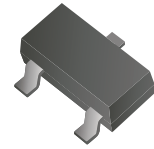


## CDBV3-40/S/C/A-G

**Reverse Voltage: 40 Volts**

**Forward Current: 200 mA**

**RoHS Device**



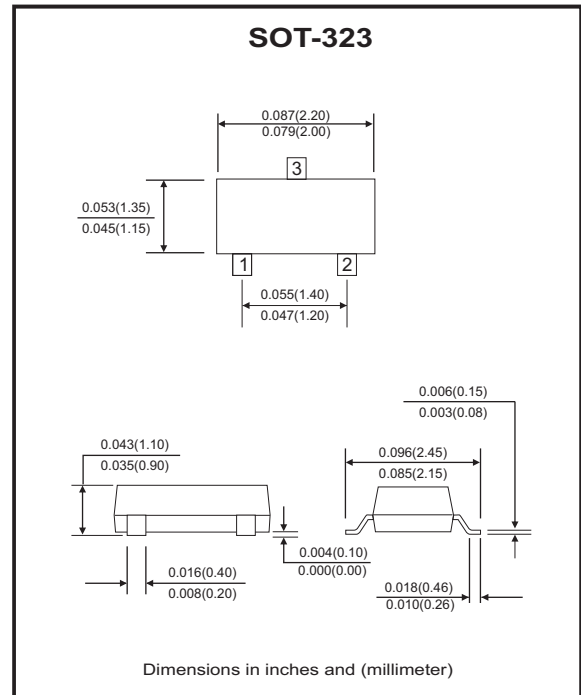
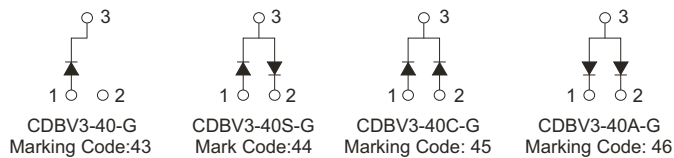
### Features

- Design for mounting on small surface.
- High speed switching application, circuit protection.
- Low turn-on voltage.

### Mechanical data

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

### Circuit diagram



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

| Parameter                                                                                   | Symbol                          | Value       | Units |
|---------------------------------------------------------------------------------------------|---------------------------------|-------------|-------|
| Peak repetitive peak reverse voltage<br>Working peak reverse voltage<br>DC blocking voltage | $V_{RRM}$<br>$V_{RWM}$<br>$V_R$ | 40          | V     |
| Forward continuous current                                                                  | $I_{FM}$                        | 200         | mA    |
| Peak surge forward current (T=1.0sec)                                                       | $I_{FSM}$                       | 0.6         | A     |
| Power dissipation                                                                           | $P_D$                           | 150         | mW    |
| Thermal resistance, junction to ambient                                                     | $R_{\theta JA}$                 | 833         | °C/W  |
| Junction temperature                                                                        | $T_J$                           | 125         | °C    |
| Storage temperature                                                                         | $T_{STG}$                       | -65 to +125 | °C    |

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

| Parameter                       | Symbol   | Conditions                                     | Min. | Max.        | Units |
|---------------------------------|----------|------------------------------------------------|------|-------------|-------|
| Reverse breakdown voltage       | $V_{BR}$ | $I_R=10\mu A$                                  | 40   |             | V     |
| Reverse voltage leakage current | $I_R$    | $V_R=30V$                                      |      | 200         | nA    |
| Forward voltage                 | $V_F$    | $I_F=1mA$<br>$I_F=40mA$                        |      | 380<br>1000 | mV    |
| Diode capacitance               | $C_D$    | $V_R=0V, f=1.0MHz$                             |      | 5           | pF    |
| Reverse recovery time           | $T_{rr}$ | $I_{rr}=1mA, I_F=I_R=10mA,$<br>$R_L=100\Omega$ |      | 5           | nS    |

