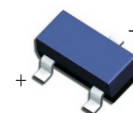


## CDST-4448-G

High Speed  
RoHS Device

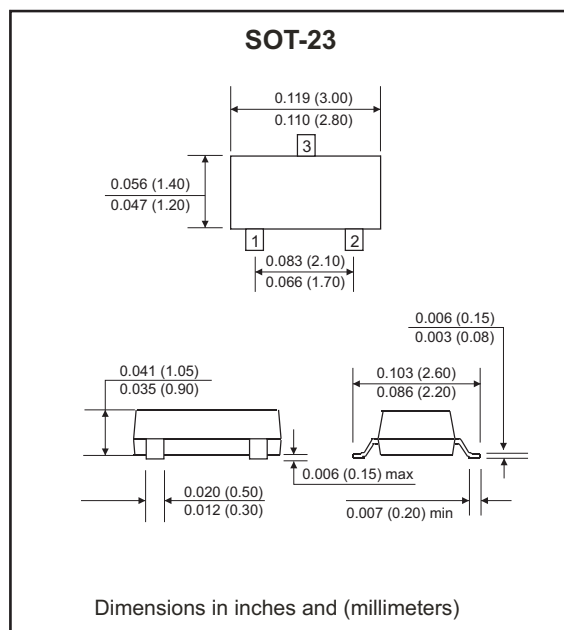
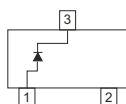


### Features

- Fast switching diode.
- Surface mount package ideally suited for automatic insertion.
- For general purpose switching applications.
- High conductance.

### Mechanical data

- Case: SOT-23
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026.
- Weight: 0.008 grams(approx.).



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

| Parameter                                  | Symbol          | Limits     | Unit |
|--------------------------------------------|-----------------|------------|------|
| Non-Repetitive peak reverse voltage        | $V_{RM}$        | 100        | V    |
| Peak repetitive peak reverse voltage       | $V_{RRM}$       | 75         | V    |
| Working peak reverse voltage               | $V_{RWM}$       |            |      |
| DC blocking voltage                        | $V_R$           |            |      |
| RMS reverse voltage                        | $V_{R(RMS)}$    | 53         | V    |
| Forward continuous current                 | $I_{FM}$        | 500        | mA   |
| Average rectified output current           | $I_o$           | 250        | mA   |
| Peak forward surge current                 | $I_{FSM}$       | 4.0        | A    |
|                                            |                 | 2.0        |      |
| Power dissipation                          | $P_D$           | 350        | mW   |
| Thermal resistance-Junction to ambient air | $R_{\theta JA}$ | 357        | °C/W |
| Storage temperature range                  | $T_{STG}$       | -65 ~ +150 | °C   |

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

| Parameter                     | Symbol                                       | Test Conditions                                                   | Min  | Max                          | Unit          |
|-------------------------------|----------------------------------------------|-------------------------------------------------------------------|------|------------------------------|---------------|
| Forward voltage               | $V_{F1}$<br>$V_{F2}$<br>$V_{F3}$<br>$V_{F4}$ | $I_{F1}=5mA$<br>$I_{F2}=10mA$<br>$I_{F3}=100mA$<br>$I_{F4}=150mA$ | 0.62 | 0.72<br>0.855<br>1.0<br>1.25 | V             |
| Reverse current               | $I_{R1}$<br>$I_{R2}$                         | $V_{R1}=75V$<br>$V_{R2}=20V$                                      |      | 2.5<br>25                    | $\mu A$<br>nA |
| Capacitance between terminals | $C_T$                                        | $V_R=0V$ , $f=1MHz$                                               |      | 4                            | pF            |
| Reverse recovery time         | $t_{rr}$                                     | $I_F=I_R=10mA$ , $I_{rr}=0.1 \times I_R$ ,<br>$R_L=100\Omega$     |      | 4                            | nS            |

Characteristic Curves (CDST-4448-G)

