

CDBFN120-HF Thru CDBFN1100-HF

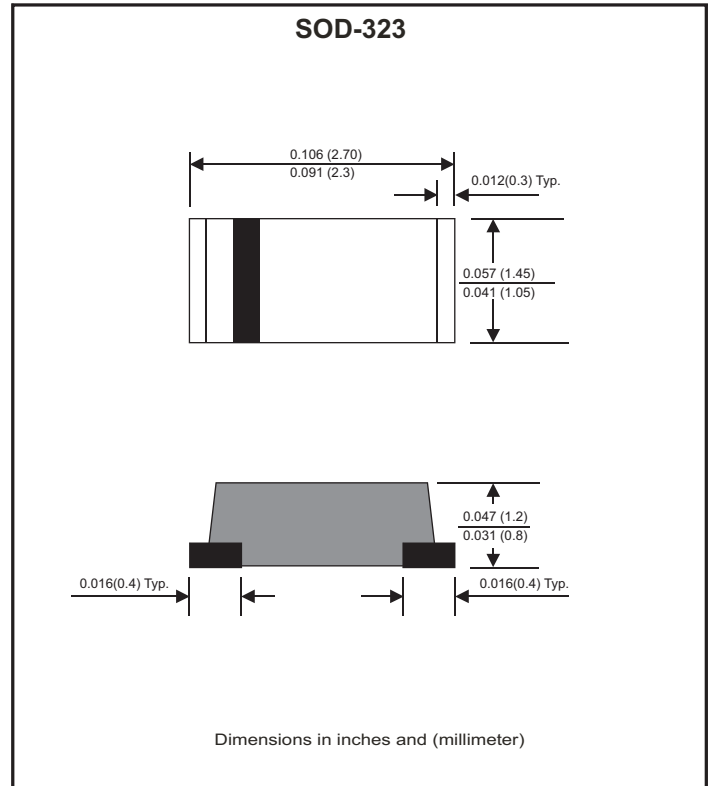
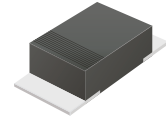
Voltage: 20 to 100 Volts

Current: 1.0 Amp

RoHS Device

Features

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



Mechanical data

- Case: JEDEC SOD-323, Molded plastic
- Terminals: Solde plated, solderable per MIL-STD-750, method 2026.
- Polarity: Indicated by cathode band.
- Mounting position: Any
- Weight:0.008 gram(approx.).

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

| Parameter | Symbol | CDBFN 120-HF | CDBFN 130-HF | CDBFN 140-HF | CDBFN 150-HF | CDBFN 160-HF | CDBFN 180-HF | CDBFN 1100-HF | Unit |
|---|------------------|--------------|--------------|--------------|--------------|--------------|--------------|---------------|------|
| Repetitive peak reverse voltage | V _{RRM} | 20 | 30 | 40 | 50 | 60 | 80 | 100 | V |
| Maximum RMS voltage | V _{RMS} | 14 | 21 | 28 | 35 | 42 | 56 | 70 | V |
| Continuous reverse voltage | V _R | 20 | 30 | 40 | 50 | 60 | 80 | 100 | V |
| Maximum forward voltage @I _F =1.0A | V _F | 0.55 | | | 0.70 | | 0.85 | | V |
| Forward rectified current | I _O | 1.0 | | | | | | | A |
| Forward surge current, 8.3ms half sine wave superimposed on rated load (JEDEC method) | I _{FSM} | 30 | | | | | | | A |
| Reverse current on V _R =V _{RRM} @T _A =25°C @T _A =125°C | I _R | | | | | 0.5 | | | mA |
| Typ. thermal resistance, junction to ambient air | R _{θJA} | | | | | 90 | | | °C/W |
| Typ. diode junction capacitance (Note 1) | C _J | | | | | 120 | | | pF |
| Operating junction temperature | T _J | | | | | -55 to +125 | | -55 to +150 | °C |
| Storage temperature | T _{STG} | -65 to +175 | | | | | | | °C |

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

Ratings and Characteristic Curves(CDBFN120-HF Thru CDBFN1100-HF)

