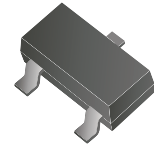


## CDSV3-16-G/56-G/70-G/99-G

**Reverse Voltage: 75 Volts**  
**Forward Current: 300 mA**  
**RoHS Device**



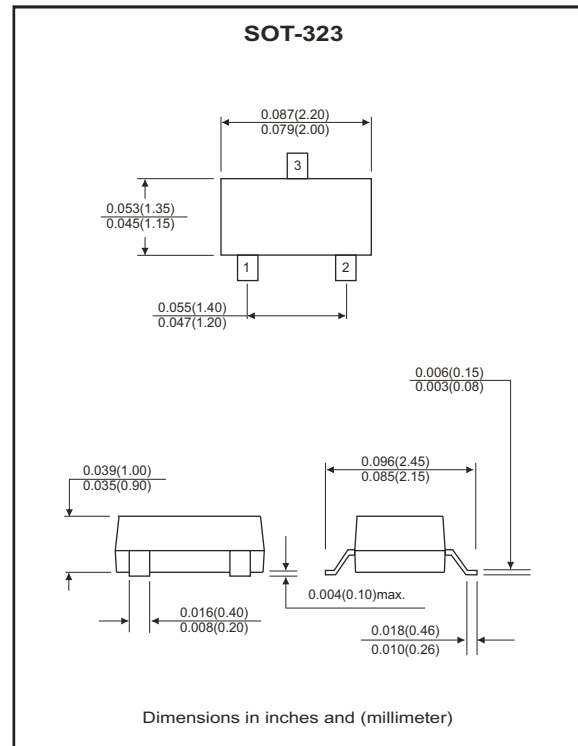
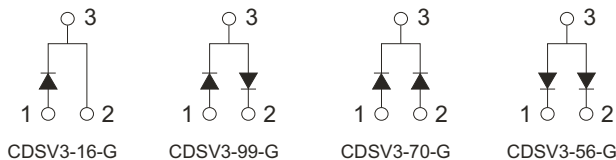
### Features

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

### Mechanical data

- Case: SOT-323, molded plastic.
- Terminals: solderable per MIL-STD-750, method 2026.
- Approx. weight: 0.006 grams

### Circuit diagram



### Maximum Ratings and Electrical Characteristics

(at Ta=25°C unless otherwise noted)

| Parameter                       | Symbol    | Conditions                                                                                 | Value                         | Units   |
|---------------------------------|-----------|--------------------------------------------------------------------------------------------|-------------------------------|---------|
| Repetitive peak reverse voltage | $V_{RRM}$ |                                                                                            | 75                            | V       |
| Reverse voltage                 | $V_R$     |                                                                                            | 75                            | V       |
| Forward current                 | $I_F$     |                                                                                            | 300                           | 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>@ $I_F=50mA$<br>@ $I_F=150mA$                               | 0.715<br>0.855<br>1.0<br>1.25 | 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>2.5<br>30<br>50      | $\mu A$ |
| Maximum reverse recovery time   | $T_{rr}$  | $I_F=10mA, V_R=6V$                                                                         | 4                             | nS      |
| Typical diode capacitance       | $C_J$     | $V_R=0V, f=1.0MHz$                                                                         | 2                             | pF      |
| Maximum junction temperature    | $T_J$     |                                                                                            | -65~+150                      | °C      |
| Storage temperature             | $T_{STG}$ |                                                                                            | -65 to +150                   | °C      |