Fig.1 - Forward Characteristics

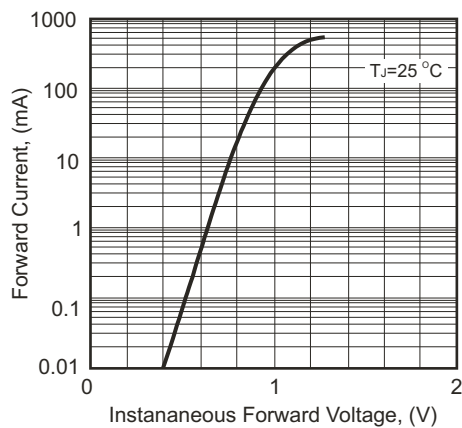
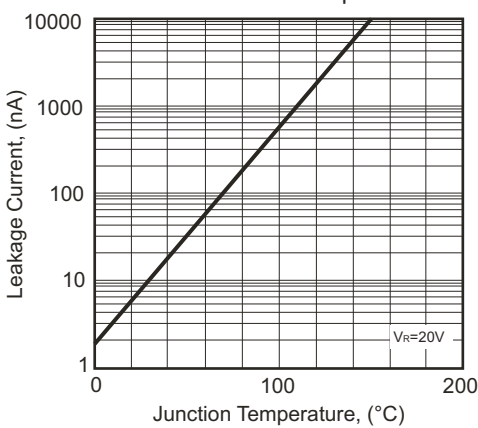
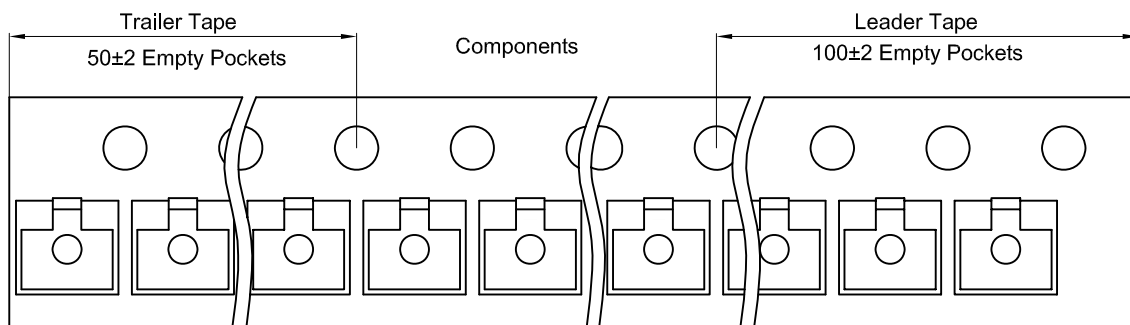
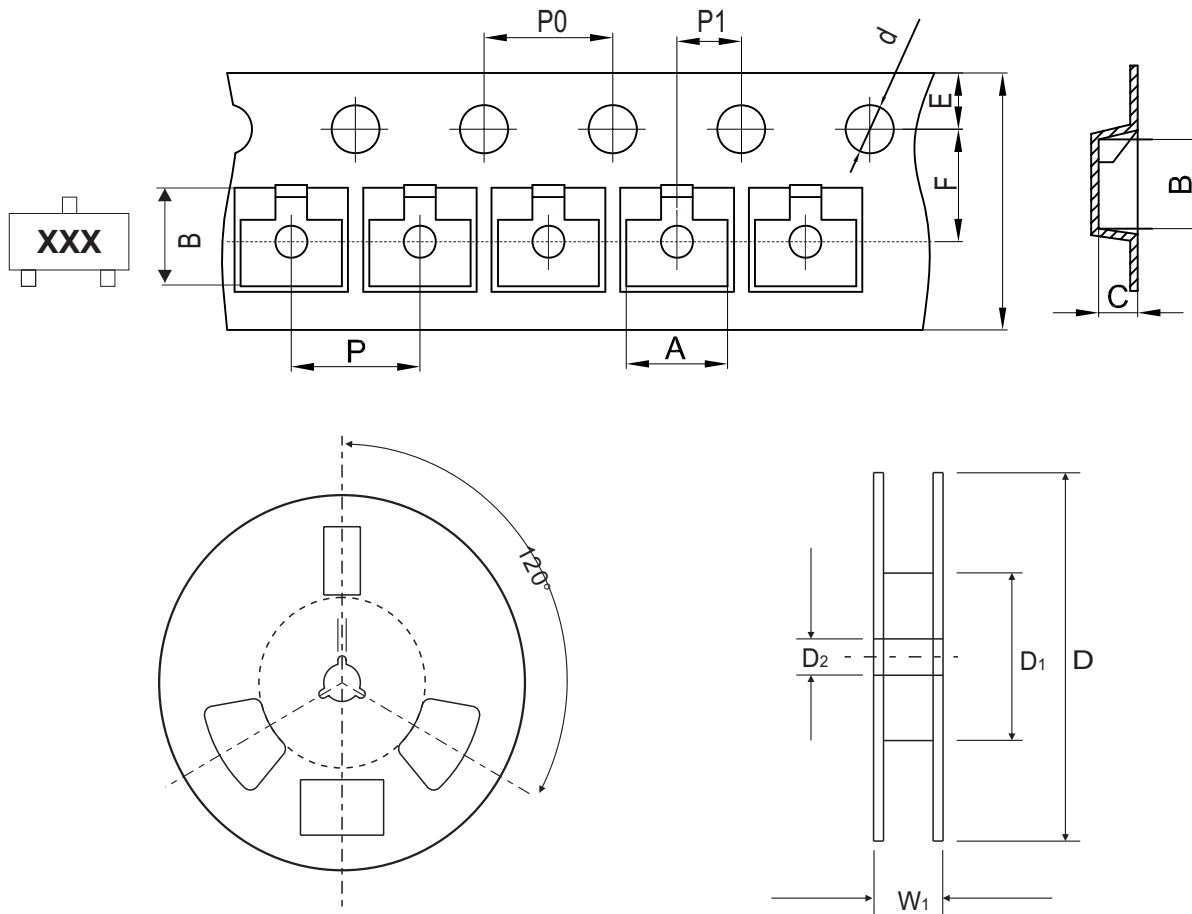