Fig.1 Typical Forward Current Derating Curve

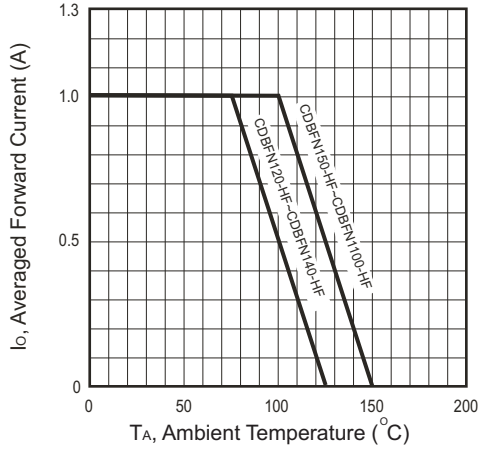


Fig.2 Typical Forward Characteristics

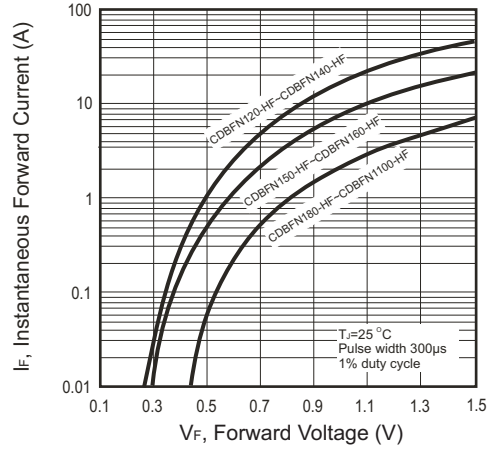


Fig.3 Maximum Non-repetitive Peak Forward Surge Current

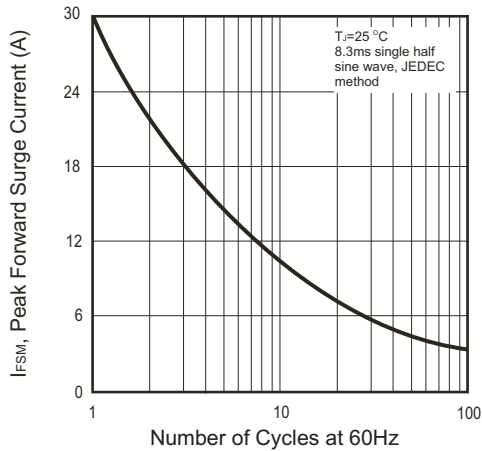


Fig.4 Typical Junction Capacitance

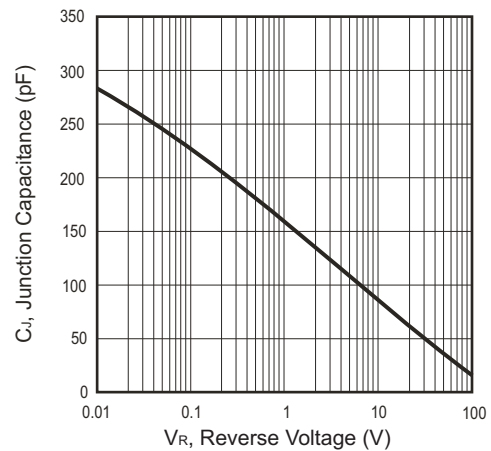
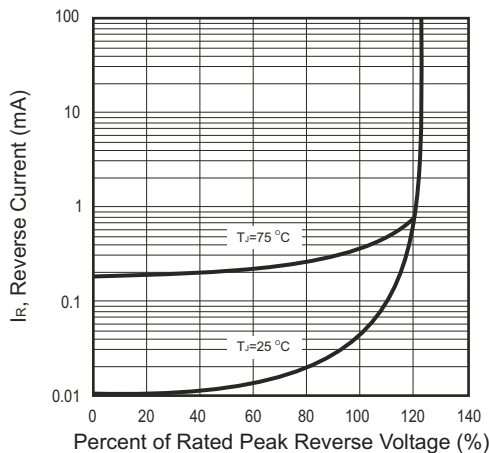
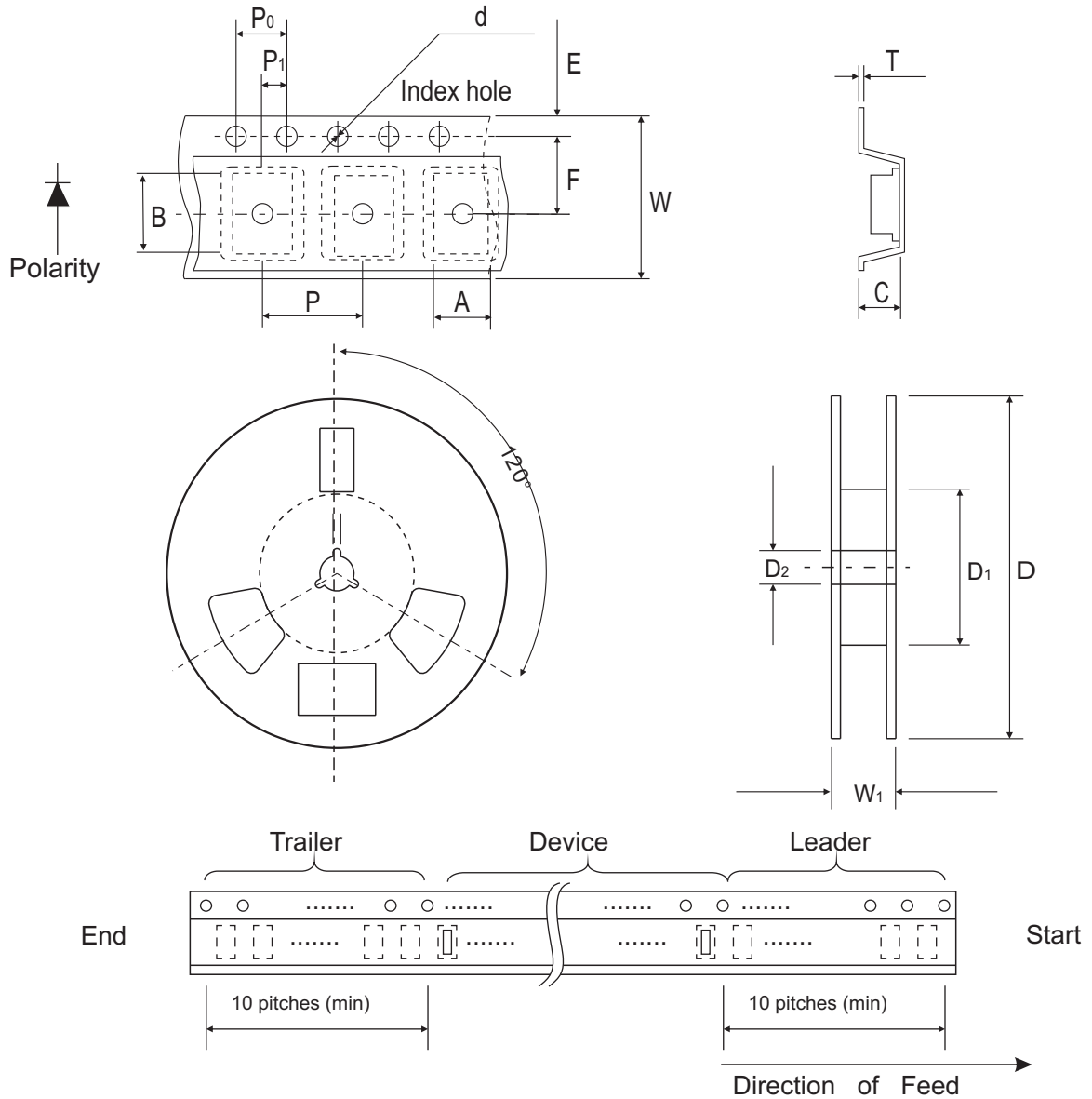


