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Chip Schottky Barrier Rectifier



CDBD2020-G Thru. CDBD20200-G

Reverse Voltage: 20 to 200 Volts
Forward Current: 20.0 Amp
RoHS Device

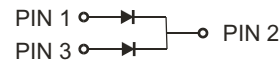
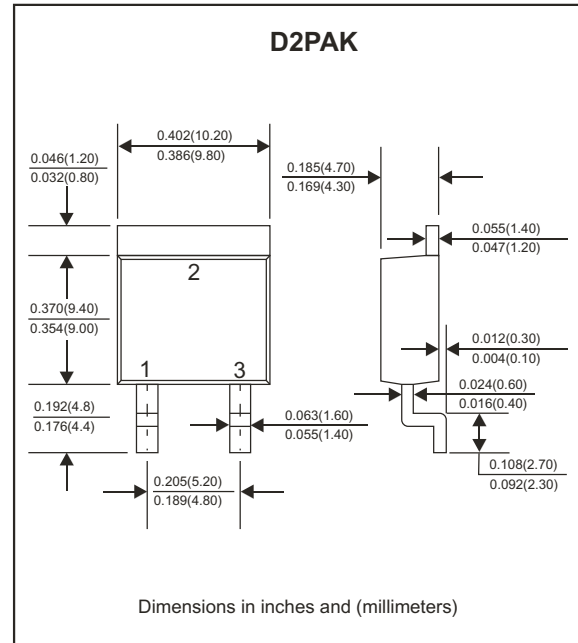


Features

- 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.
- 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

- Case: TO-263/D2PAK, molded plastic.
- Terminals: solderable per MIL-STD-750, method 2026.
- Polarity: Indicated by cathode band.
- Weunting Position: Any
- Weight: 1.46 gram(approx.).



Maximum Ratings (At Ta=25°C, unless otherwise noted)

| Parameter | Symbol | CDBD 2020-G | CDBD 2030-G | CDBD 2040-G | CDBD 2045-G | CDBD 2050-G | CDBD 2060-G | CDBD 2080-G | CDBD 20100-G | CDBD 20150-G | CDBD 20200-G | Unit | |
|---|--|------------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|--------------|--------------|------|------|
| Repetitive peak reverse voltage | V _{RRM} | 20 | 30 | 40 | 45 | 50 | 60 | 80 | 100 | 150 | 200 | V | |
| Continuous reverse voltage | V _R | 20 | 30 | 40 | 45 | 50 | 60 | 80 | 100 | 150 | 200 | V | |
| RMS voltage | V _{RMS} | 14 | 21 | 28 | 31.5 | 35 | 42 | 56 | 70 | 105 | 140 | V | |
| Maximum Forward rectified current (See fig. 1) | I _o | 20.0 | | | | | | | | | | A | |
| Maximum forward voltage I _F =10.0A | V _F | 0.55 | | | | 0.75 | | 0.85 | 1.00 | | | V | |
| Maxium Forward surge current, 8.3ms singlehalf sine-wave superimposed on rate load (JEDEC method) | I _{FSM} | 150 | | | | | | | | | | A | |
| Maximum Reverse current | V _R =V _{RRM} T _A =25°C | I _R | | | | | 0.5 | | | | | | mA |
| | V _R =V _{RRM} T _A =100°C | I _R | | | | | 50 | | | | | | mA |
| Typ. Thermal resistance | Junction to Case | R _{θJc} | | | | | | | | | | 2.0 | °C/W |
| Operating temperature | T _J | -55 to +125 | | | | | -55 to +150 | | | | | | °C |
| Storage temperature | T _{STG} | -65 to +175 | | | | | | | | | | °C | |

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RATING AND CHARACTERISTIC CURVES (CDBD2020-G Thru. CDBD20200-G)

