

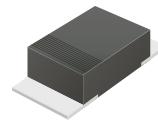
CDBM240-HF Thru CDBM2200-HF

Reverse Voltage: 40 to 200 Volts

Forward Current: 2.0 Amp

RoHS Device

Halogen free

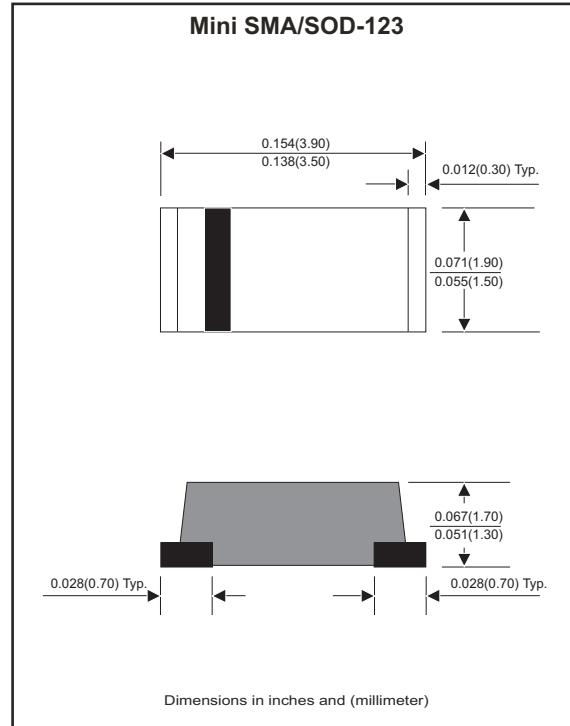


Features

- Batch process design, excellent power dissipation offers better reverse leakage current and thermal resistance.
- Low profile surface mounted application in order to optimize board space.
- Tiny plastic SMD package.
- Low power loss, high efficiency.
- High current capability, low forward voltage drop.
- High surge capability.
- Guardring for overvoltage protection.
- Ultra high-speed switching.
- Silicon epitaxial planar chip, metal silicon junction.
- Lead-free parts meet environmental standards of MIL-STD-19500 /228

Mechanical data

- Epoxy: UL94-V0 rated flame retardant.
- Case: Molded plastic, JEDEC Mini SMA/SOD-123.
- Terminals: Solder plated, solderable per MIL-STD-750, method 2026.
- Polarity: Indicated by cathode band.
- Mounting position: Any
- Weight: 0.018 gram(approx.).



Maximum Ratings (at $T_A=25^\circ\text{C}$ unless otherwise noted)

| Parameter | Symbol | CDBM 240-HF | CDBM 260-HF | CDBM 2100-HF | CDBM 2150-HF | CDBM 2200-HF | Unit |
|---|-----------------|-------------|-------------|--------------|--------------|--------------|---------------------------|
| Repetitive peak reverse voltage | V_{RRM} | 40 | 60 | 100 | 150 | 200 | V |
| Maximum RMS voltage | V_{RMS} | 28 | 42 | 70 | 105 | 140 | V |
| Continuous reverse voltage | V_R | 40 | 60 | 100 | 150 | 200 | V |
| Forward voltage @ $I_F=2.0\text{A}$ | V_F | 0.50 | 0.70 | 0.85 | 0.90 | 0.92 | V |
| Forward rectified current | I_O | | | 2.0 | | | A |
| Forward surge current, 8.3ms half sine wave superimposed on rated load (JEDEC method) | I_{FSM} | | | 50 | | | A |
| Reverse current on $V_R=V_{RRM}$ @ $T_A=25^\circ\text{C}$ @ $T_A=100^\circ\text{C}$ | I_R | | | 0.5 10 | | | mA |
| Typ. thermal resistance, junction to ambient air | $R_{\theta JA}$ | | | 85 | | | $^\circ\text{C}/\text{W}$ |
| Typ. diode junction capacitance (Note 1) | C_J | | | 160 | | | pF |
| Operating junction temperature | T_J | -55 to +125 | | -55 to +150 | | | $^\circ\text{C}$ |
| Storage temperature | T_{STG} | | | -65 to +175 | | | $^\circ\text{C}$ |

Note 1: f=1MHz and applied 4V DC reverse voltage.

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

REV:B

Rating and Characteristic Curves (CDBM240-HF Thru CDBM2200-HF)