Fig.5 Typical Reverse Characteristics



Reel Taping Specification



| SOD-323 | SYMBOL | A | B | C | d | D | D1 | D2 |
|---------|--------|---------------|---------------|---------------|---------------|---------------|-----------|----------------|
| | (mm) | 1.47 ± 0.10 | 2.95 ± 0.10 | 1.15 ± 0.10 | 1.50 ± 0.10 | 178 ± 1 | 62.0 MIN. | 13.0 ± 0.50 |
| | (inch) | 0.057 ± 0.004 | 0.116 ± 0.004 | 0.045 ± 0.004 | 0.059 ± 0.004 | 7.008 ± 0.040 | 2.44 MIN. | 0.512 ± 0.0197 |

| SOD-323 | SYMBOL | E | F | P | P0 | P1 | W | W1 |
|---------|--------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|
| | (mm) | 1.75 ± 0.10 | 3.50 ± 0.10 | 4.00 ± 0.10 | 4.00 ± 0.10 | 2.00 ± 0.10 | 8.00 ± 0.30 | 11.4 ± 0.04 |
| | (inch) | 0.069 ± 0.004 | 0.138 ± 0.004 | 0.157 ± 0.004 | 0.157 ± 0.004 | 0.079 ± 0.004 | 0.315 ± 0.012 | 0.449 ± 0.0016 |

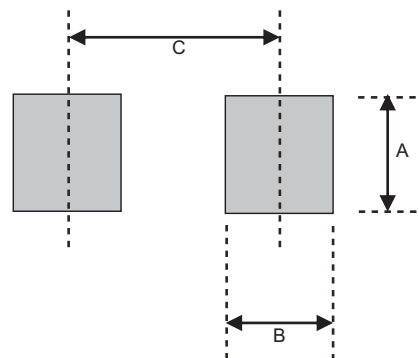
Marking Code

| Park Number | Marking Code |
|--------------|--------------|
| CDBFN120-HF | 12 |
| CDBFN130-HF | 13 |
| CDBFN140-HF | 14 |
| CDBFN150-HF | 15 |
| CDBFN160-HF | 16 |
| CDBFN180-HF | 18 |
| CDBFN1100-HF | 10 |



Suggested PAD Layout

| SIZE | SOD-323 | |
|------|---------|--------|
| | (mm) | (inch) |
| A | 0.059 | 1.500 |
| B | 0.039 | 1.000 |
| C | 0.051 | 1.300 |



Standard Package

| Case Type | Qty per Reel | Reel Size |
|-----------|--------------|-----------|
| | (Pcs) | (inch) |
| SOD-323 | 3000 | 7 |