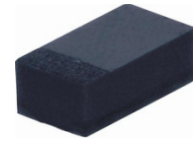


CDSER4148-HF

RoHS Device

Halogen Free

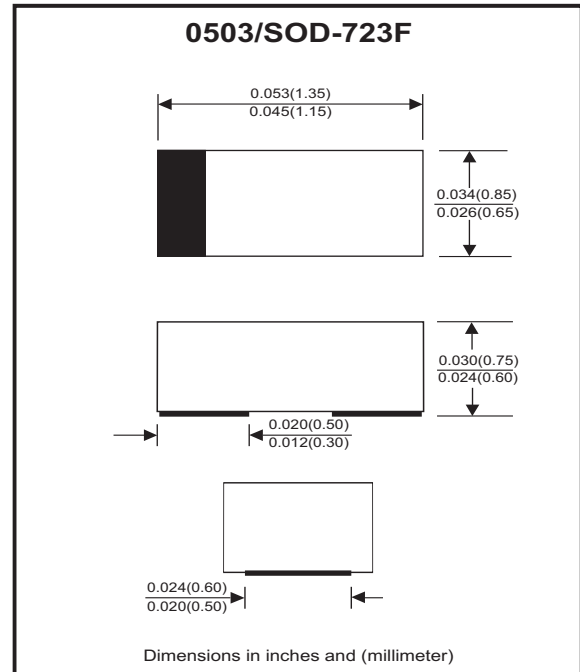


Features

- High Speed.
- Designed for mounting on small surface.
- Extremely thin/leadless package.
- High mounting capability, strong surge withstand, high reliability.
- Use in sensitive electronics protection against voltage transients induced by inductive load switching and lighting on ICs, MOSFET, signal lines of sensor units for consumer, computer, industrial, automotive and telecommunication.

Mechanical data

- Case: 0503/SOD-723F standard package, molded plastic.
- Terminals: Gold plated, solderable per MIL-STD-750, method 2026.
- Polarity: Indicated by cathode band.
- Mounting position: Any.
- Weight: 0.002 grams(approx.).



Circuit diagram



Maximum Rating (at TA=25 °C unless otherwise noted)

| Parameter | Conditions | Symbol | Min | Typ | Max | Unit |
|---------------------------------|---------------------------|-----------|-----|--------|------|------|
| Repetitive peak reverse voltage | | V_{RRM} | | | 100 | V |
| Reverse voltage | | V_R | | | 75 | V |
| Average forward current | | I_O | | | 150 | mA |
| Forward current, surge peak | $T_p=1\mu S$ $T_p=1mS$ | I_{FSM} | | 4 1 | | A |
| Power dissipation | | P_D | | | 150 | mW |
| Operating temperature range | | T_j | -40 | | +125 | °C |
| Storage temperature range | | T_{STG} | -40 | | +125 | °C |

Electrical Characteristics (at TA=25 °C unless otherwise noted)

| Parameter | Conditions | Symbol | Min | Typ | Max | Unit |
|-------------------------------|--|----------|-----|-----|-----------|----------|
| Forward voltage | $I_F = 50 \text{ mA DC}$ | V_F | | | 1.0 | V |
| Reverse current | $V_R = 20V$ $V_R = 75V$ | I_R | | | 25 2.5 | nA uA |
| Capacitance between terminals | $f = 1\text{MHz}$, and 0 VDC reverse voltage | C_T | | | 4 | pF |
| Reverse recovery time | $I_F = I_R = 10 \text{ mA}$, $R_L = 100 \text{ ohms}$, $I_{rr} = 1\text{mA}$ | T_{rr} | | | 4 | nS |

RATING AND CHARACTERISTIC CURVES (CDSER4148-HF)

