

## SOD-123FL Plastic-Encapsulate Diodes

### DSK22 THRU DSK220 Schottky Rectifier Diodes



#### • Features

- $I_{F(AV)}$  2A
- $V_{RRM}$  20V-200V
- High surge current capability
- Polarity: Color band denotes cathode



SOD-123FL

#### • MAXIMUM RATINGS (T<sub>C</sub>=25°C)

| Item                                 | Symbol           | Unit | Test Conditions                                    | DSK2       |    |    |    |          |    |     |     |     |
|--------------------------------------|------------------|------|--|------------|----|----|----|----------|----|-----|-----|-----|
|                                      |                  |      |  | 2          | 3  | 4  | 5  | 6        | 8  | 10  | 15  | 20  |
| Repetitive Peak Reverse Voltage      | $V_{RRM}$        | V    |  | 20         | 30 | 40 | 50 | 60       | 80 | 100 | 150 | 200 |
| Maximum RMS Voltage                  | $V_{RMS}$        | V    |  | 14         | 21 | 28 | 35 | 42       | 56 | 70  | 105 | 140 |
| Average Forward Current              | $I_{F(AV)}$      | A    | 60Hz Half-sine wave, Resistance load               | 2.0        |    |    |    |          |    |     |     |     |
| Surge(Non-repetitive)Forward Current | $I_{FSM}$        | A    | 60Hz Half-sine wave, 1 cycle, T <sub>a</sub> =25°C | 50         |    |    |    |          |    |     |     |     |
| Junction Temperature                 | T <sub>J</sub>   | °C   |  | -55~+125   |    |    |    | -55~+150 |    |     |     |     |
| Storage Temperature                  | T <sub>STG</sub> | °C   |  | -55 ~ +150 |    |    |    |          |    |     |     |     |

#### • ELECTRICAL CHARACTERISTICS (T<sub>a</sub>=25°C)

| Item                          | Symbol            | Unit | Test Condition  | DSK2                  |   |      |   |      |   |      |    |    |
|-------------------------------|-------------------|------|---|-----------------------|---|------|---|------|---|------|----|----|
|                               |                   |      |   | 2                     | 3 | 4    | 5 | 6    | 8 | 10   | 15 | 20 |
| Peak Forward Voltage          | $V_F$             | V    | $I_F=2.0A$  | 0.55                  |   | 0.70 |   | 0.85 |   | 0.95 |    |    |
| Peak Reverse Current          | $I_{RRM1}$        | mA   | $V_{RM}=V_{RRM}$  | T <sub>a</sub> =25°C  |   |      |   | 0.5  |   | 0.1  |    |    |
|                               | $I_{RRM2}$        |      |   | T <sub>a</sub> =100°C |   |      |   | 10   |   | 5.0  |    |    |
| Thermal Resistance(Typical)   | R <sub>θJ-A</sub> | °C/W | Between junction and ambient                              | 54                    |   |      |   |      |   |      |    |    |
|                               | R <sub>θJ-L</sub> |      | Between junction and lead                                 | 10                    |   |      |   |      |   |      |    |    |
| Juction Capacitance (Typical) | C <sub>j</sub>    | pF   | Measured at 1MHZ and Applied Reverse Voltage of 4.0 V.D.C | 114                   |   | 92   |   | 53   |   | 40   |    |    |

#### Notes:

Thermal resistance from junction to ambient and from junction to lead mounted on FR4 PCB double sided copper mini pad

**Ordering Information:**

|                           |              |
|---------------------------|--------------|
| Part NO.                  | DSK22-DSK220 |
| Marking                   | K2***        |
| Packing Information       | REEL TAPE    |
| Basic ordering unit (pcs) | 3000         |

