

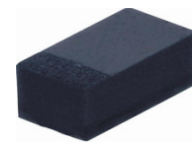
## CDSFR4448-HF

$I_o = 125 \text{ mA}$

$V_R = 80 \text{ Volts}$

RoHS Device

Halogen Free

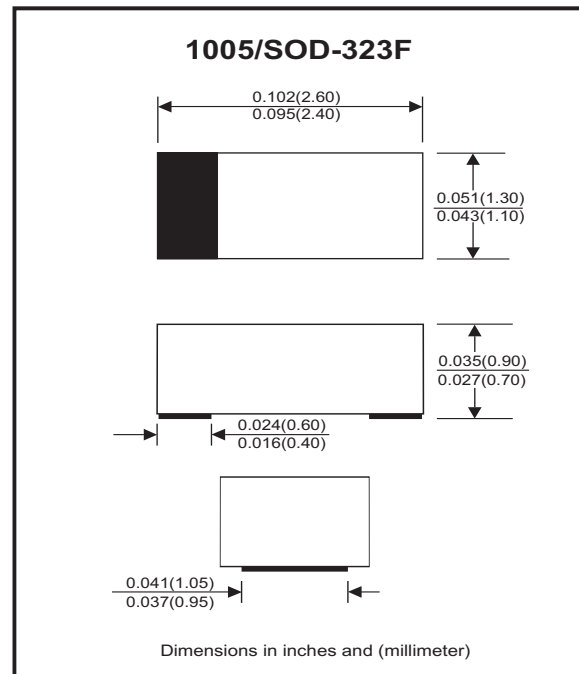


### Features

- Fast Switching Speed
- Designed for mounting on small surface.
- Extremely thin/leadless package.

### Mechanical data

- Case: 1005/SOD-323F standard package, molded plastic.
- Terminals: Gold plated, solderable per MIL-STD-750,method 2026.
- Polarity: Indicated by cathode band.
- Mounting position: Any.
- Weight: 0.006 grams(approx.).



### Circuit diagram



### Maximum Rating (at $T_A=25^\circ\text{C}$ unless otherwise noted)

| Parameter                         | Conditions                               | Symbol    | Min | Typ | Max    | Unit             |
|-----------------------------------|------------------------------------------|-----------|-----|-----|--------|------------------|
| Repetitive peak reverse voltage   |                                          | $V_{RRM}$ |     |     | 100    | V                |
| Reverse voltage                   |                                          | $V_R$     |     |     | 80     | V                |
| Average forward rectified current |                                          | $I_o$     |     |     | 125    | mA               |
| Forward current,surge peak        | $t = 1 \text{ us}$<br>$t = 8.3\text{ms}$ | $I_{FSM}$ |     |     | 2<br>1 | A                |
| Power dissipation                 |                                          | $P_d$     |     |     | 350    | mW               |
| Junction temperature range        |                                          | $T_j$     | -40 |     | +125   | $^\circ\text{C}$ |
| Storage temperature range         |                                          | $T_{STG}$ | -40 |     | +125   | $^\circ\text{C}$ |

### Electrical Characteristics (at $T_A=25^\circ\text{C}$ unless otherwise noted)

| Parameter                     | Conditions                                                                | Symbol   | Min | Typ | Max       | Unit |
|-------------------------------|---------------------------------------------------------------------------|----------|-----|-----|-----------|------|
| Forward voltage               | $I_F = 5 \text{ mA}$<br>$I_F = 100 \text{ mA}$                            | $V_F$    |     |     | 0.72<br>1 | V    |
| Reverse current               | $V_R = 20 \text{ V}$<br>$V_R = 80 \text{ V}$                              | $I_R$    |     |     | 25<br>100 | nA   |
| Capacitance between terminals | $f = 1 \text{ MHz}$ , and 0.5 VDC reverse voltage                         | $C_T$    |     |     | 9         | pF   |
| Reverse recovery time         | $I_F = I_R = 10\text{mA}$ , $I_{rr}=0.1 \times I_R$ , $R_L=100\text{ohm}$ | $T_{rr}$ |     |     | 9         | nS   |

Company reserves the right to improve product design , functions and reliability without notice.