## RATING AND CHARACTERISTIC CURVES (CDSV3-16-G/56-G/70-G/99-G)

Fig.1 - Forward Characteristics

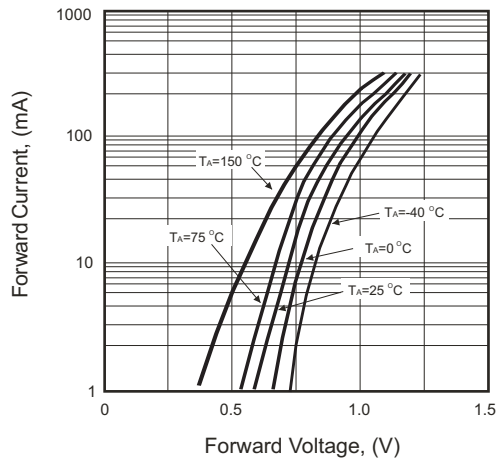


Fig.2 - Typical Reverse Characteristics

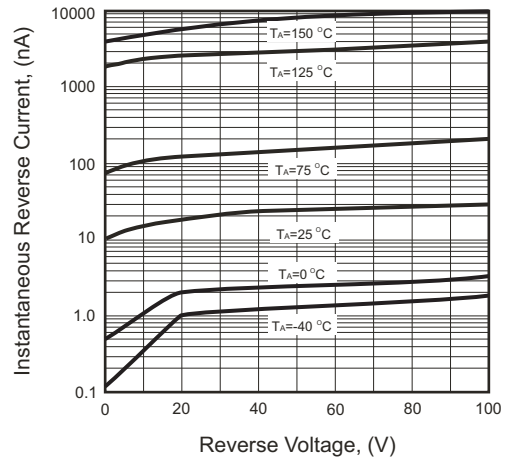


Fig.3 - Typical Capacitance vs. Reverse Voltage

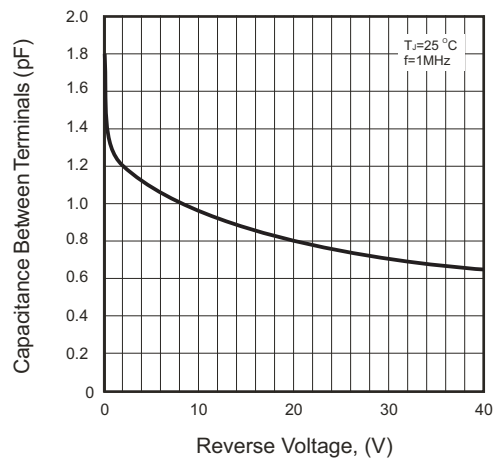


Fig.4 - Reverse Recovery Time vs. Forward Current

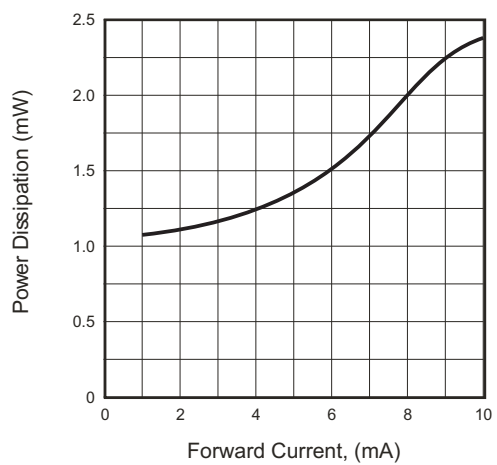
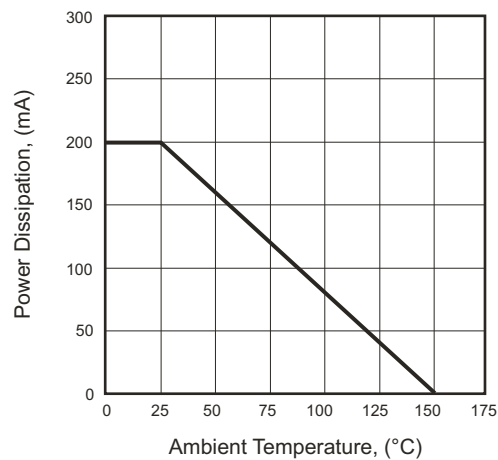
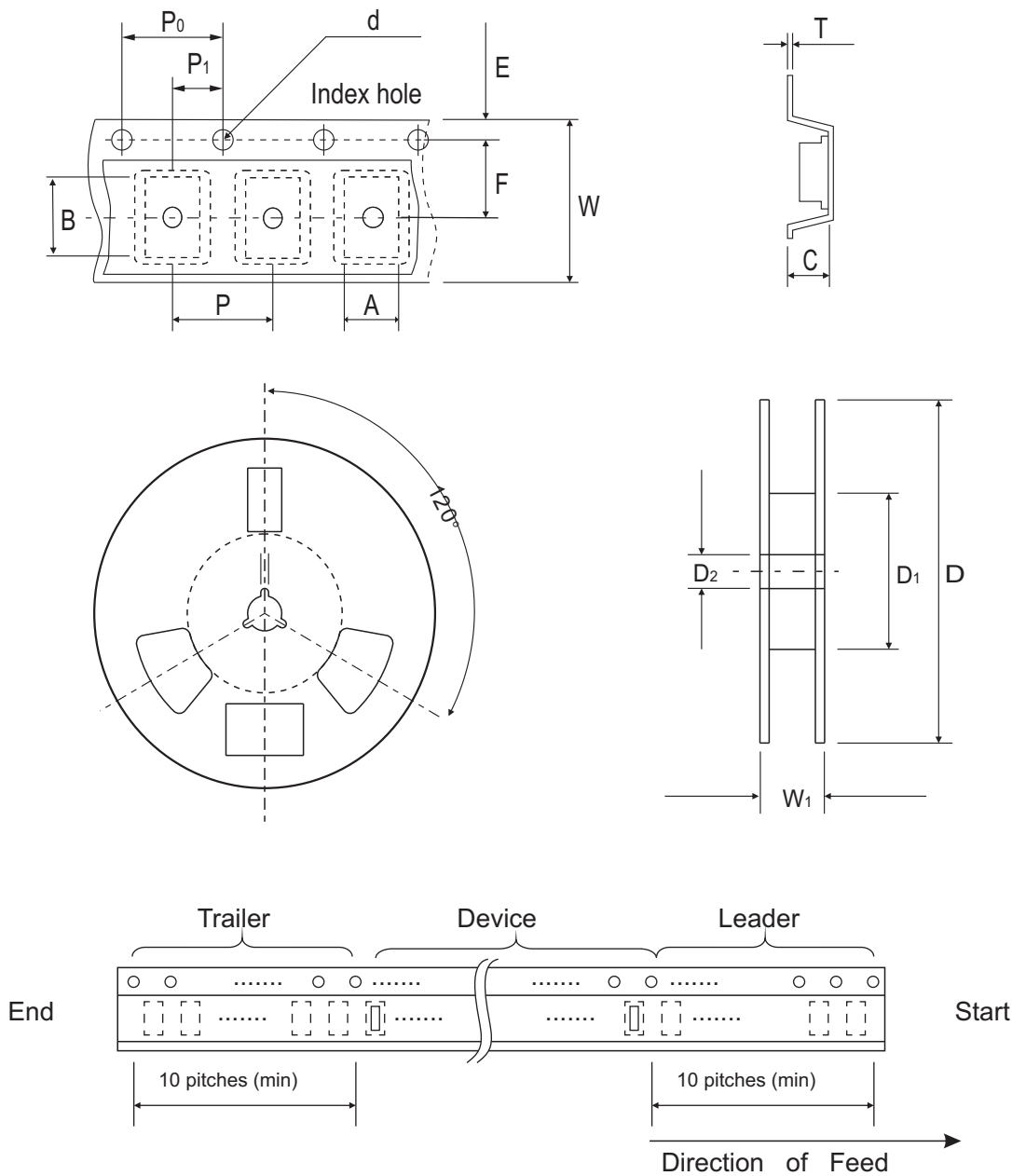