Fig.1-Typical forward current current derating curve

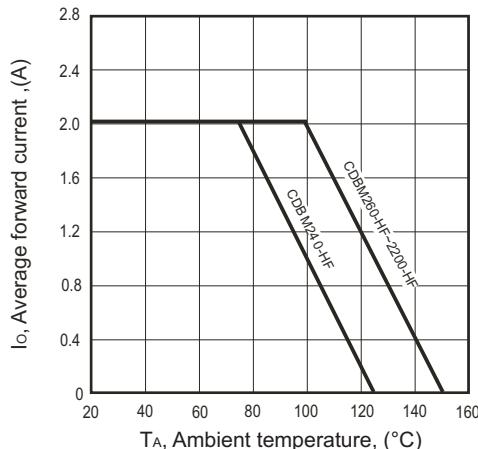


Fig.2-Typical forward characteristics

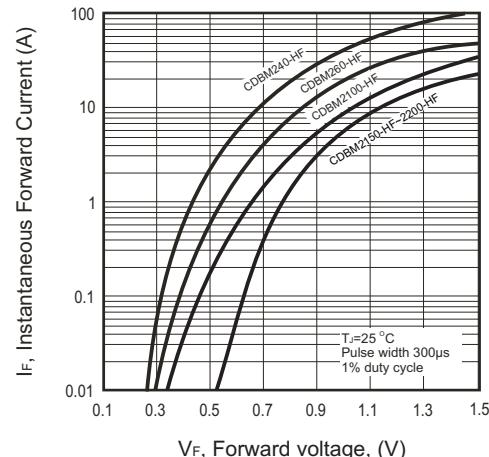


Fig.3 - Maximum non-repetitive forward surge current

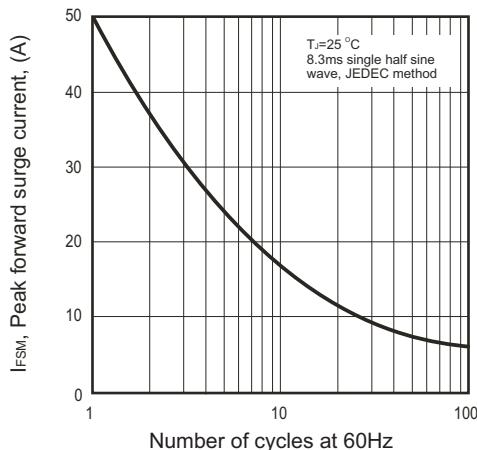


Fig.4-Typical junction capacitance

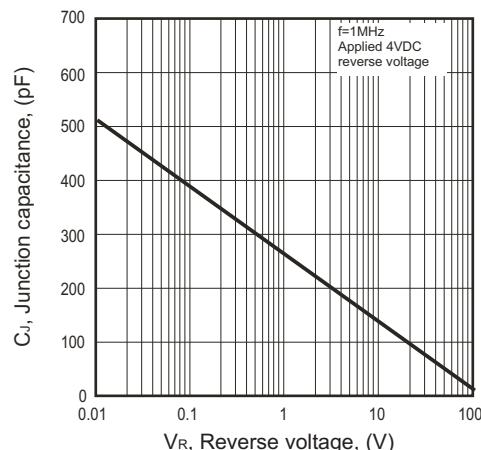
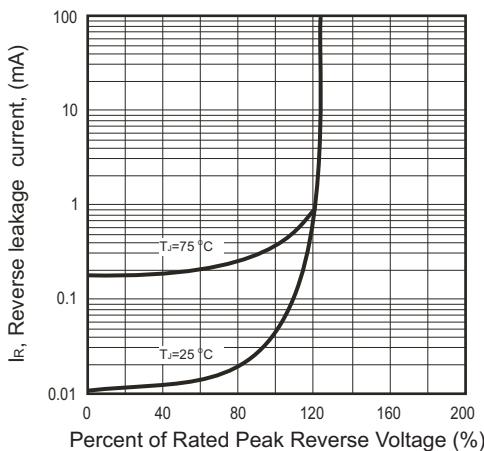
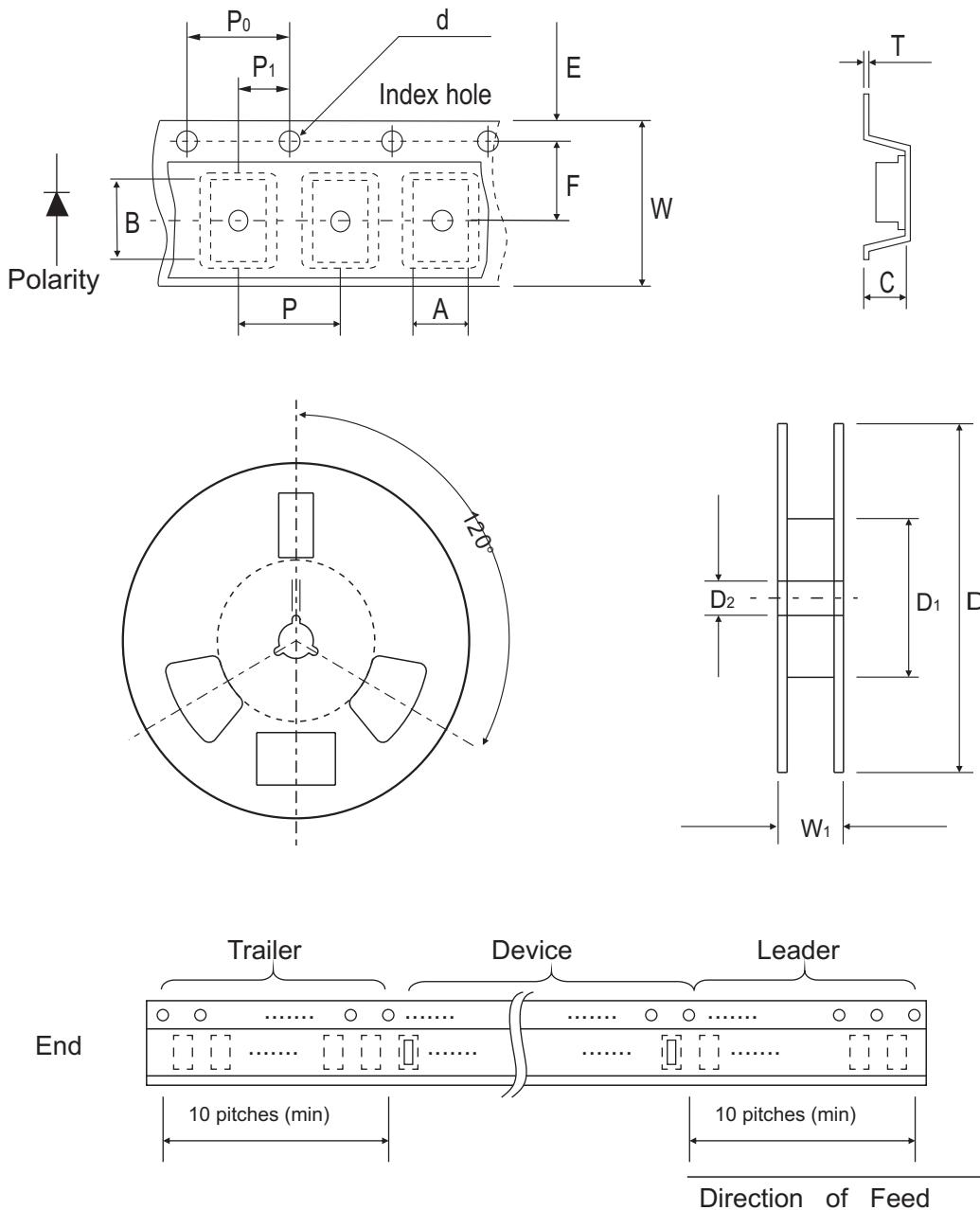