REV:A

RATING AND CHARACTERISTIC CURVES (CDSFR4448-HF)

Fig.1 - Forward Characteristics

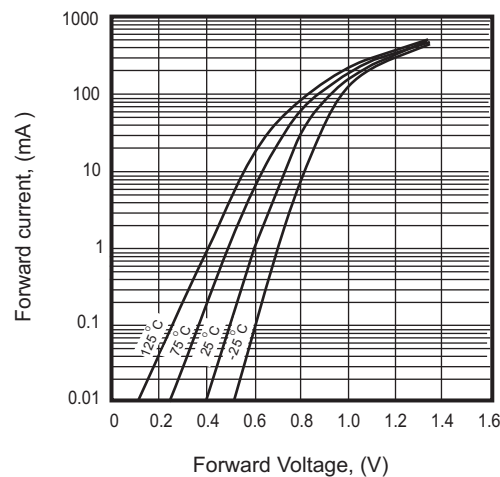


Fig.2 - Reverse characteristics

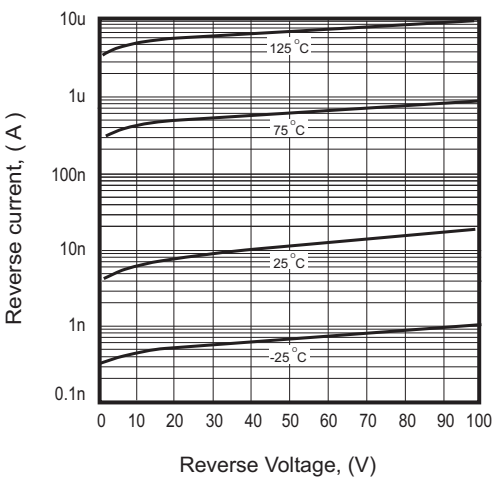


Fig.3 - Capacitance Between Terminals Characteristics

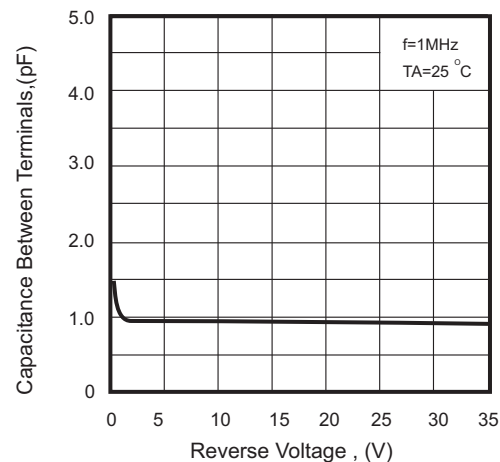
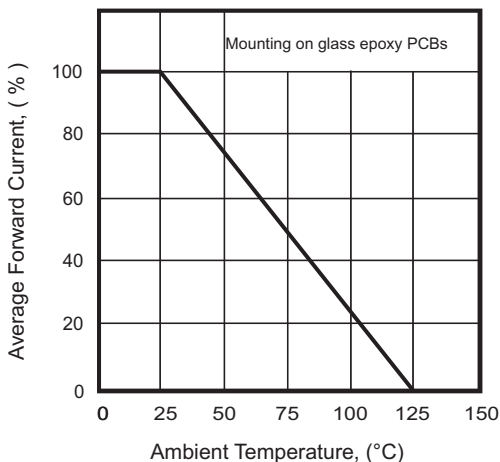
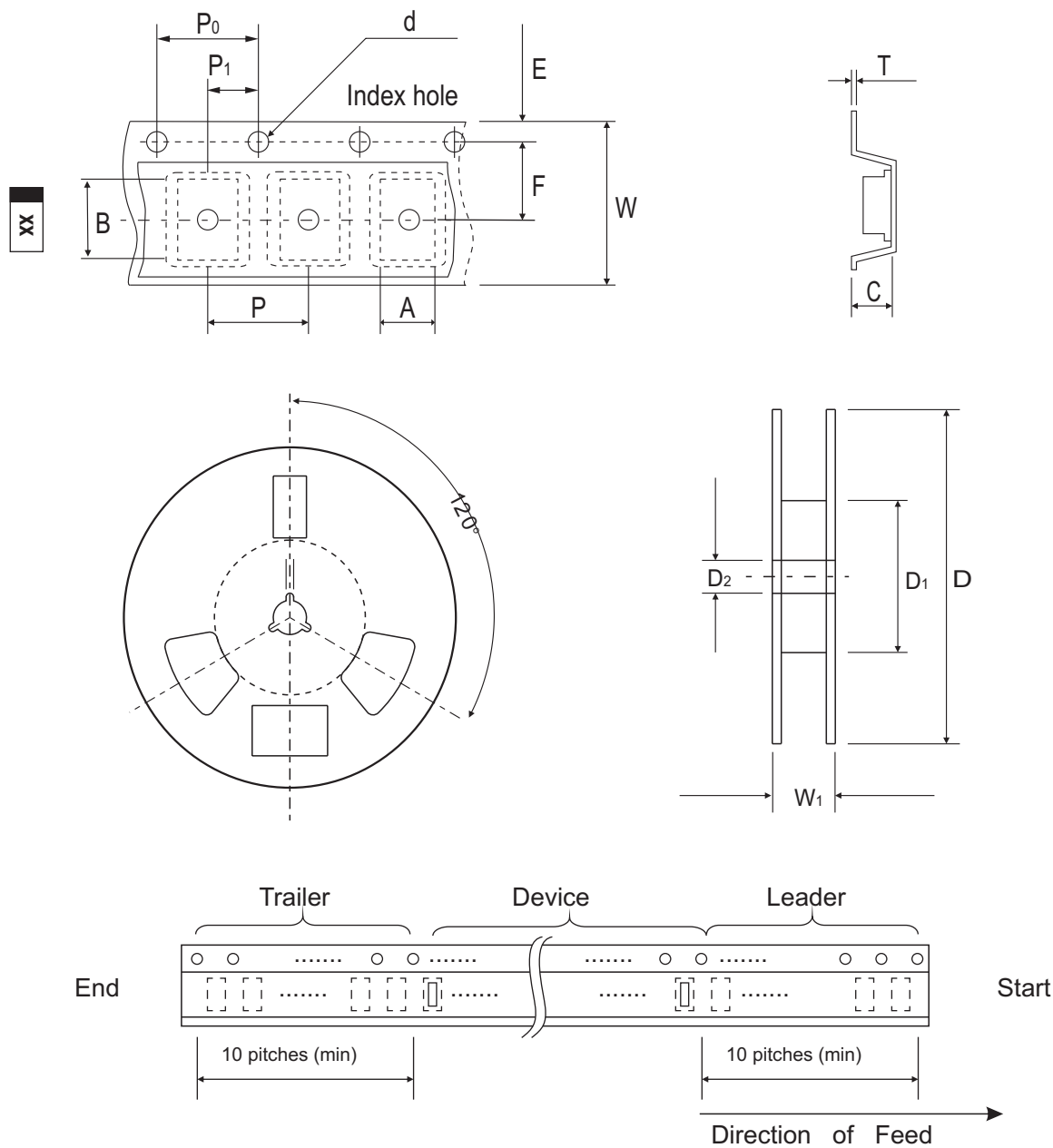


