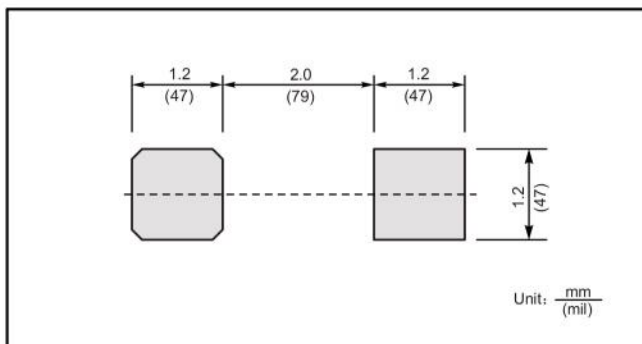
Plastic surface mounted package; 2 leads

SOD-123FL



| UNIT |     | A   | C    | D   | E   | e   | g   | H <sub>E</sub> | <  |
|------|-----|-----|------|-----|-----|-----|-----|----------------|----|
| mm   | max | 1.1 | 0.20 | 2.9 | 1.9 | 1.1 | 0.9 | 3.8            | 7° |
|      | min | 0.9 | 0.12 | 2.6 | 1.7 | 0.8 | 0.7 | 3.5            |    |
| mil  | max | 43  | 7.9  | 114 | 75  | 43  | 35  | 150            |    |
|      | min | 35  | 4.7  | 102 | 67  | 31  | 28  | 138            |    |

### The recommended mounting pad size



### Marking

| Type number | Marking code |
|-------------|--------------|
| DS22W       | K22          |
| DS24W       | K24          |
| DS26W       | K210         |
| DS28W       | K28          |
| DS210W      | K210         |
| DS212W      | K212         |
| DS215W      | K215         |
| DS220W      | K220         |