

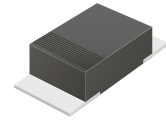
## CDBM120L-HF Thru. CDBM140L-HF

**Reverse Voltage: 20 to 40 Volts**

**Forward Current: 1.0 Amp**

**RoHS Device**

**Halogen free**

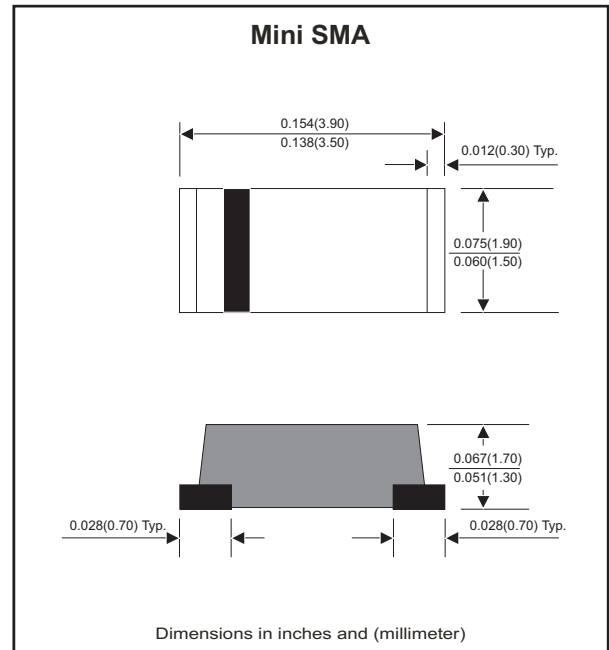


### Features

- Ideal for surface mount applications.
- Easy pick and place.
- Plastic package has Underwriters Lab. flammability classification 94V-0.
- Exceeds environmental standard MIL-S-19500/228.
- Low leakage current.

### Mechanical data

- Case: Mini SMA/SOD-123, molded plastic.
- Terminals: solderable per MIL-STD-750, method 2026.
- Polarity: Color band denotes cathode end.
- Approx. weight: 0.027 grams



### Maximum Ratings and Electrical Characteristics

| Parameter                                                                                        | Symbol          | CDBM120L-HF | CDBM130L-HF | CDBM140L-HF | Units         |
|--------------------------------------------------------------------------------------------------|-----------------|-------------|-------------|-------------|---------------|
| Max. Repetitive peak reverse voltage                                                             | $V_{RRM}$       | 20          | 30          | 40          | V             |
| Max. DC blocking voltage                                                                         | $V_R$           | 20          | 30          | 40          | V             |
| Max. RMS voltage                                                                                 | $V_{RMS}$       | 14          | 21          | 28          | V             |
| Peak surge forward current, 8.3ms single half sine-wave superimposed on rate load (JEDEC method) | $I_{FSM}$       | 30          |             |             | A             |
| Max. average forward current                                                                     | $I_O$           | 1.0         |             |             | A             |
| Max. instantaneous forward voltage at $I_F=1.0A$                                                 | $V_F$           | 0.38        | 0.40        | 0.40        | V             |
| Max. DC reverse current at $T_A=25^{\circ}C$                                                     | $I_R$           | 1.0         |             |             | mA            |
| Max. thermal resistance (Note 1)                                                                 | $R_{\theta JA}$ | 42          |             |             | $^{\circ}C/W$ |
| Typ. Diode Junction capacitance ( $F=1MHz$ and applied 4V DC reverse voltage)                    | $C_J$           | 130         |             |             | $^{\circ}C$   |
| Max. operating junction temperature                                                              | $T_J$           | -55 to +100 |             |             | $^{\circ}C$   |
| Storage temperature                                                                              | $T_{STG}$       | -65 to +175 |             |             | $^{\circ}C$   |

Notes: 1. Thermal resistance from junction to ambient and junction to lead, P.C.B. mounted on 0.2×0.2 inch<sup>2</sup> copper pad area.

