

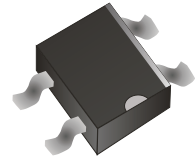
## CDBHM120L-HF Thru. CDBHM1100L-HF

Reverse Voltage: 20 to 100 Volts

Forward Current: 1.0 Amp

RoHS Device

Halogen Free

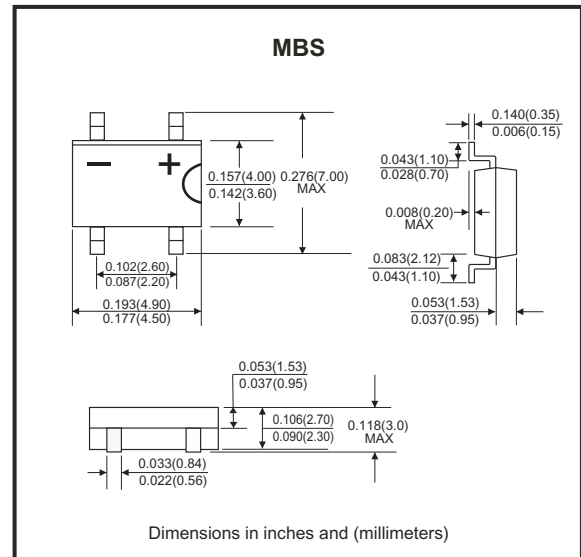


### Features

- High surge forward current capability.
- Low Forward voltage drop.
- General purpose 1 phase Bridge rectifier applications
- UL recognized file # E230084 

### Mechanical data

- Case: molded plastic
- Epoxy: UL 94V-0 rate flame retardant.
- Lead: solder plated
- Polarity: As marked
- Weight: 0.125 gram(approx)



### Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz resistive or inductive load.

For capacitive load, derate current by 20%

| Parameter                                                                                              | Symbol                          | Conditions                          | CDBHM-HF    |      |      |      |       | Units            |
|--------------------------------------------------------------------------------------------------------|---------------------------------|-------------------------------------|-------------|------|------|------|-------|------------------|
|                                                                                                        |                                 |                                     | 120L        | 140L | 160L | 180L | 1100L |                  |
| Max. Repetitive peak reverse voltage                                                                   | V <sub>RRM</sub>                |                                     | 20          | 40   | 60   | 80   | 100   | V                |
| Max. DC blocking voltage                                                                               | V <sub>DC</sub>                 |                                     | 20          | 40   | 60   | 80   | 100   | V                |
| Max. RMS voltage                                                                                       | V <sub>RMS</sub>                |                                     | 14          | 28   | 42   | 56   | 70    | V                |
| Average rectified output current<br>@60Hz sine wave, R-load, T <sub>A</sub> =25°C                      | I <sub>O</sub>                  | On alumina substrate                | 1.0         |      |      |      |       | A                |
|                                                                                                        |                                 | On glass-epoxi substrate            | 0.8         |      |      |      |       |                  |
| Peak forward surge current,8.3ms<br>single half sine-wave superimposed<br>on rated load (JEDEC method) | I <sub>FSM</sub>                |                                     | 40          |      |      |      |       | A                |
| Max. Peak forward voltage                                                                              | V <sub>FM</sub>                 | I <sub>FM</sub> =0.5A               | 0.55        |      | 0.65 | 0.85 |       | V                |
| Max. Peak reverse current                                                                              | I <sub>RRM</sub>                | V <sub>RM</sub> =V <sub>RRM</sub>   | 0.5         |      |      |      |       | mA               |
| Max. Current Squared Time                                                                              | I <sup>2</sup> t                | 1ms≤t<8.3ms<br>T <sub>A</sub> =25°C | 6.6         |      |      |      |       | A <sup>2</sup> S |
| Max. Thermal resistance                                                                                | R <sub>θJA</sub> <sup>(1)</sup> | On alumina substrate                | 76          |      |      |      |       | °C/W             |
|                                                                                                        |                                 | On glass-epoxi substrate            | 134         |      |      |      |       |                  |
|                                                                                                        | R <sub>θJL</sub>                | Between junction and lead           | 20          |      |      |      |       |                  |
| Operating temperature range                                                                            | T <sub>J</sub>                  |                                     | -55 to +150 |      |      |      |       | °C               |
| Sorage temperature range                                                                               | T <sub>STG</sub>                |                                     | -55 to +150 |      |      |      |       | °C               |