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

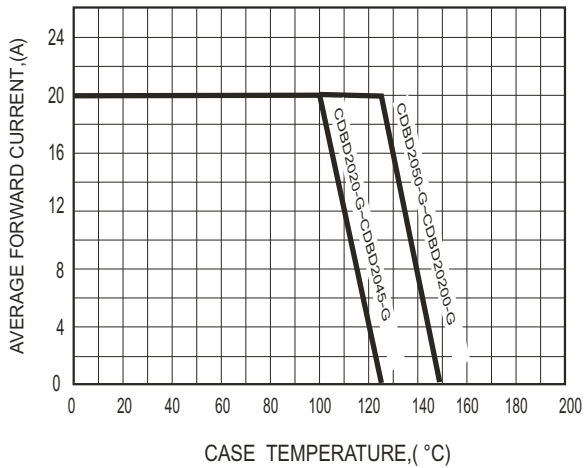


FIG.2-TYPICAL FORWARD CHARACTERISTICS

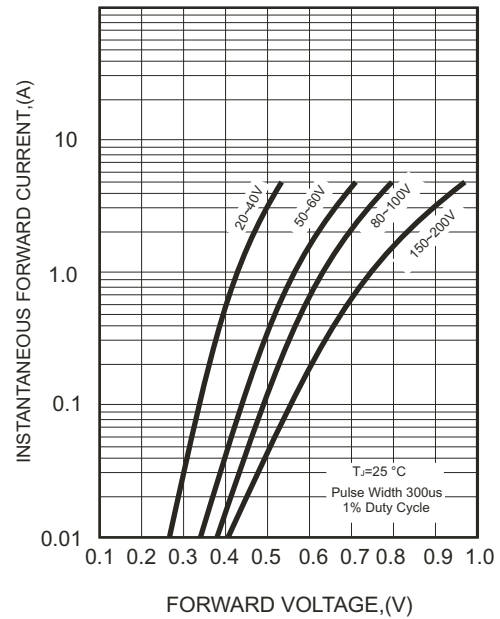


FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

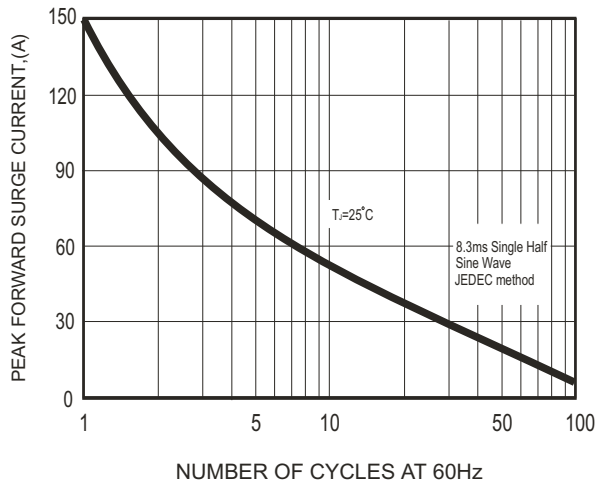
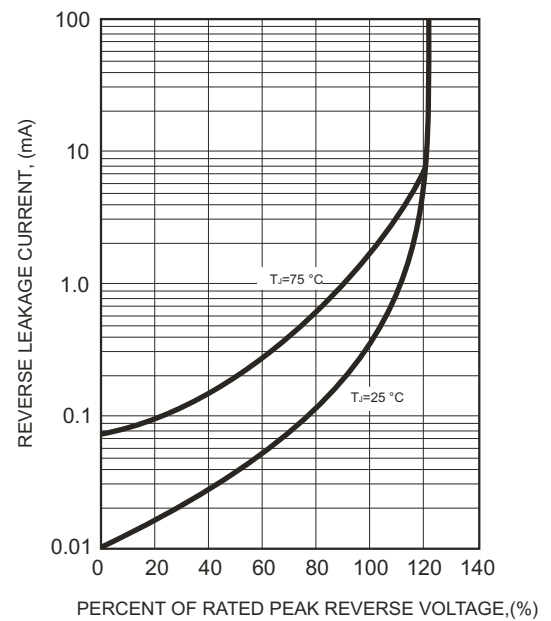