Fig.4 - Current Derating Curve



Reel Taping Specification



|                    |        |               |               |               |               |              |                |                |
|--------------------|--------|---------------|---------------|---------------|---------------|--------------|----------------|----------------|
| 1005<br>(SOD-323F) | SYMBOL | A             | B             | C             | d             | D            | D <sub>1</sub> | D <sub>2</sub> |
|                    | (mm)   | 1.55 ± 0.10   | 2.65 ± 0.10   | 1.05 ± 0.10   | 1.55 ± 0.05   | 178 ± 1      | 60.0 MIN.      | 13.0 ± 0.20    |
|                    | (inch) | 0.061 ± 0.004 | 0.104 ± 0.004 | 0.041 ± 0.004 | 0.061 ± 0.002 | 7.008 ± 0.04 | 2.362 MIN.     | 0.512 ± 0.008  |

|                    |        |               |               |               |                |                |               |               |                |
|--------------------|--------|---------------|---------------|---------------|----------------|----------------|---------------|---------------|----------------|
| 1005<br>(SOD-323F) | SYMBOL | E             | F             | P             | P <sub>0</sub> | P <sub>1</sub> | T             | W             | W <sub>1</sub> |
|                    | (mm)   | 1.75 ± 0.10   | 3.50 ± 0.05   | 4.00 ± 0.10   | 4.00 ± 0.10    | 2.00 ± 0.05    | 0.23 ± 0.05   | 8.00 ± 0.20   | 13.5 MAX.      |
|                    | (inch) | 0.069 ± 0.004 | 0.138 ± 0.002 | 0.157 ± 0.004 | 0.157 ± 0.004  | 0.079 ± 0.004  | 0.009 ± 0.002 | 0.315 ± 0.008 | 0.531 MAX.     |

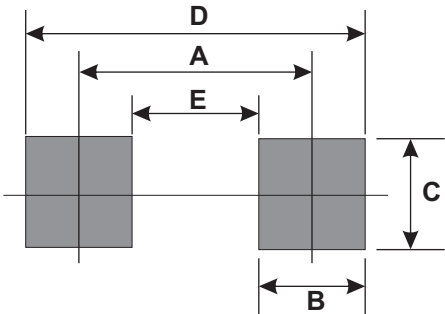
Marking Code

| Part Number  | Marking Code |
|--------------|--------------|
| CDSFR4448-HF | S5           |



Suggested PAD Layout

| SIZE | 1005/SOD-323F |        |
|------|---------------|--------|
|      | (mm)          | (inch) |
| A    | 2.00          | 0.079  |
| B    | 0.70          | 0.028  |
| C    | 1.30          | 0.051  |
| D    | 2.70          | 0.106  |
| E    | 1.30          | 0.051  |



Standard Packaging

| Case Type         | REEL PACK       |                     |
|-------------------|-----------------|---------------------|
|                   | REEL<br>( pcs ) | Reel Size<br>(inch) |
| 1005/<br>SOD-323F | 4,000           | 7                   |