Notes: 1. Between junction and ambient

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

REV: D

## Rating and Characteristics Curves (CDBHM120L-HF Thru. CDBHM1100L-HF)

Fig.1 - Forward Current Derating Curve

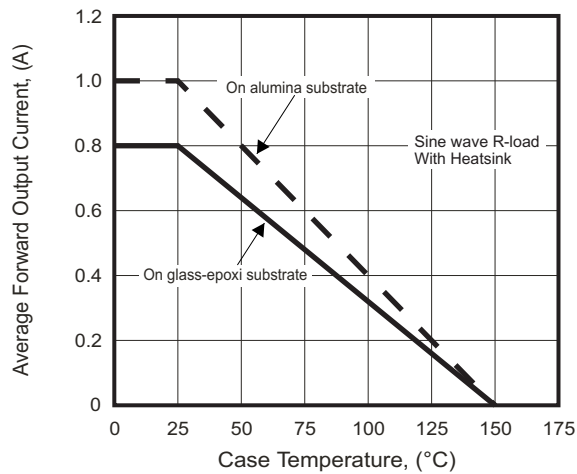


Fig.2 - Typical Forward Characteristics

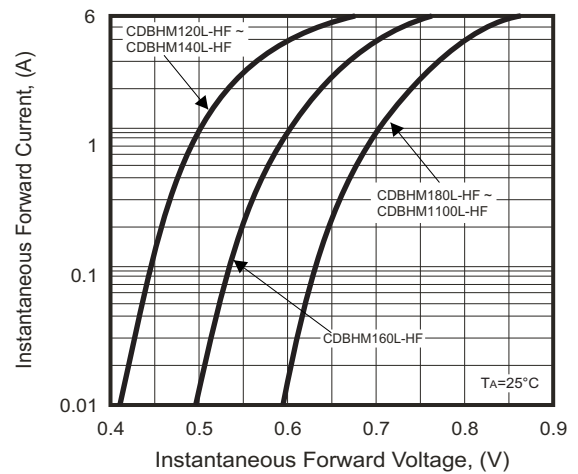


Fig.3 - Maximum Non-Repetitive Surge Current

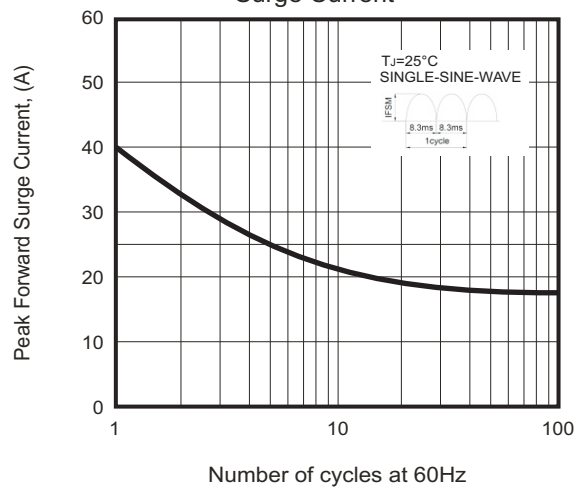
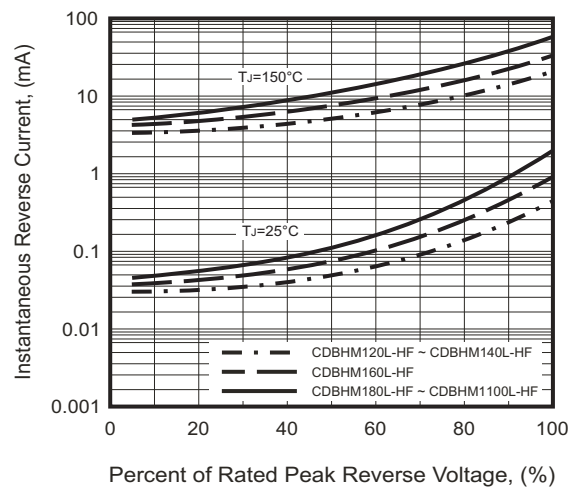
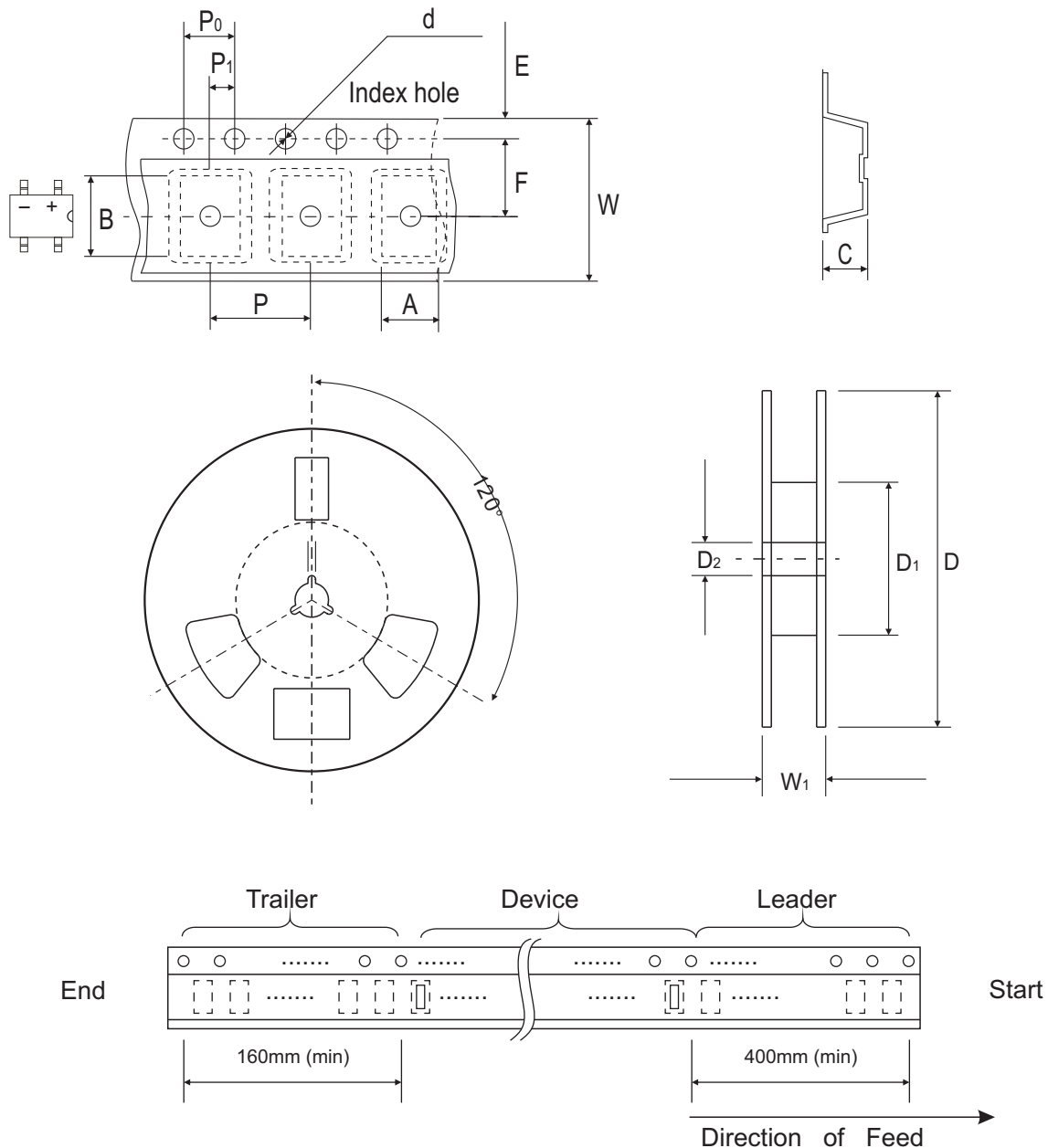