Fig.5 - Typical reverse characteristics



Reel Taping Specification



| | SYMBOL | A | B | C | d | D | D1 | D2 |
|------------------|--------|------------------|------------------|------------------|-------------------|------------------|------------|-------------------|
| Mini-SMA/SOD-123 | (mm) | 1.90 ± 0.10 | 3.90 ± 0.10 | 1.68 ± 0.10 | 1.50 ± 0.10 | 178 ± 2.00 | 62.0 MIN. | 13.0 ± 0.50 |
| | (inch) | 0.075 ± 0.04 | 0.153 ± 0.04 | 0.066 ± 0.04 | 0.059 ± 0.004 | 7.00 ± 0.079 | 2.440 MIN. | 0.512 ± 0.020 |

| | SYMBOL | E | F | P | P ₀ | P ₁ | T | W | W ₁ |
|------------------|--------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Mini-SMA/SOD-123 | (mm) | 1.75 ± 0.10 | 3.50 ± 0.10 | 4.00 ± 0.10 | 4.00 ± 0.10 | 2.00 ± 0.10 | 0.23 ± 0.10 | 8.00 ± 0.30 | 14.4 ± 0.10 |
| | (inch) | 0.069 ± 0.004 | 0.138 ± 0.004 | 0.157 ± 0.004 | 0.157 ± 0.004 | 0.079 ± 0.004 | 0.009 ± 0.004 | 0.315 ± 0.011 | 0.567 ± 0.004 |

Marking Code

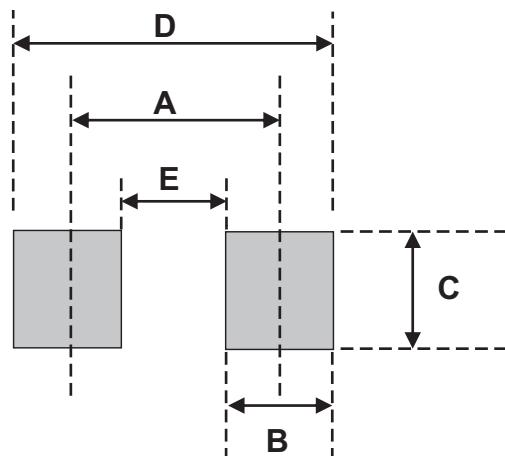
| Part Number | Marking Code |
|-------------|--------------|
| CDBM240-HF | 24 |
| CDBM260-HF | 26 |
| CDBM2100-HF | 20 |
| CDBM2150-HF | 215 |
| CDBM2200-HF | 220 |



xx/xxx = 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 (pcs) | Reel Size (inch) |
| Mini-SMA /SOD-123 | 2,500 | 7 |