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

REV:B

## RATING AND CHARACTERISTIC CURVES (CDBV3-40/S/C/A-G)

Fig.1 Forward Characteristics

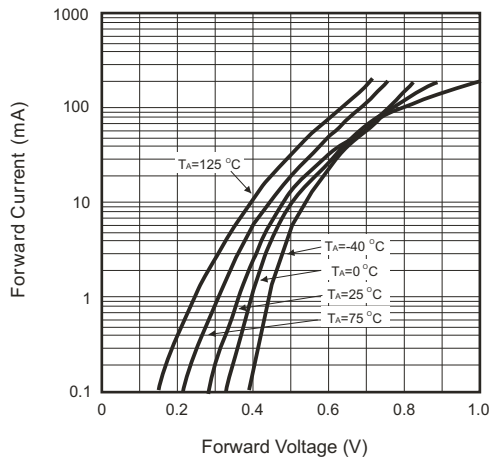


Fig.2 Reverse Characteristics

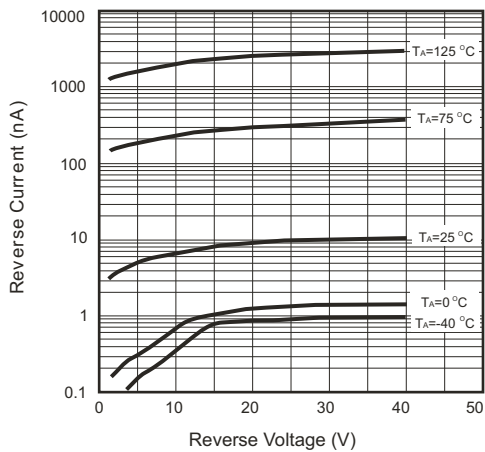


Fig.3 Capacitance Between Terminals Characteristics

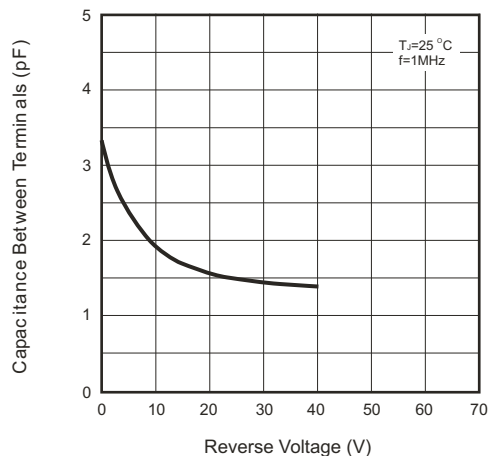
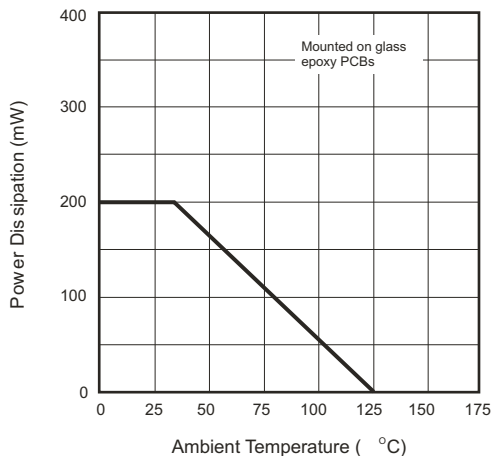
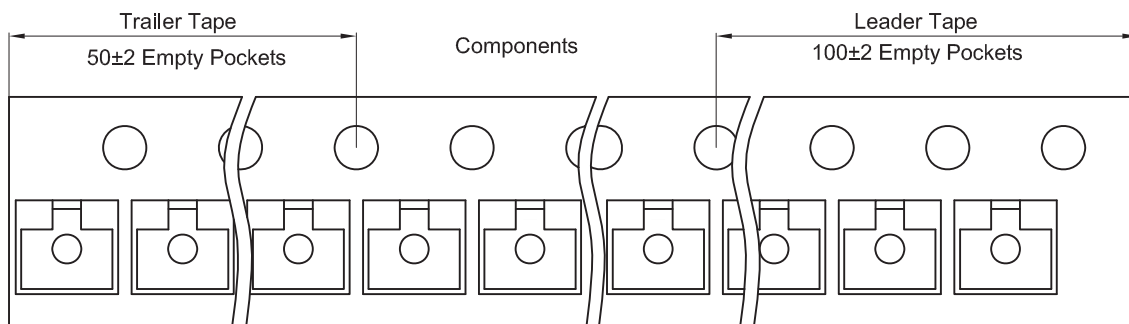
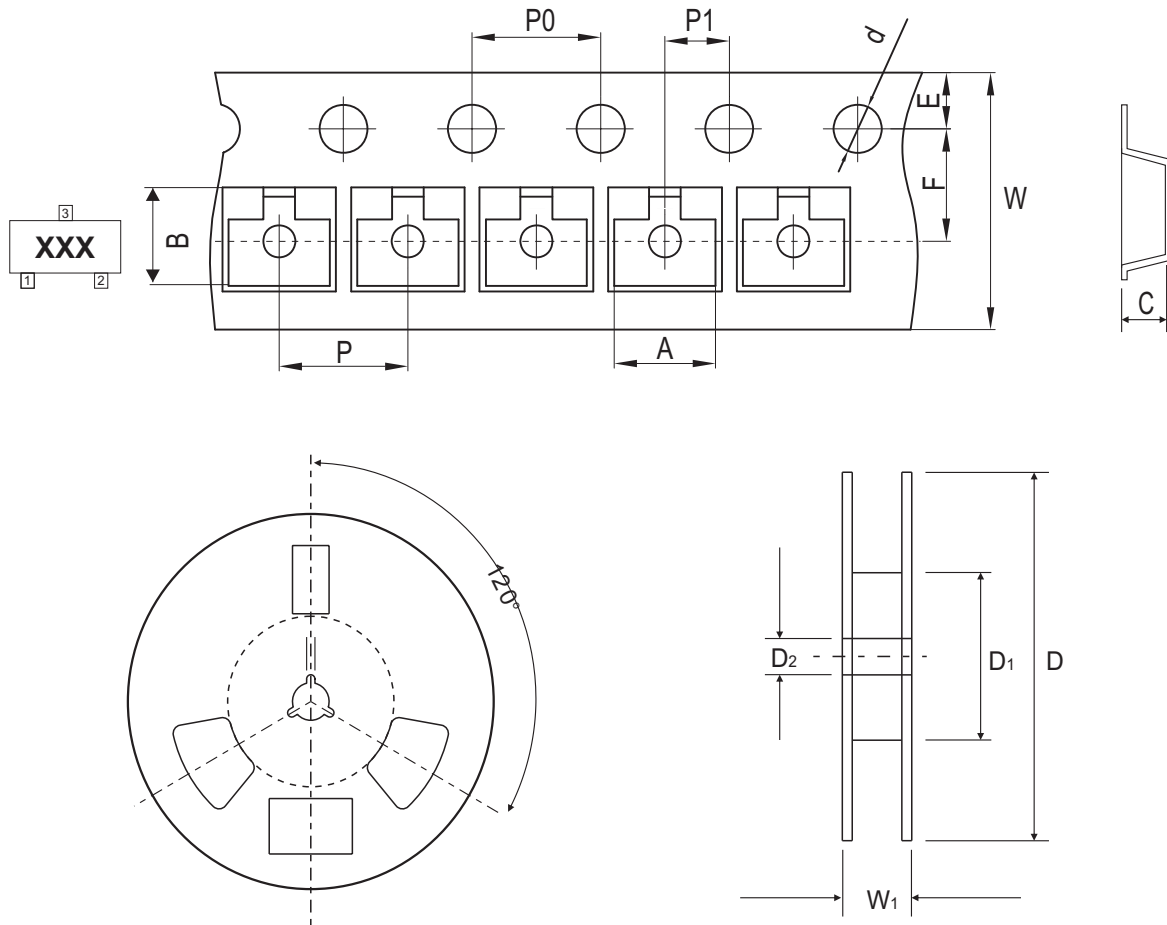