Fig.1 - Forward Characteristics

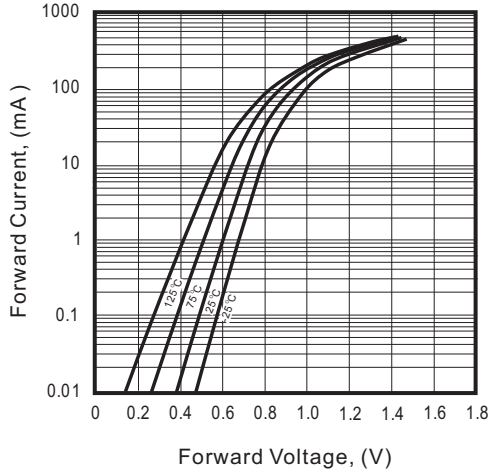


Fig.2 - Reverse Characteristics

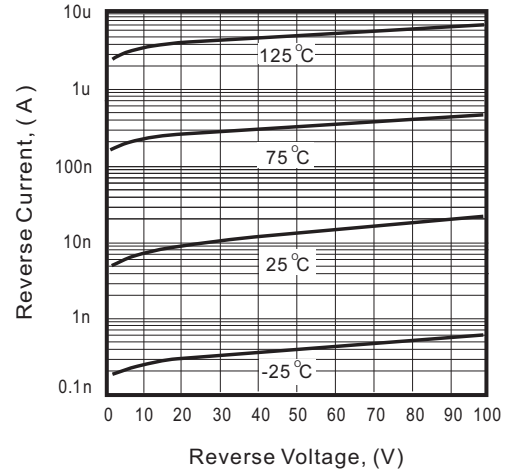


Fig.3 - Capacitance Between Terminals Characteristics

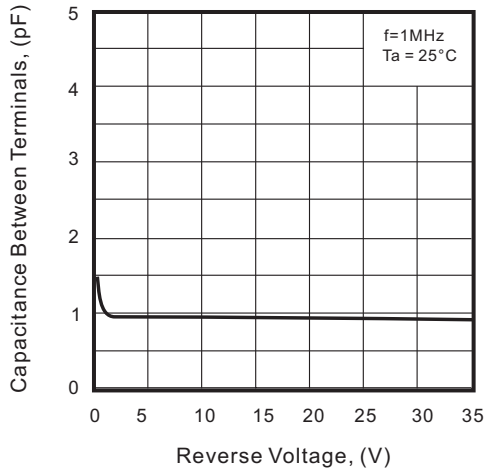
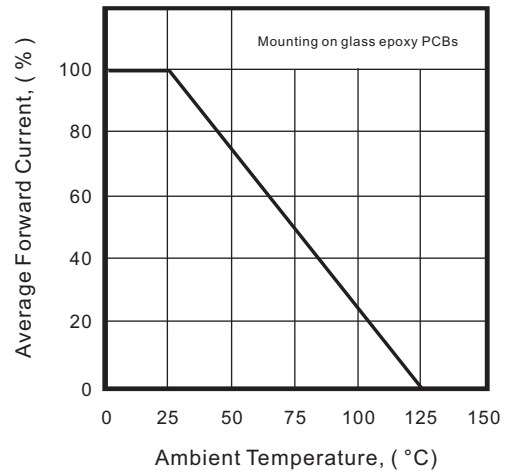
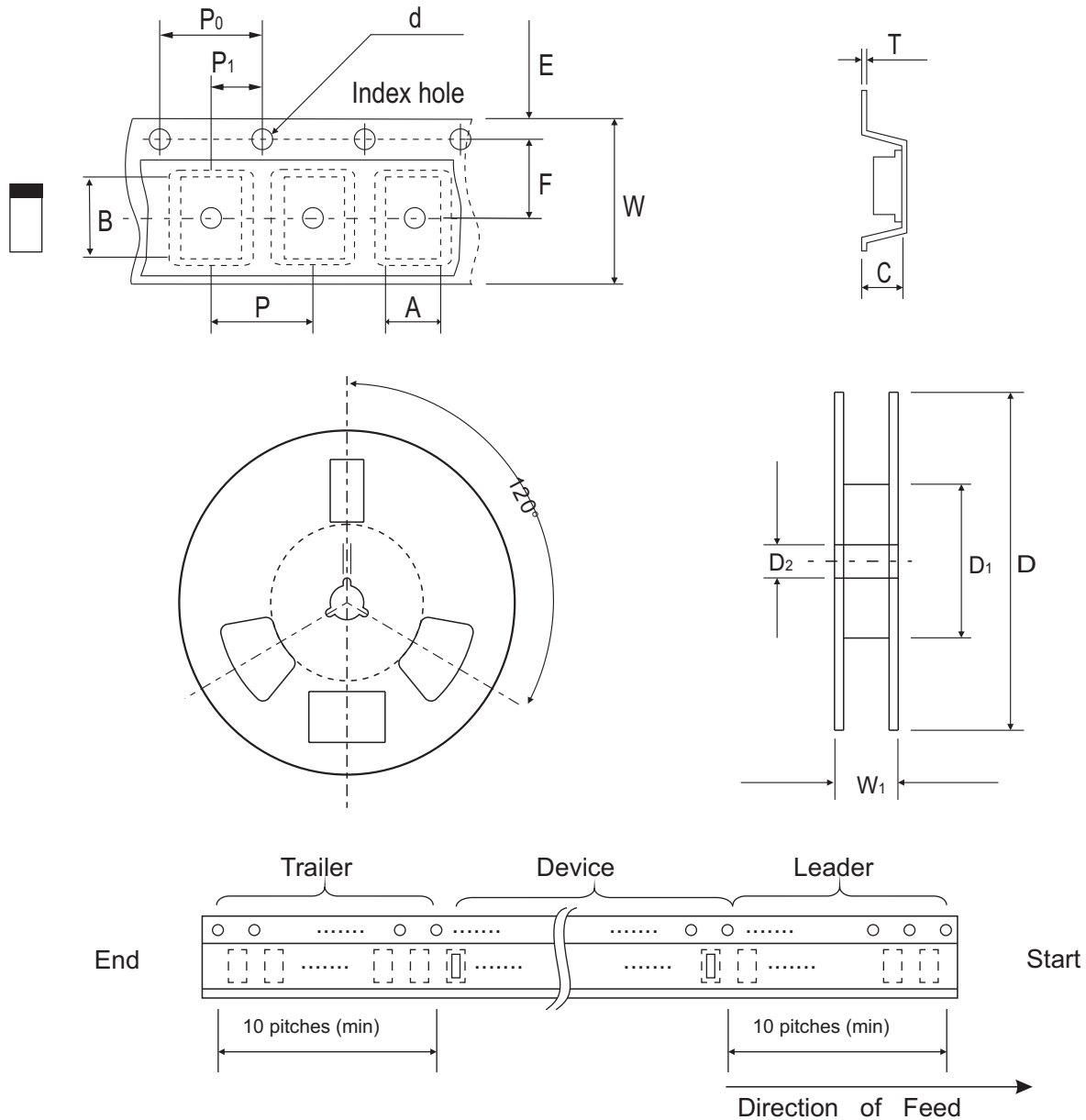