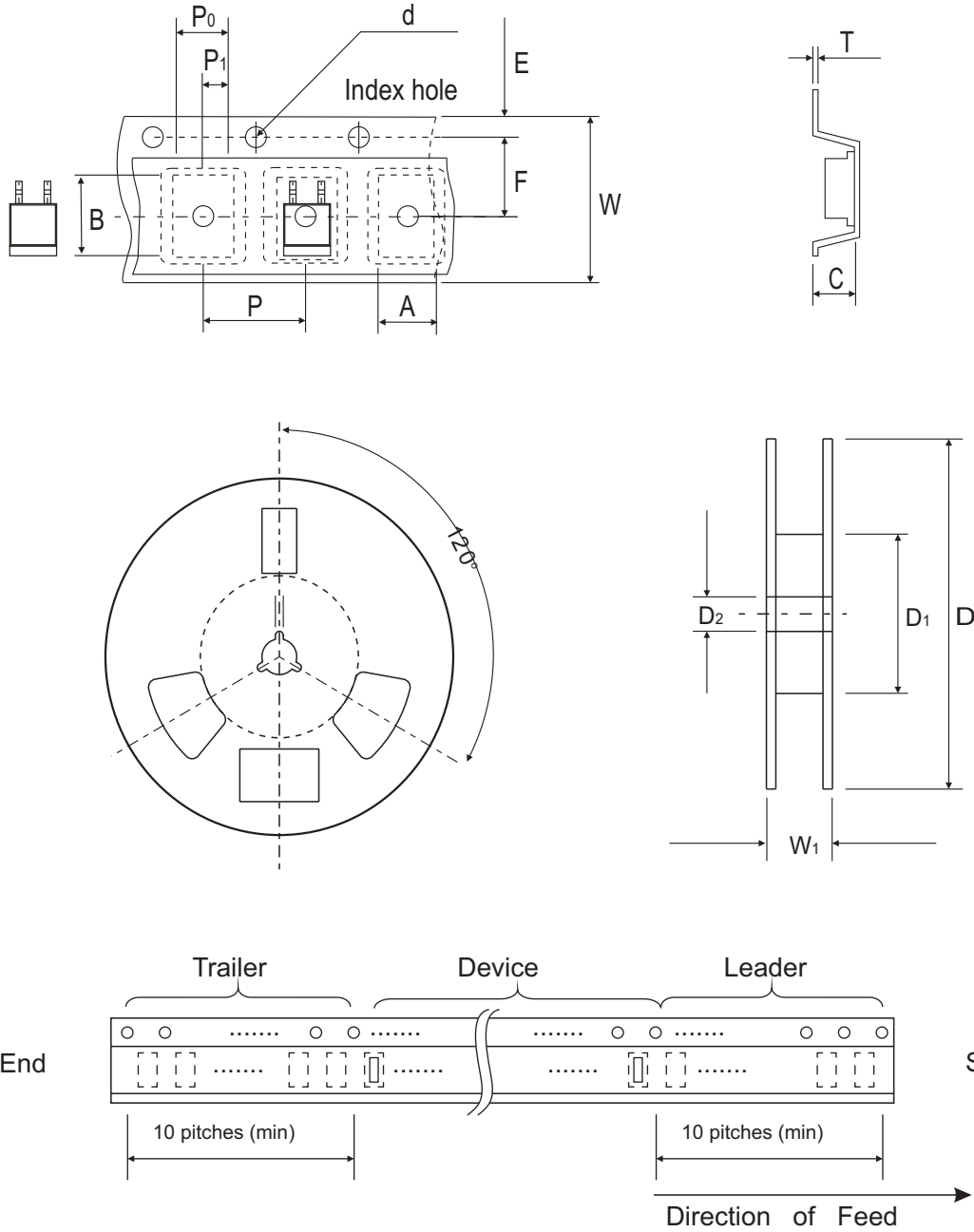
FIG.4 - TYPICAL REVERSE CHARACTERISTICS



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Reel Taping Specification



| TO-263/D2PAK | SYMBOL | A | B | C | d | D | D ₁ | D ₂ |
|--------------|--------|---------------|---------------|---------------|---------------|---------------|----------------|----------------|
| | (mm) | 10.70 ± 0.10 | 16.30 ± 0.10 | 5.10 ± 0.10 | 1.50 ± 0.10 | 330.00 ± 2.00 | 50.0 MIN. | 13.0 ± 0.50 |
| | (inch) | 0.421 ± 0.004 | 0.642 ± 0.004 | 0.201 ± 0.004 | 0.059 ± 0.004 | 13.00 ± 0.079 | 1.969 MIN. | 0.512 ± 0.020 |

