# DHE1A THRU DHE1M SOD-123FL

**Surface Mount Ultrafast Recovery Rectifier**

**Reverse Voltage - 50 to 1000 V**

**Forward Current - 1 A**

## Pinning

| 1.Cathode | 2.Anode |
|---|---|


SOD123FL

## FEATURES

- For surface mounted applications
- Low profile package
- Glass Passivated Chip Junction
- High efficiency
- Lead free in comply with EU RoHS 2011/65/EU directives

## MECHANICAL DATA

- Case: SOD-123FL
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 15mg /0.00053oz

| Marking Code | |
|---|---|
| DHE1A | YFW U1A |
| DHE1B | YFW U1B |
| DHE1D | YFW U1D |
| DHE1G | YFW U1G |
| DHE1J | YFW U1J |
| DHE1K | YFW U1K |
| DHE1M | YFW U1M |

## Maximum Ratings and characteristics

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

| Parameter | Symbols | DHE1A | DHE1B | DHE1D | DHE1G | DHE1J | DHE1K | DHE1M | Units |
|---|---|---|---|---|---|---|---|---|---|
| Maximum Repetitive Peak Reverse Voltage | $V_{RRM}$ | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum RMS voltage | $V_{RMS}$ | 35 | 70 | 140 | 280 | 420 | 560 | 700 | V |
| Maximum DC Blocking Voltage | $V_{DC}$ | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum Average Forward Rectified Current at $T_c$ = 125 °C | $I_{F(AV)}$ | 1 | | | | | | | A |
| Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load | $I_{FSM}$ | 30 | | | | | | | A |
| Maximum Instantaneous Forward Voltage at 1 A | $V_F$ | 0.95 | | | 1.25 | 1.65 | | | V |
| Maximum DC Reverse Current $T_a$ = 25 °C<br>at Rated DC Blocking Voltage $T_a$=125 °C | $I_R$ | 5<br>100 | | | | | | | μA |
| Maximum Reverse Recovery Time (1) | Trr | 50 | | | | 75 | | | nS |
| Typical Thermal Resistance (2) | $R_{\theta JA}$ | 85 | | | | | | | °C/W |
| Operating and Storage Temperature Range | $T_j$, $T_{stg}$ | -55 ~ +150 | | | | | | | °C |

