

**Trench MOS Barrier Schottky Rectifier**

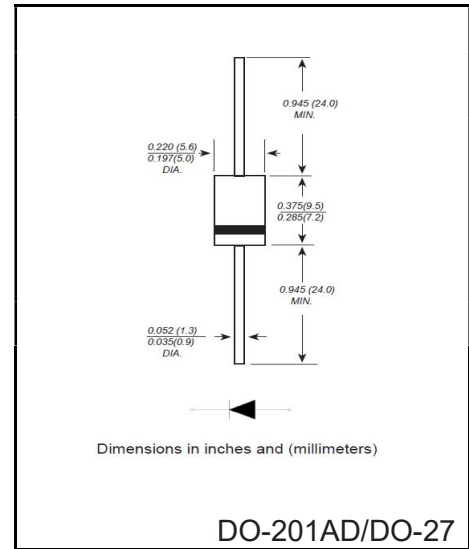
**Reverse Voltage - 40 V**

**Forward Current - 10 A**



**FEATURES**

- ◆ Plastic Package Has Underwriters Laboratory Flammability Classification 94V-0
- ◆ Metal Silicon Junction, Majority Carrier Conduction
- ◆ Guard Ring For Over Voltage Protection
- ◆ Low Power Loss ,High Efficiency
- ◆ High Current Capability ,Low Forward Voltage Drop, High Surge Capability
- ◆ For Use In Low Voltage ,High Frequency Inverters, Free Wheeling ,And Polarity Protection Applications
- ◆ High Temperature Soldering: 260°C MAX At 10 Seconds



DO-201AD/DO-27

**MECHANICAL DATA**

- ◆ Case: DO-201AD/DO-27
- ◆ Terminals: Solderable per MIL-STD-750, Method 2026
- ◆ Approx. Weight: 0.98g / 0.0345oz

**Maximum Ratings (Per Leg) at Ta=25°C unless otherwise specified**

| Parameter  | Symbols                  | Value                  | Units          |
|--|--------------------------|------------------------|----------------|
| Maximum Repetitive Peak Reverse Voltage  | <b>V<sub>RRM</sub></b>   | 40                     | <b>V</b>       |
| Maximum RMS voltage  | <b>V<sub>RMS</sub></b>   | 40                     | <b>V</b>       |
| Maximum DC Blocking Voltage  | <b>V<sub>DC</sub></b>    | 40                     | <b>V</b>       |
| Maximum Average Forward Rectified Current(See FIG.1)   | <b>I<sub>F(AV)</sub></b> | 10                     | <b>A</b>       |
| Peak Forward Surge Current, 8.3ms Single Half Sine-wave superimposed on rated load per diode | <b>I<sub>FSM</sub></b>   | 125                    | <b>A</b>       |
| Operating Temperature Range  | <b>T<sub>J</sub></b>     | -65 ~ +150             | <b>°C</b>      |
| Storage Temperature Range  | <b>T<sub>STG</sub></b>   | -65 ~ +150             | <b>°C</b>      |
| Thermal resistance from junction to ambient  | DO-27                    | <b>R<sub>θJC</sub></b> | 25 <b>°C/W</b> |

**Electrical Characteristics (Per Leg) unless otherwise specified**

| Characteristics  | Symbols               | Value                 |            | Units    |           |
|--|-----------------------|-----------------------|------------|----------|-----------|
| Maximum instantaneous forward voltage at I <sub>F(AV)</sub> (Note 1) | <b>V<sub>F</sub></b>  | <b>Typ</b>            | <b>Max</b> | <b>V</b> |           |
| at I <sub>F</sub> =2A Instantaneous forward voltage per diode        |                       | T <sub>J</sub> =25°C  | 0.40       |          | -         |
|  |                       | T <sub>J</sub> =105°C | 0.36       |          | -         |
| at I <sub>F</sub> =10A Instantaneous forward voltage per diode       |                       | T <sub>J</sub> =25°C  | 0.51       |          | 0.53      |
|  | T <sub>J</sub> =105°C | 0.48                  | -          |          |           |
| Maximum Reverse Current at Rated DC Blocking Voltage(Note 2)         | <b>I<sub>R</sub></b>  | T <sub>J</sub> =25°C  | 70         | 120      | <b>uA</b> |
|  |                       | T <sub>J</sub> =105°C | -          | 40       | <b>mA</b> |

Note: (1)Pulse test: 300 μs pulse width, 1 % duty cycle  
(2) Pulse test: Pulse width ≦ 40 ms