**Typical Characteristics**

FIG.1: FORWARD CURRENT DERATING CURVE

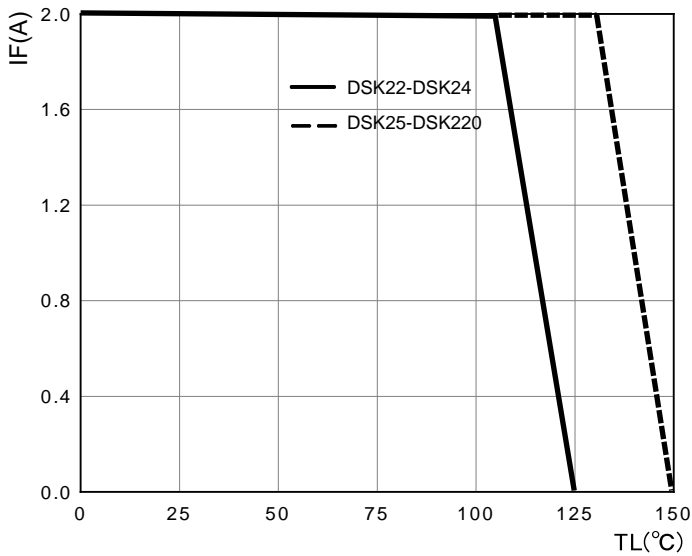
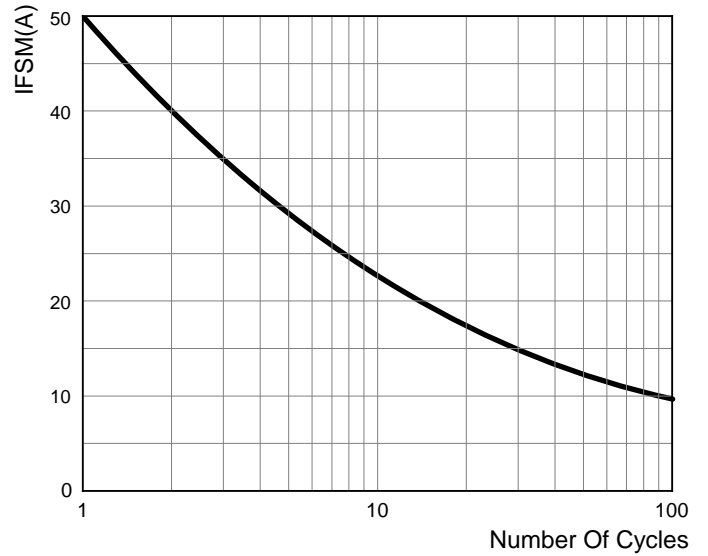
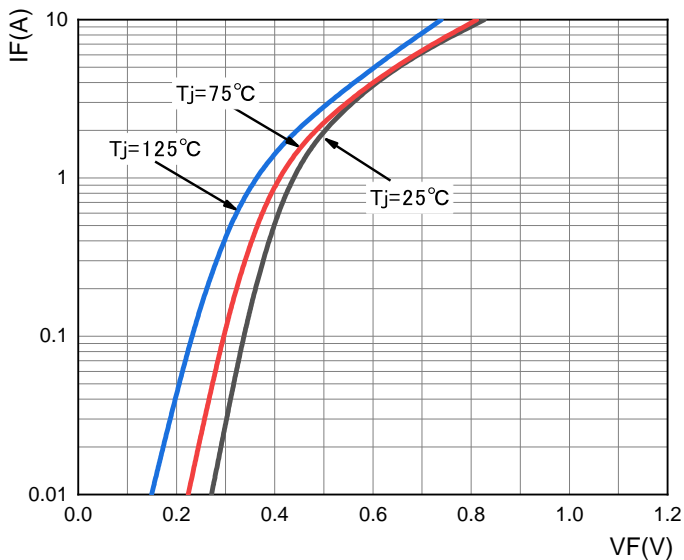