(1) Measured with $I_F$=0.5A,$I_R$=1A,$I_n$=0.25A

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

Fig.1 Forward Current Derating Curve

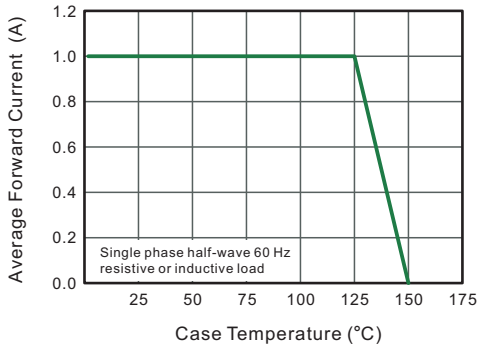



Fig.2 Typical Reverse Characteristics

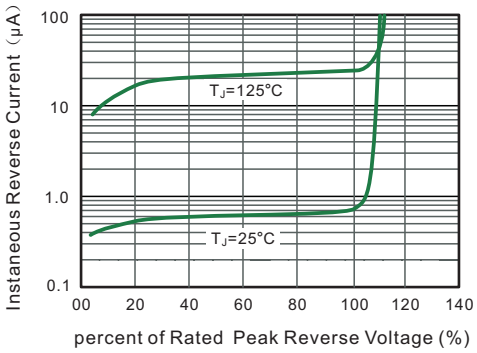



Fig.3 Typical Forward Characteristics

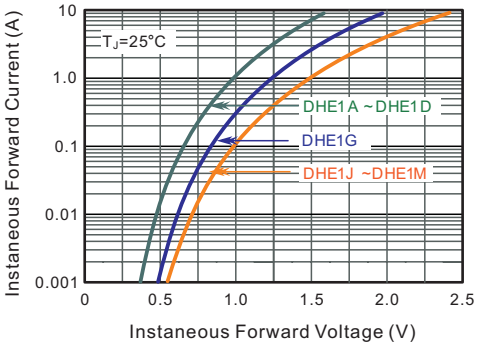



Fig.4 Maximum Non-Repetitive Peak Forward Surage Current

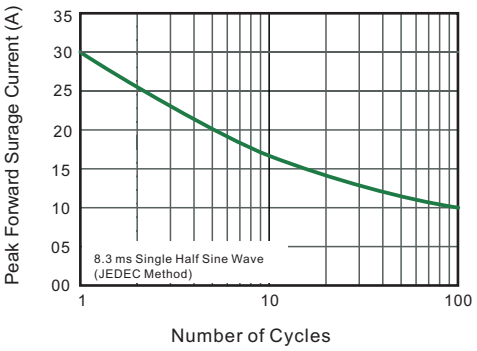



Fig.5- Typical Transient Thermal Impedance

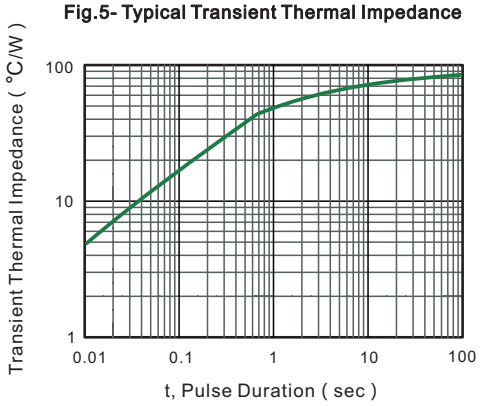
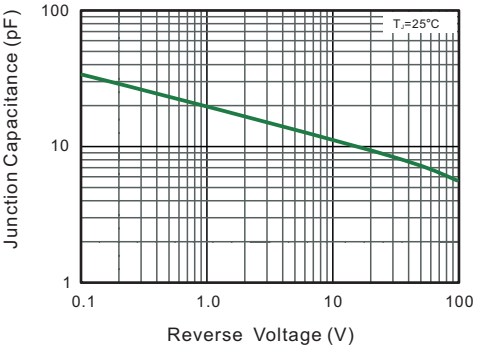
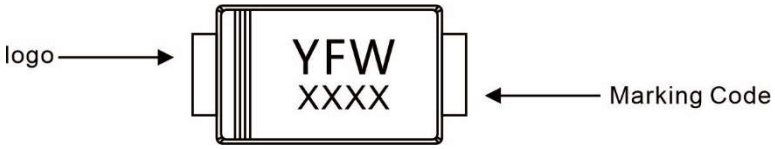



Fig.6 Typical Junction Capacitance



## Marking Diagram

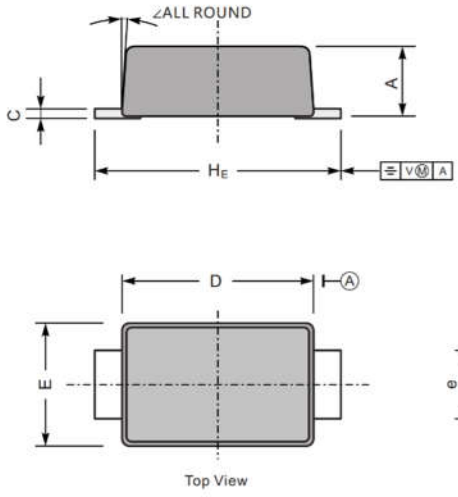



## Ordering information

| Package | Packing Description | Packing Quantity |
|---|---|---|
| SOD-123FL | Tape/Reel,7"reel | 3000PCS/Reel 120000PCS/Carton |

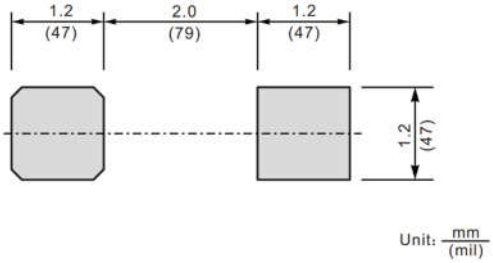
## Package Dimensions

**SOD-123FL**




| Dim. | Millimeter(mm) | | mil | |
|---|---|---|---|---|
| | Min. | Max. | Min. | Max. |
| A | 0.9 | 1.3 | 35 | 43 |
| C | 0.12 | 0.20 | 4.7 | 7.9 |
| D | 2.6 | 2.9 | 102 | 114 |
| E | 1.7 | 1.9 | 67 | 75 |
| e | 0.8 | 1.1 | 31 | 43 |
| g | 0.7 | 0.9 | 28 | 35 |
| HE | 3.5 | 3.8 | 138 | 150 |
| ∠ | 7° | | | |

## The recommended mounting pad size



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