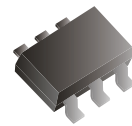


# CDSV6-4448TI/AQ/AD/CD/SD-G

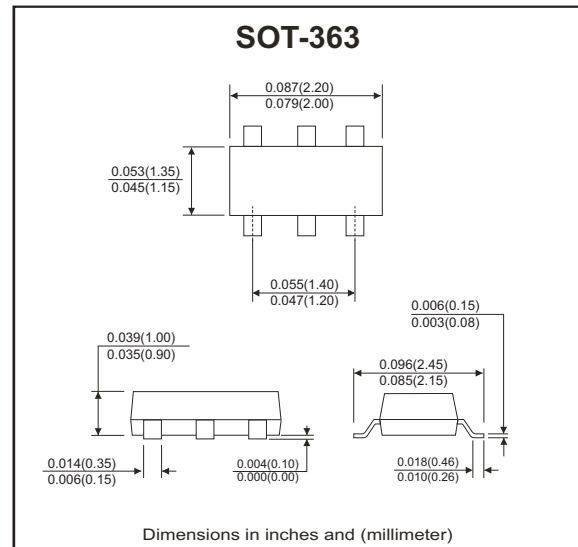
**Reverse Voltage: 80 Volts**
**Forward Current: 100 mA**
**RoHS Device**


## Features

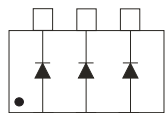
- Design for mounting on small surface.
- High speed switching.
- High mounting capability, strong surge withstand, high reliability.

## Mechanical data

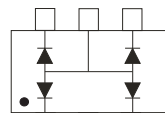
- Case: SOT-363, molded plastic.
- Terminals: solderable per MIL-STD-750, method 2026.
- Approx. weight: 0.006 grams



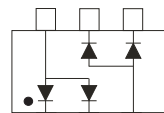
## Circuit diagram



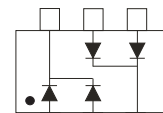
CDSV6-4448TI-G



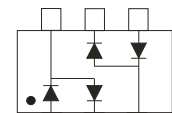
CDSV6-4448AQ-G



CDSV6-4448AD-G



CDSV6-4448CD-G



CDSV6-4448SD-G

## Maximum Ratings and Electrical Characteristics

(at Ta=25°C unless otherwise noted)

| Parameter                       | Symbol    | Conditions                                                                             | Value                    | Units   |
|---------------------------------|-----------|----------------------------------------------------------------------------------------|--------------------------|---------|
| Repetitive peak reverse voltage | $V_{RRM}$ |                                                                                        | 80                       | V       |
| DC blocking voltage             | $V_R$     |                                                                                        | 80                       | V       |
| Forward current                 | $I_F$     |                                                                                        | 100                      | mA      |
| Peak surge forward current      | $I_{FSM}$ | $T=1.0 \mu S$                                                                          | 2                        | A       |
| Power dissipation               | $P_D$     |                                                                                        | 200                      | mW      |
| Maximum forward voltage         | $V_F$     | $@I_F=1mA$<br>$@I_F=10mA$<br>$@I_F=100mA$                                              | 0.72<br>0.855<br>1.0     | V       |
| Maximum reverse current         | $I_R$     | $@V_R=20V$<br>$@V_R=75V$<br>$@V_R=25V, T_J=150^\circ C$<br>$@V_R=75V, T_J=150^\circ C$ | 0.025<br>0.1<br>30<br>50 | $\mu A$ |
| Maximum reverse recovery time   | $T_{rr}$  | $I_F = I_R = 10mA$<br>$I_{rr} = 0.1 \times I_R, R_L = 100\Omega$                       | 4                        | nS      |
| Typical diode capacitance       | $C_T$     | $V_R=6V, f=1.0MHz$                                                                     | 3.5                      | pF      |
| Maximum junction temperature    | $T_J$     |                                                                                        | 150                      | °C      |
| Storage temperature             | $T_{STG}$ |                                                                                        | -55 to +150              | °C      |