## RATING AND CHARACTERISTIC CURVES (CDBM120L-HF thru CDBM140L-HF)

Fig.1 - Typical Forward Characteristics

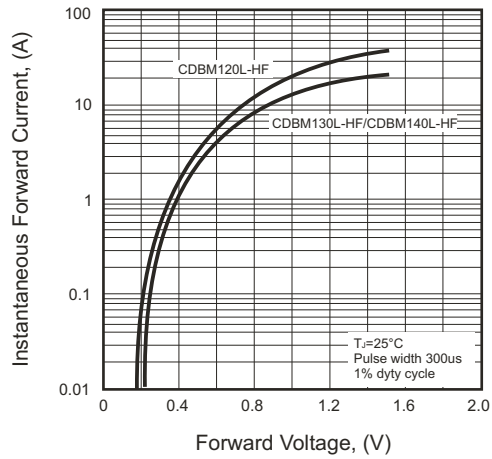


Fig.2 - Typical Forward Current Derating Curve

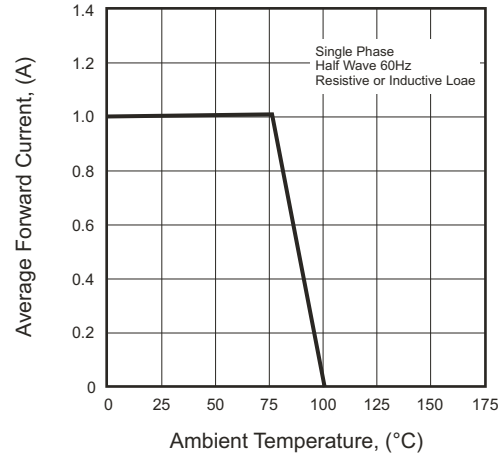


Fig.3 - Typical Reverse Characteristics

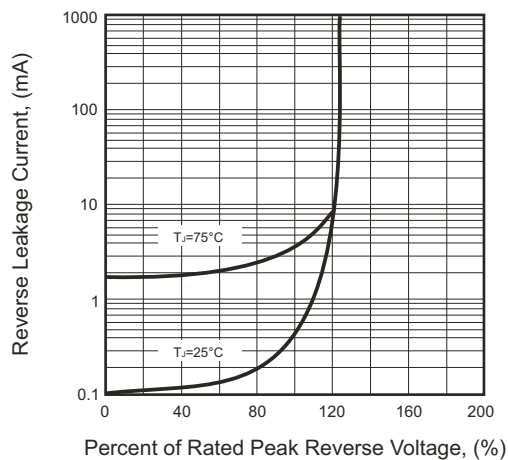


Fig.4 - Max. Non-repetitive Forward Surge Current

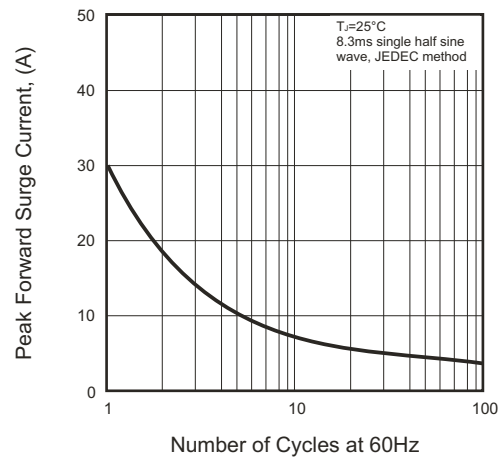
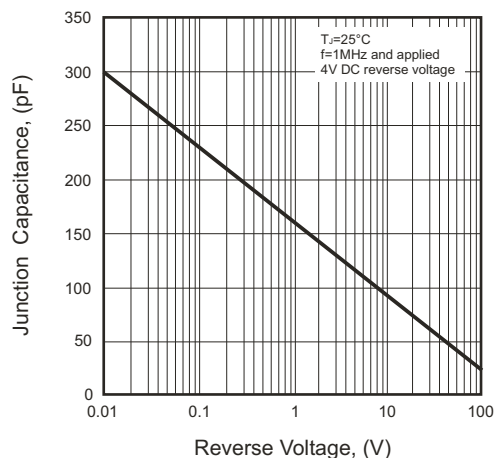
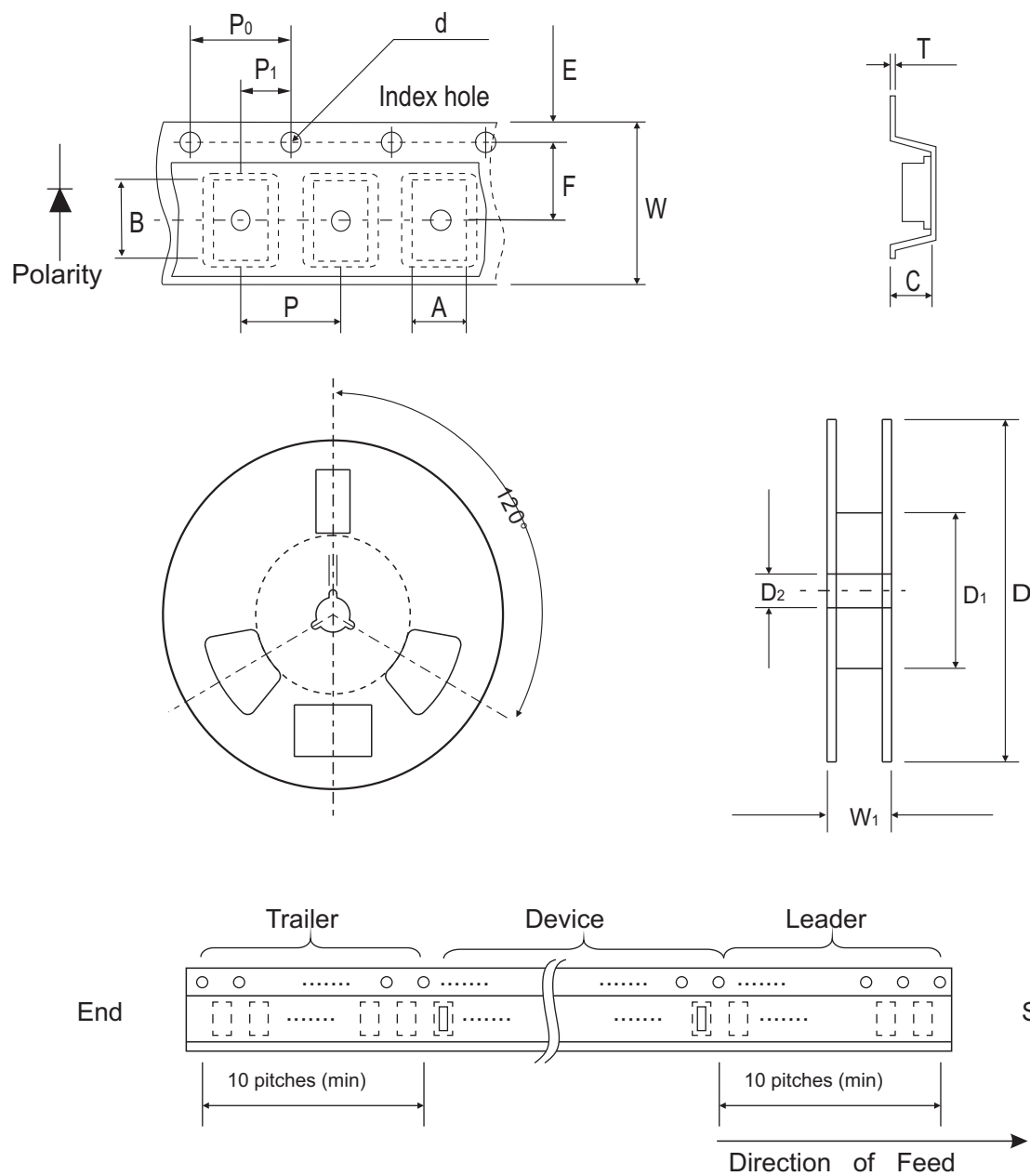