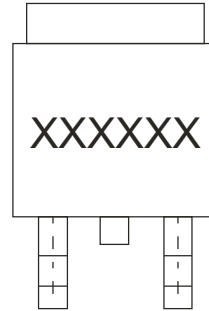
| TO-263/D2PAK | SYMBOL | E | F | P | P ₀ | P ₁ | T | W | W ₁ |
|--------------|--------|---------------|---------------|---------------|----------------|----------------|---------------|---------------|----------------|
| | (mm) | 1.75 ± 0.10 | 11.50 ± 0.10 | 16.00 ± 0.10 | 4.00 ± 0.10 | 2.00 ± 0.10 | 0.23 ± 0.10 | 24.00 ± 0.30 | 30.00 ± 1.0 |
| | (inch) | 0.069 ± 0.004 | 0.453 ± 0.004 | 0.630 ± 0.004 | 0.157 ± 0.004 | 0.079 ± 0.004 | 0.009 ± 0.004 | 0.945 ± 0.012 | 1.181 ± 0.039 |

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Marking Code

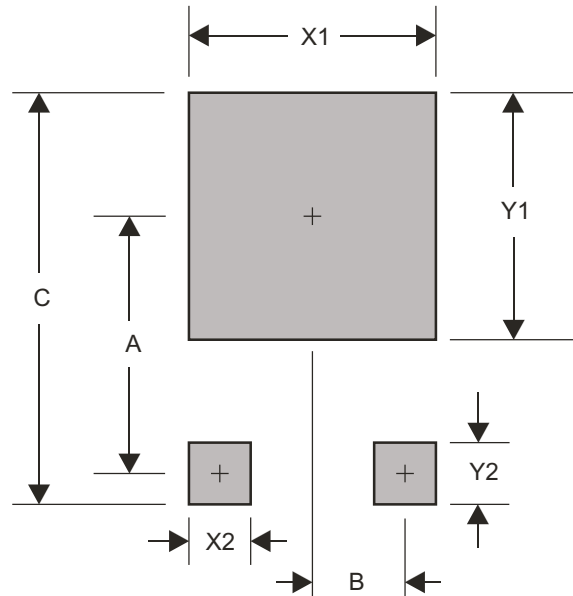
| Part Number | Marking Code |
|-------------|--------------|
| CDBD2020-G | SK2020 |
| CDBD2030-G | SK2030 |
| CDBD2040-G | SK2040 |
| CDBD2045-G | SK2045 |
| CDBD2050-G | SK2050 |
| CDBD2060-G | SK2060 |
| CDBD2080-G | SK2080 |
| CDBD20100-G | SK20100 |
| CDBD20150-G | SK20150 |
| CDBD20200-G | SK20200 |



XXXXXX / XXXXXXXX = Product type marking code

Suggested PAD Layout

| SIZE | TO-263 / D2PAK | |
|------|----------------|--------|
| | (mm) | (inch) |
| A | 9.50 | 0.374 |
| B | 2.50 | 0.098 |
| C | 16.90 | 0.665 |
| X1 | 10.80 | 0.425 |
| X2 | 1.10 | 0.043 |
| Y1 | 11.40 | 0.449 |
| Y2 | 3.50 | 0.138 |



Standard Packaging

| Case Type | REEL PACK | |
|--------------|------------|------------------|
| | REEL (pcs) | Reel Size (inch) |
| TO-263/D2PAK | 800 | 13 |