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

REV:C

## RATING AND CHARACTERISTIC CURVES (CDSV6-4448TI/AQ/AD/CD/SD-G)

Fig.1 - Forward Characteristics

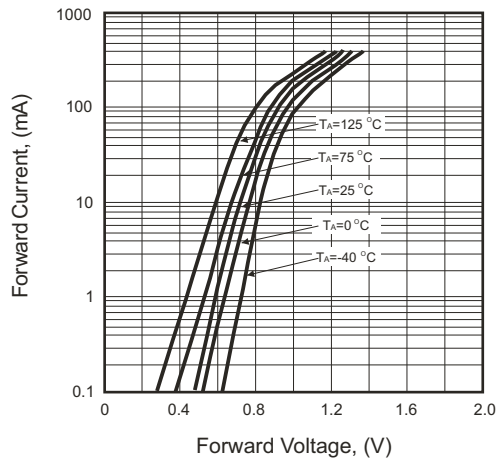


Fig.2 - Reverse Characteristics

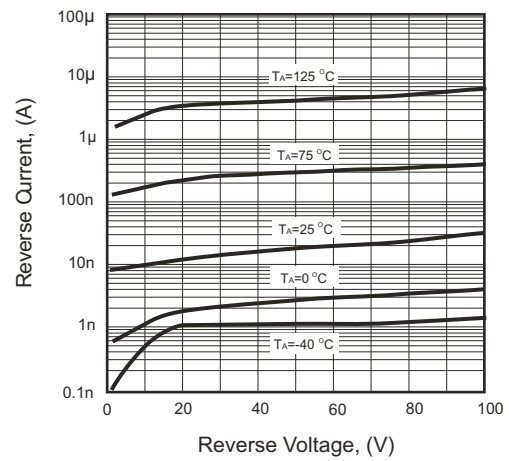


Fig.3 - Capacitance Between Terminals Characteristics

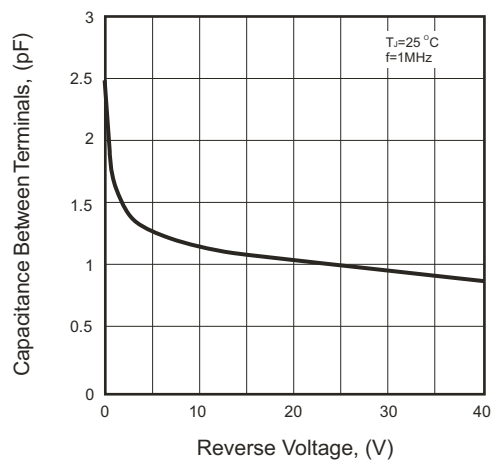
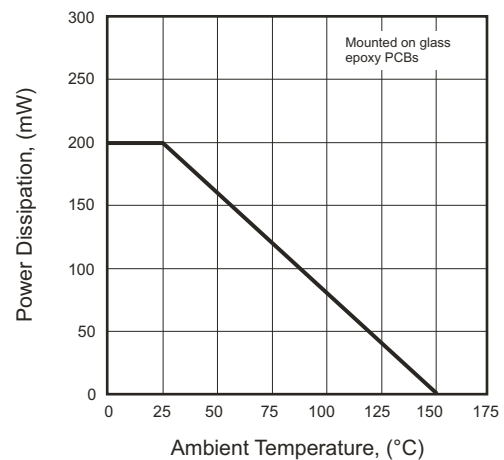
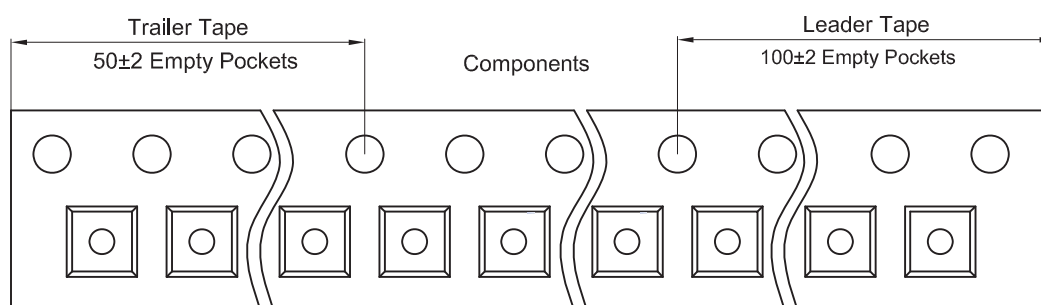
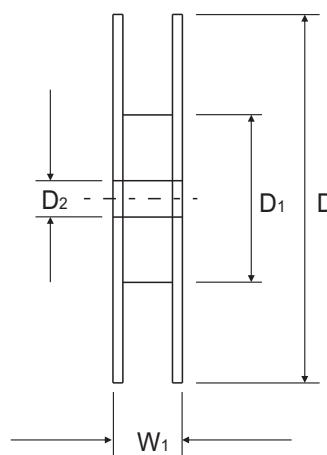
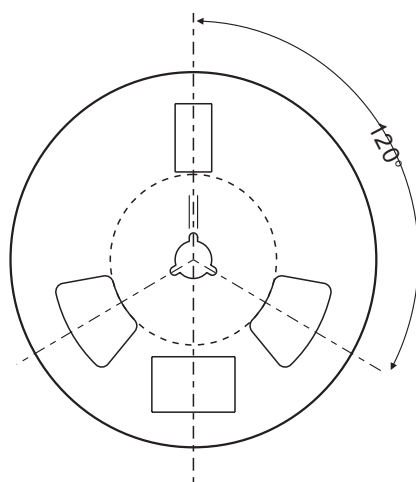
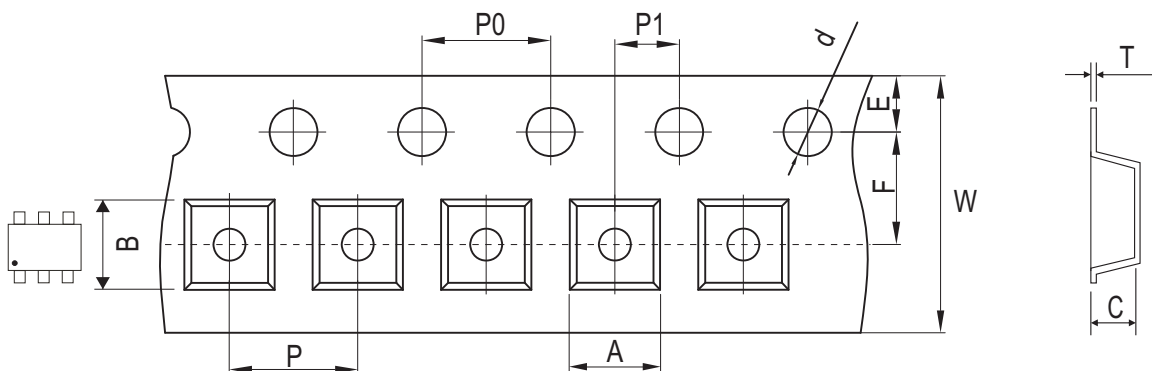