Fig.5 - Typical Junction Capacitance



## Reel Taping Specification



| Mini-SMA/SOD-123 | SYMBOL | A                | B                | C                | d                 | D                | D1         | D2                |
|------------------|--------|------------------|------------------|------------------|-------------------|------------------|------------|-------------------|
|                  | (mm)   | $1.90 \pm 0.10$  | $3.90 \pm 0.10$  | $1.68 \pm 0.10$  | $1.50 \pm 0.10$   | $178 \pm 2.00$   | 62.0 MIN.  | $13.0 \pm 0.50$   |
|                  | (inch) | $0.075 \pm 0.04$ | $0.154 \pm 0.04$ | $0.066 \pm 0.04$ | $0.059 \pm 0.004$ | $7.00 \pm 0.079$ | 2.440 MIN. | $0.512 \pm 0.020$ |

| Mini-SMA/SOD-123 | SYMBOL | E                 | F                 | P                 | $P_0$             | $P_1$             | T                 | W                 | $W_1$             |
|------------------|--------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
|                  | (mm)   | $1.75 \pm 0.10$   | $3.50 \pm 0.10$   | $4.00 \pm 0.10$   | $4.00 \pm 0.10$   | $2.00 \pm 0.10$   | $0.23 \pm 0.10$   | $8.00 \pm 0.30$   | $11.40 \pm 1.0$   |
|                  | (inch) | $0.069 \pm 0.004$ | $0.138 \pm 0.004$ | $0.157 \pm 0.004$ | $0.157 \pm 0.004$ | $0.079 \pm 0.004$ | $0.009 \pm 0.004$ | $0.315 \pm 0.012$ | $0.449 \pm 0.004$ |

## Marking Code

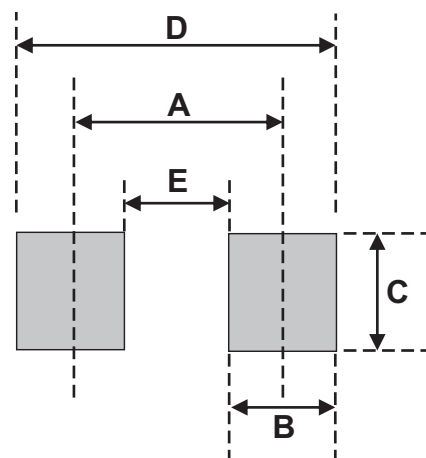
| Part Number | Marking Code |
|-------------|--------------|
| CDBM120L-HF | L2           |
| CDBM130L-HF | L3           |
| CDBM140L-HF | L4           |



XX = Product type marking code

## Suggested PAD Layout

| SIZE | Mini-SMA/SOD-123 |        |
|------|------------------|--------|
|      | (mm)             | (inch) |
| A    | 3.30             | 0.130  |
| B    | 1.40             | 0.055  |
| C    | 1.90             | 0.075  |
| D    | 4.70             | 0.185  |
| E    | 1.90             | 0.075  |



## Standard Packaging

| Case Type        | REEL PACK       |                     |
|------------------|-----------------|---------------------|
|                  | REEL<br>( pcs ) | Reel Size<br>(inch) |
| Mini-SMA/SOD-123 | 2,500           | 7                   |

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