FIG 2: MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT



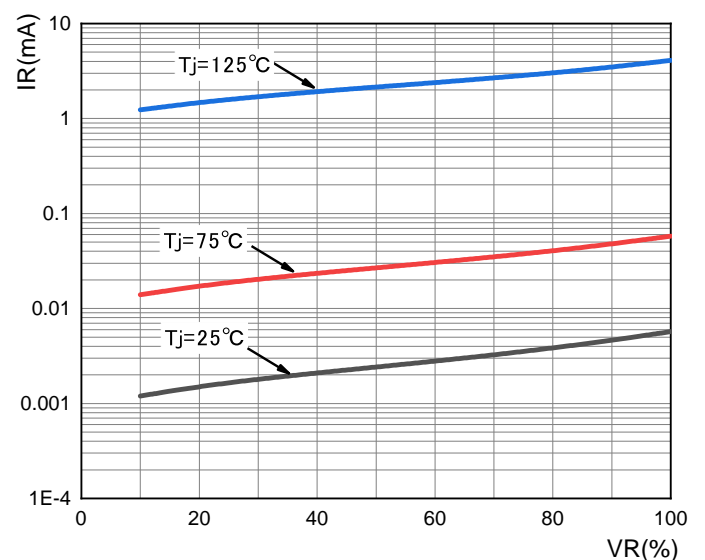
DSK22-DSK24

FIG.3: TYPICAL FORWARD CHARACTERISTICS



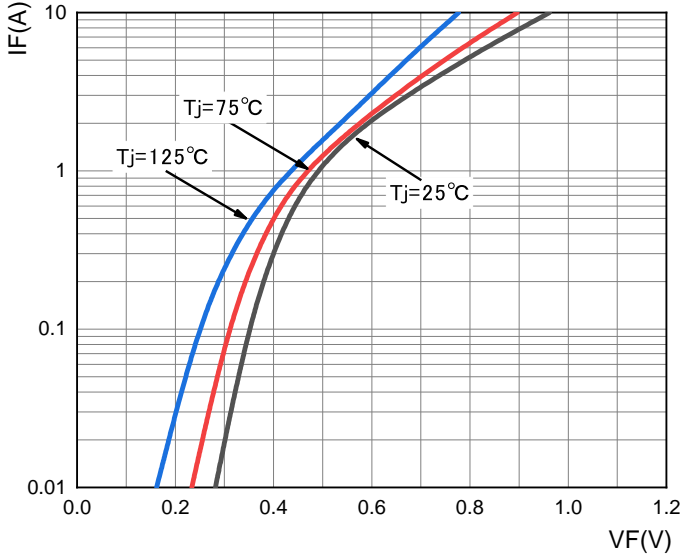
DSK22-DSK24

FIG.4: TYPICAL REVERSE CHARACTERISTICS



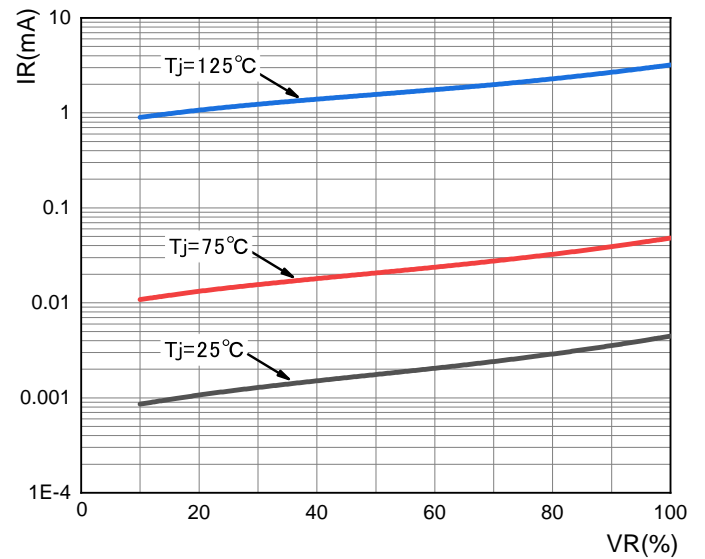
DSK25-DSK26