Fig.5 - Power Derating Curve, Total Package



## Reel Taping Specification

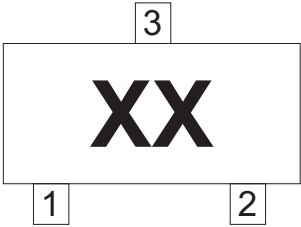


| SOT-323 | SYMBOL | A                 | B                 | C                 | d                 | D                 | D <sub>1</sub>    | D <sub>2</sub>    |
|---------|--------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
|         | (mm)   | $2.25 \pm 0.10$   | $2.55 \pm 0.10$   | $1.19 \pm 0.10$   | $1.55 \pm 0.10$   | $178 \pm 1.00$    | $54.40 \pm 0.40$  | $13.0 \pm 0.20$   |
|         | (inch) | $0.089 \pm 0.004$ | $0.100 \pm 0.004$ | $0.047 \pm 0.004$ | $0.061 \pm 0.004$ | $7.008 \pm 0.039$ | $2.142 \pm 0.016$ | $0.512 \pm 0.008$ |

| SOT-323 | SYMBOL | E                 | F                 | P                 | P <sub>0</sub>    | P <sub>1</sub>    | W                         | W <sub>1</sub>    |
|---------|--------|-------------------|-------------------|-------------------|-------------------|-------------------|---------------------------|-------------------|
|         | (mm)   | $1.75 \pm 0.10$   | $3.50 \pm 0.05$   | $4.00 \pm 0.10$   | $4.00 \pm 0.10$   | $2.00 \pm 0.10$   | $8.00 + 0.30 / - 0.10$    | $9.50 \pm 1.00$   |
|         | (inch) | $0.069 \pm 0.004$ | $0.138 \pm 0.002$ | $0.158 \pm 0.004$ | $0.158 \pm 0.004$ | $0.079 \pm 0.004$ | $0.315 + 0.012 / - 0.004$ | $0.374 \pm 0.039$ |

## Marking Code

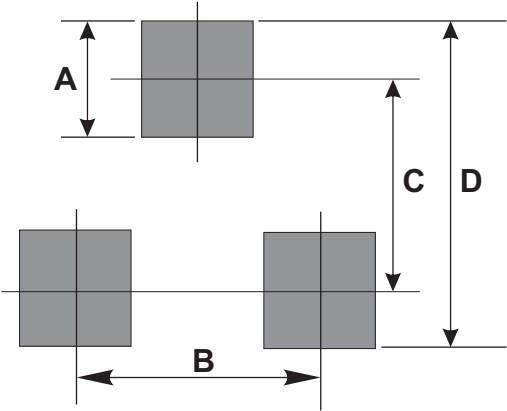
| Part Number | Marking Code |
|-------------|--------------|
| CDBV3-16-G  | A2           |
| CDBV3-56-G  | KJC          |
| CDBV3-70-G  | KJA          |
| CDBV3-99-G  | KJG          |



xx/ xxx = Product type marking code

## Suggested PAD Layout

| SIZE | SOT-323 |        |
|------|---------|--------|
|      | (mm)    | (inch) |
| A    | 0.80    | 0.031  |
| B    | 1.30    | 0.051  |
| C    | 1.94    | 0.076  |
| D    | 2.74    | 0.108  |



## Standard Packaging

| Case Type | REEL PACK       |                     |
|-----------|-----------------|---------------------|
|           | REEL<br>( pcs ) | Reel Size<br>(inch) |
| SOT-323   | 3,000           | 7                   |