Fig.4 Power Derating Curve



## Reel Taping Specification

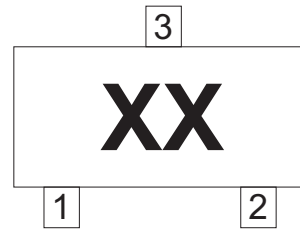


| SOT-323 | SYMBOL | A                 | B                 | C                 | d                 | D                 | D1                | D2                |
|---------|--------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
|         | (mm)   | $2.25 \pm 0.05$   | $2.55 \pm 0.05$   | $1.19 \pm 0.05$   | $1.55 \pm 0.10$   | $178 \pm 2.00$    | $54.40 \pm 1.00$  | $13.00 \pm 1.00$  |
|         | (inch) | $0.089 \pm 0.002$ | $0.100 \pm 0.002$ | $0.047 \pm 0.002$ | $0.061 \pm 0.004$ | $7.008 \pm 0.079$ | $2.142 \pm 0.039$ | $0.512 \pm 0.039$ |

| SOT-323 | 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) | $0.069 \pm 0.004$ | $0.138 \pm 0.004$ | $0.157 \pm 0.004$ | $0.157 \pm 0.004$ | $0.079 \pm 0.004$ | $0.315 + 0.012 / - 0.004$ | $0.484 \pm 0.039$ |

## Marking Code

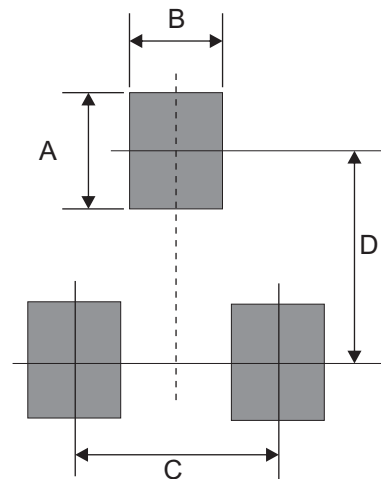
| Part Number | Marking Code |
|-------------|--------------|
| CDBV3-40-G  | 43           |
| CDBV3-40S-G | 44           |
| CDBV3-40C-G | 45           |
| CDBV3-40A-G | 46           |



xx/xxx = Product type marking code

## Suggested PAD Layout

| SIZE | SOT-323 |        |
|------|---------|--------|
|      | (mm)    | (inch) |
| A    | 0.80    | 0.031  |
| B    | 0.50    | 0.020  |
| C    | 1.30    | 0.051  |
| D    | 2.20    | 0.087  |



## Standard Packaging

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

# Mouser Electronics

Authorized Distributor

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