Fig.4 - Current Derating Curve



Reel Taping Specification



| 0503 (SOD-723F) | SYMBOL | A | B | C | d | D | D ₁ | D ₂ |
|--------------------|--------|---------------|---------------|---------------|---------------|--------------|----------------|----------------|
| | (mm) | 0.90 ± 0.10 | 1.46 ± 0.10 | 0.80 ± 0.10 | 1.55 ± 0.05 | 178 ± 1 | 60.0 MIN. | 13.0 ± 0.20 |
| | (inch) | 0.035 ± 0.004 | 0.057 ± 0.004 | 0.031 ± 0.004 | 0.061 ± 0.002 | 7.008 ± 0.04 | 2.362 MIN. | 0.512 ± 0.008 |

| 0503 (SOD-723F) | SYMBOL | E | F | P | P ₀ | P ₁ | T | W | W ₁ |
|--------------------|--------|---------------|---------------|---------------|----------------|----------------|---------------|---------------|----------------|
| | (mm) | 1.75 ± 0.10 | 3.50 ± 0.05 | 4.00 ± 0.10 | 4.00 ± 0.10 | 2.00 ± 0.05 | 0.22 ± 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 ± 0.002 | 0.009 ± 0.002 | 0.315 ± 0.008 | 0.531 MAX. |

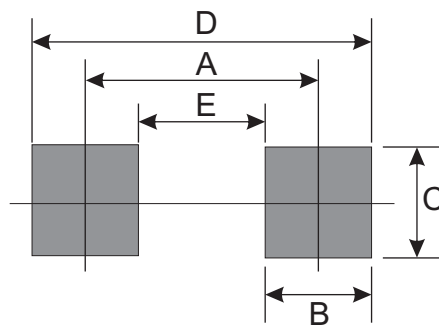
Marking Code

| Part Number | Marking Code |
|--------------|--------------|
| CDSER4148-HF | S3 |



Suggested PAD Layout

| SIZE | 0503/SOD-723F | |
|------|---------------|--------|
| | (mm) | (inch) |
| A | 0.85 | 0.033 |
| B | 0.55 | 0.022 |
| C | 0.85 | 0.033 |
| D | 1.40 | 0.055 |
| E | 0.30 | 0.012 |



Standard Packaging

| Case Type | Qty Per Reel | Reel Size |
|---------------|--------------|-----------|
| | (Pcs) | (inch) |
| 0503/SOD-723F | 4,000 | 7 |

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