FIG.5: TYPICAL FORWARD CHARACTERISTICS



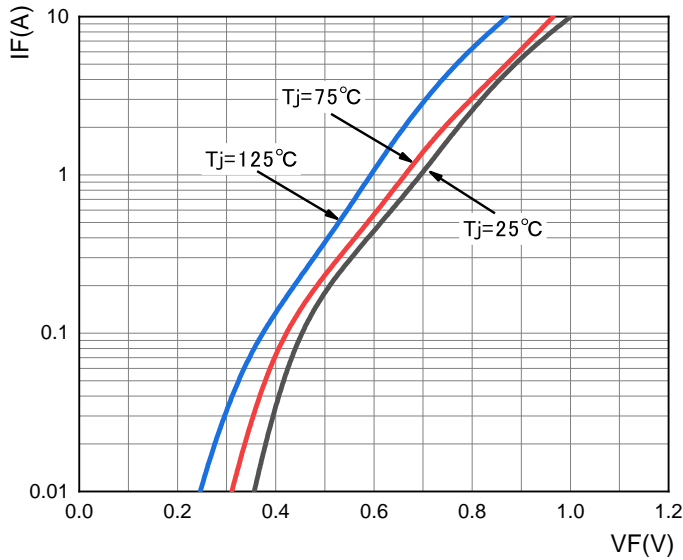
DSK25-DSK26

FIG.6: TYPICAL REVERSE CHARACTERISTICS



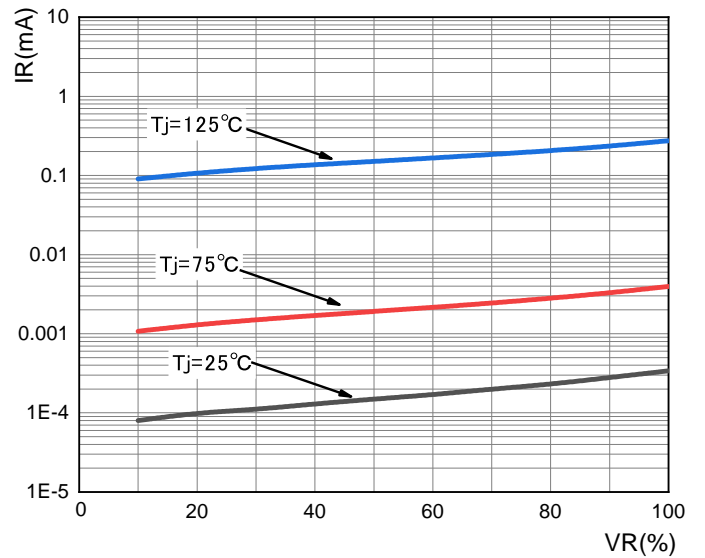
DSK28-DSK210

FIG.7: TYPICAL FORWARD CHARACTERISTICS



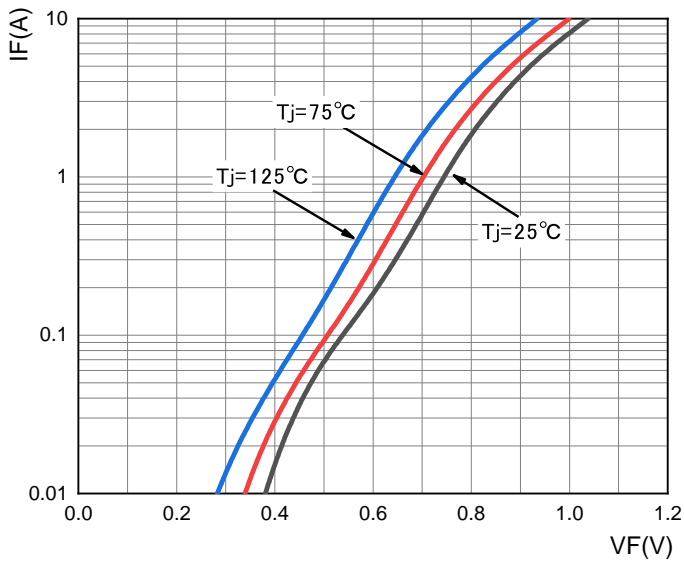
DSK28-DSK210

FIG.8: TYPICAL REVERSE CHARACTERISTICS