Fig.4 - Power Derating Curve



## Reel Taping Specification



| SOT-363 | SYMBOL | A                 | B                 | C                 | d                 | D                 | D1                | D2                |
|---------|--------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
|         | (mm)   | $2.25 \pm 0.05$   | $2.55 \pm 0.05$   | $1.20 \pm 0.05$   | $1.50 \pm 0.10$   | $178 \pm 2.00$    | $54.40 \pm 1.00$  | $13.00 \pm 1.00$  |
|         | (inch) | $0.089 \pm 0.002$ | $0.100 \pm 0.002$ | $0.047 \pm 0.002$ | $0.059 \pm 0.004$ | $7.008 \pm 0.079$ | $2.142 \pm 0.039$ | $0.512 \pm 0.039$ |

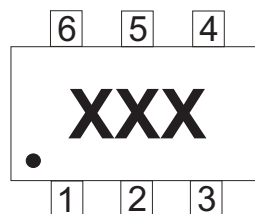
| SOT-363 | SYMBOL | E                 | F                 | P                 | P0                | P1                | W                         | W1                |
|---------|--------|-------------------|-------------------|-------------------|-------------------|-------------------|---------------------------|-------------------|
|         | (mm)   | $1.75 \pm 0.10$   | $3.50 \pm 0.10$   | $4.00 \pm 0.10$   | $4.00 \pm 0.10$   | $2.00 \pm 0.10$   | $8.00 + 0.30 / - 0.10$    | $12.30 \pm 1.00$  |
|         | (inch) | $0.069 \pm 0.004$ | $0.138 \pm 0.004$ | $0.157 \pm 0.004$ | $0.157 \pm 0.004$ | $0.079 \pm 0.004$ | $0.315 + 0.012 / - 0.004$ | $0.484 \pm 0.039$ |

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

REV:C

## Marking Code

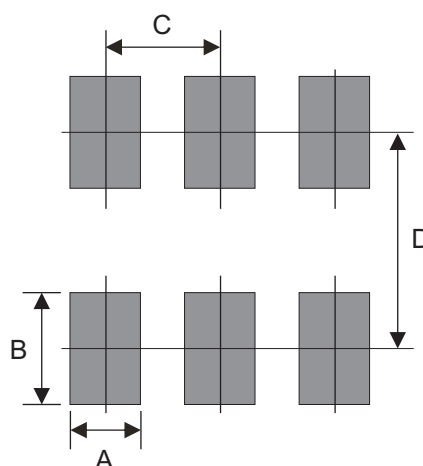
| Part Number    | Marking Code |
|----------------|--------------|
| CDSV6-4448TI-G | KAA          |
| CDSV6-4448AQ-G | KA5          |
| CDSV6-4448AD-G | KA6          |
| CDSV6-4448CD-G | KA7          |
| CDSV6-4448SD-G | KAB          |



**XXX = Product type marking code**

## Suggested PAD Layout

| SIZE | SOT-363 |        |
|------|---------|--------|
|      | (mm)    | (inch) |
| A    | 0.40    | 0.016  |
| B    | 0.80    | 0.031  |
| C    | 0.65    | 0.026  |
| D    | 1.94    | 0.076  |



## Standard Packaging

| Case Type | REEL PACK       |                     |
|-----------|-----------------|---------------------|
|           | REEL<br>( pcs ) | Reel Size<br>(inch) |
| SOT-363   | 3,000           | 7                   |