Fig.4 - Typical Reverse Characteristics



## Reel Taping Specification



| MBS | SYMBOL | A                 | B                 | C                 | d                 | D                 | D1         | D2                |
|-----|--------|-------------------|-------------------|-------------------|-------------------|-------------------|------------|-------------------|
|     | (mm)   | $5.00 \pm 0.10$   | $7.24 \pm 0.10$   | $2.95 \pm 0.10$   | $1.55 \pm 0.05$   | $330.0 \pm 2.00$  | 50.0 Min.  | $13.0 \pm 0.50$   |
|     | (inch) | $0.197 \pm 0.004$ | $0.285 \pm 0.004$ | $0.116 \pm 0.004$ | $0.061 \pm 0.002$ | $13.00 \pm 0.079$ | 1.969 Min. | $0.512 \pm 0.020$ |

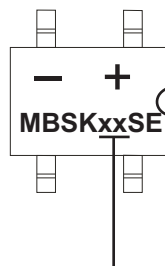
| MBS | SYMBOL | E                 | F                 | P                 | $P_0$             | $P_1$             | W                 | $W_1$      |
|-----|--------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|------------|
|     | (mm)   | $1.75 \pm 0.10$   | $5.50 \pm 0.05$   | $8.00 \pm 0.10$   | $4.00 \pm 0.10$   | $2.00 \pm 0.10$   | $12.00 \pm 0.30$  | 18.70 Max. |
|     | (inch) | $0.069 \pm 0.004$ | $0.217 \pm 0.002$ | $0.315 \pm 0.004$ | $0.157 \pm 0.004$ | $0.079 \pm 0.004$ | $0.472 \pm 0.012$ | 0.736 Max. |

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REV: D

## Marking Code

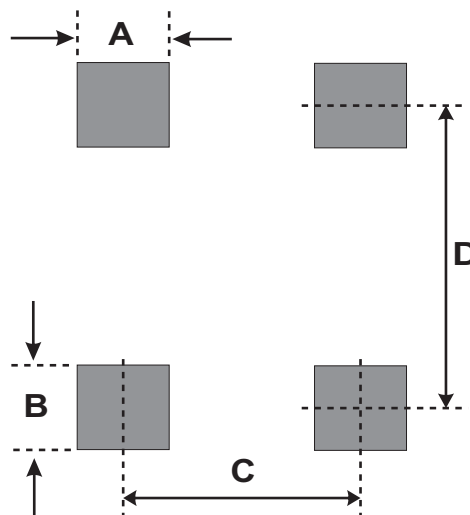
| Part Number   | Marking Code |
|---------------|--------------|
| CDBHM120L-HF  | MBSK12SE     |
| CDBHM140L-HF  | MBSK14SE     |
| CDBHM160L-HF  | MBSK16SE     |
| CDBHM180L-HF  | MBSK18SE     |
| CDBHM1100L-HF | MBSK110SE    |



xx/xxx = Product type marking code

## Suggested PAD Layout

| SIZE | MBS  |        |
|------|------|--------|
|      | (mm) | (inch) |
| A    | 1.20 | 0.047  |
| B    | 1.84 | 0.072  |
| C    | 2.40 | 0.094  |
| D    | 6.00 | 0.236  |



## Standard Packaging

| Case Type | REEL PACK       |                     |
|-----------|-----------------|---------------------|
|           | REEL<br>( pcs ) | Reel Size<br>(inch) |
| MBS       | 2,500           | 13                  |