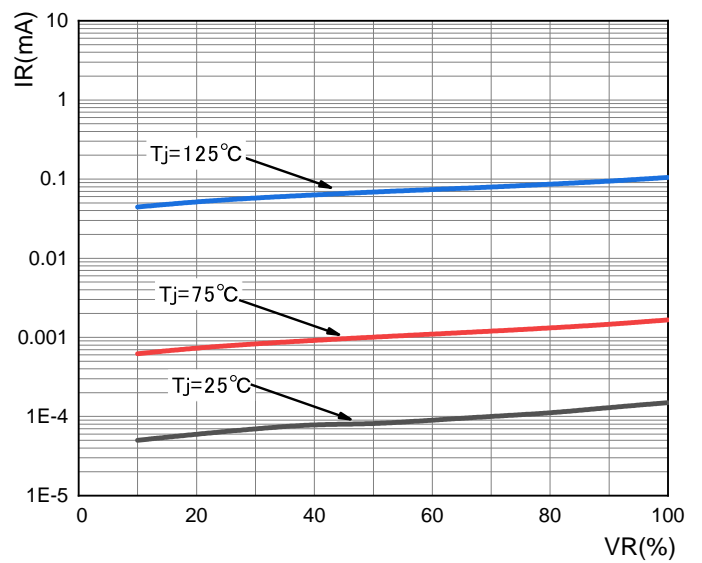
DSK215

FIG.9: TYPICAL FORWARD CHARACTERISTICS



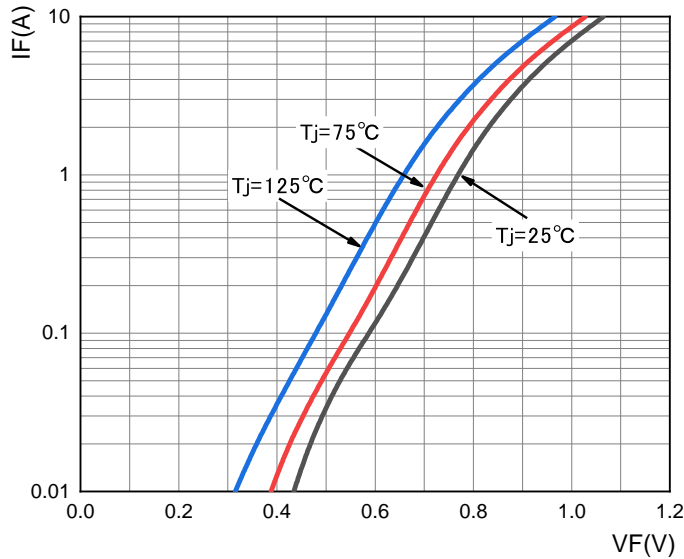
DSK215

FIG.10: TYPICAL REVERSE CHARACTERISTICS



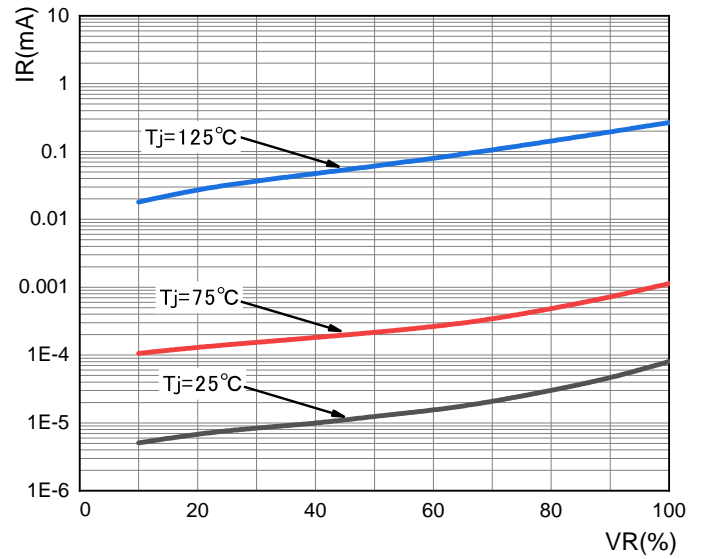
DSK220

FIG.11: TYPICAL FORWARD CHARACTERISTICS

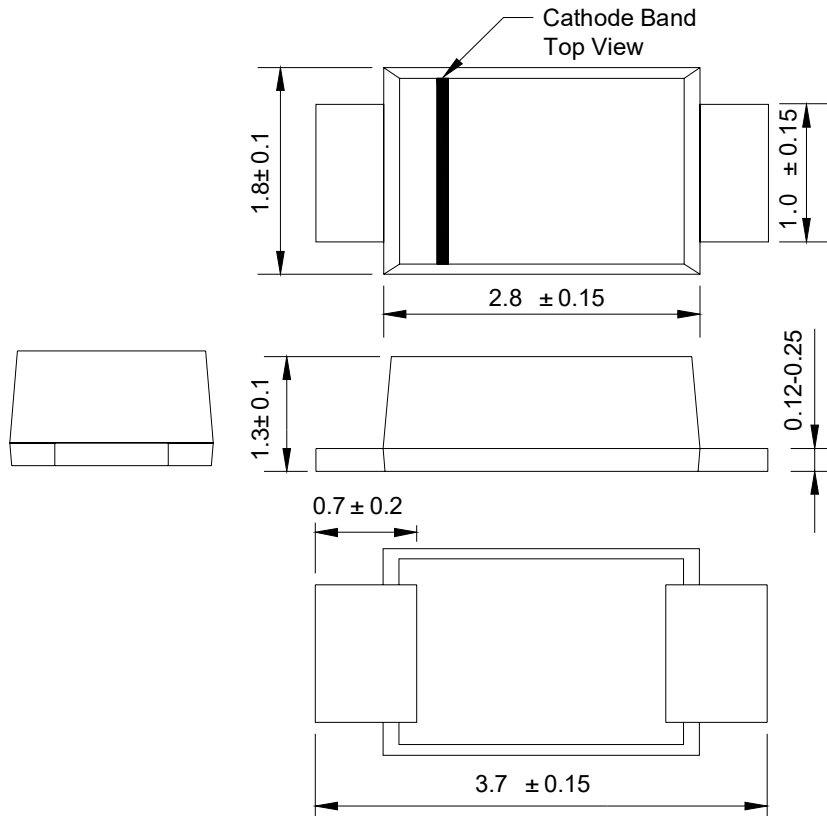


DSK220

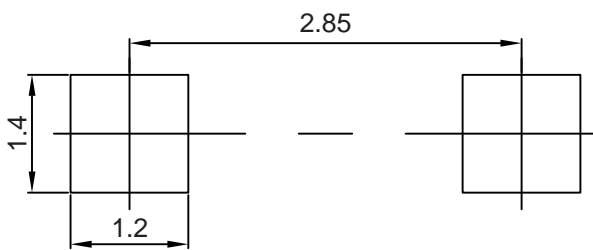
FIG.12: TYPICAL REVERSE CHARACTERISTICS



## SOD-123FL Package Outline Dimensions



Dimensions in millimeters



**Note:**

1. Controlling dimension: in millimeters.
2. General tolerance:  $\pm 0.05$  mm.
3. The pad layout is for reference purposes only.