Fig.2 - Leakage Current vs Junction Temperature



## Reel Taping Specification

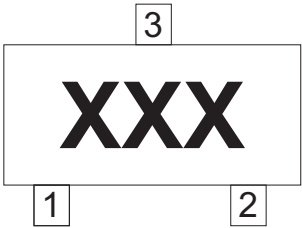


| SOT-23 | SYMBOL | A                 | B                 | C                 | d                 | D                 | D1                | D2                |
|--------|--------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
|        | (mm)   | $3.15 \pm 0.10$   | $2.77 \pm 0.10$   | $1.22 \pm 0.10$   | $1.50 \pm 0.10$   | $178 \pm 2.00$    | $54.40 \pm 1.00$  | $13.00 \pm 1.00$  |
|        | (inch) | $0.124 \pm 0.004$ | $0.109 \pm 0.004$ | $0.048 \pm 0.004$ | $0.059 \pm 0.004$ | $7.008 \pm 0.079$ | $2.142 \pm 0.039$ | $0.512 \pm 0.039$ |

| SOT-23 | SYMBOL | E                 | F                 | P                 | P0                | P1                | W                         | W1                |
|--------|--------|-------------------|-------------------|-------------------|-------------------|-------------------|---------------------------|-------------------|
|        | (mm)   | $1.75 \pm 0.10$   | $3.50 \pm 0.10$   | $4.00 \pm 0.10$   | $4.00 \pm 0.10$   | $2.00 \pm 0.10$   | $8.00 + 0.30 / - 0.10$    | $12.30 \pm 1.0$   |
|        | (inch) | $0.069 \pm 0.004$ | $0.138 \pm 0.004$ | $0.157 \pm 0.004$ | $0.157 \pm 0.004$ | $0.079 \pm 0.004$ | $0.315 + 0.012 / - 0.004$ | $0.484 \pm 0.039$ |

Marking Code

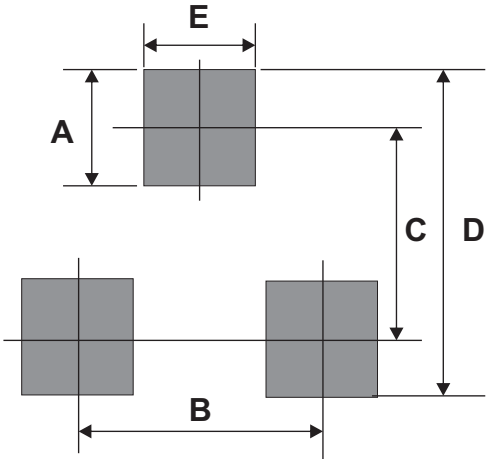
| Part Number | Marking Code |
|-------------|--------------|
| CDST-4448-G | KA3          |



xx = Product type marking code

Suggested PAD Layout

| SIZE | SOT-23 |        |
|------|--------|--------|
|      | (mm)   | (inch) |
| A    | 0.80   | 0.031  |
| B    | 1.90   | 0.075  |
| C    | 2.02   | 0.080  |
| D    | 2.82   | 0.111  |
| E    | 0.80   | 0.031  |



Standard Packaging

| Case Type | REEL PACK       |                     |
|-----------|-----------------|---------------------|
|           | REEL<br>( pcs ) | Reel Size<br>(inch) |
| SOT-23    | 3,000           | 7                   |

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