**RATINGS AND CHARACTERISTIC CURVES**

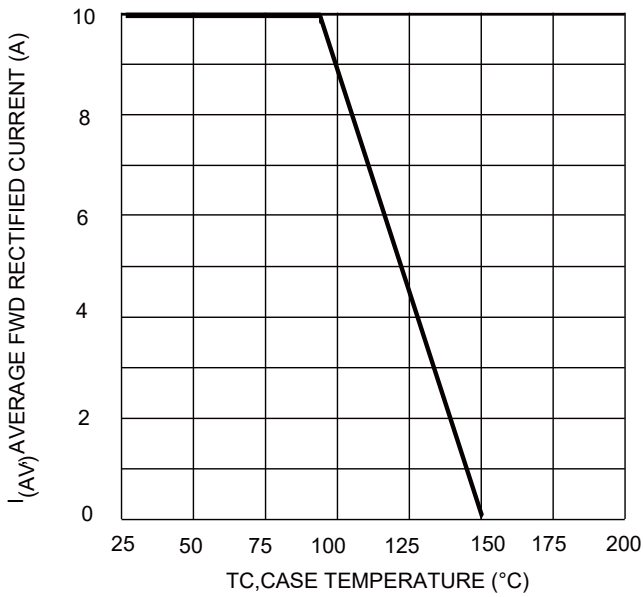


Fig. 1 Forward Derating Curve

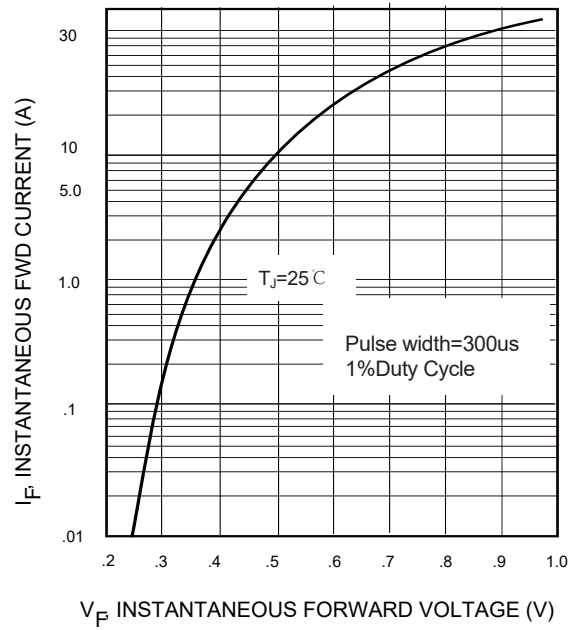


Fig. 2 Typical Forward Characteristics

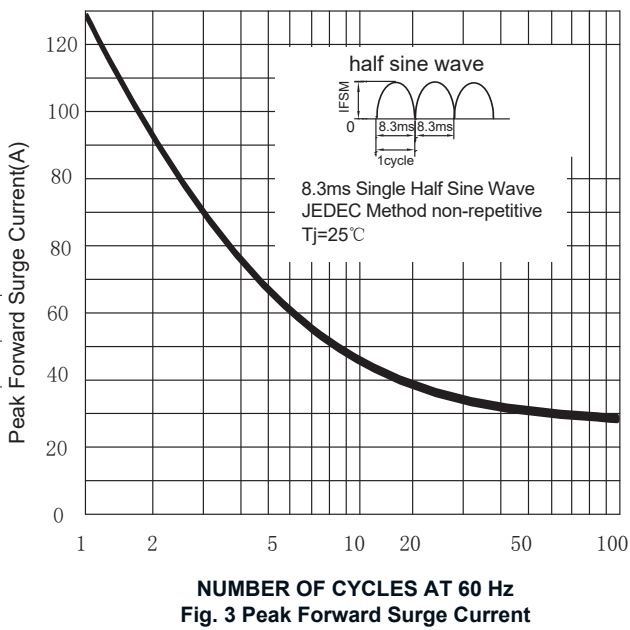


Fig. 3 Peak Forward Surge Current

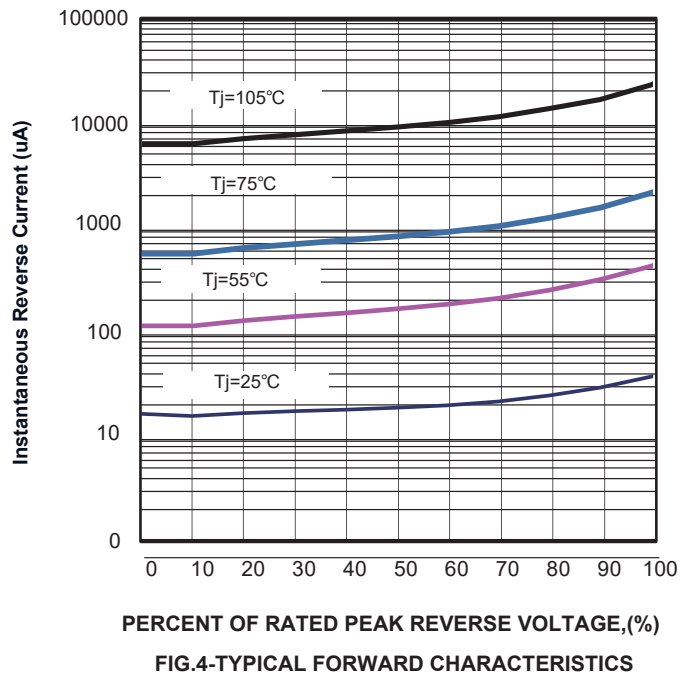
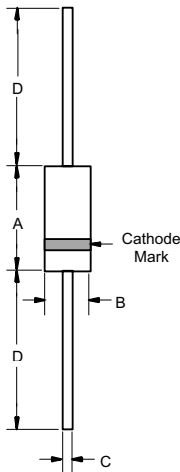


FIG.4-TYPICAL FORWARD CHARACTERISTICS

**Package Outline DO-201AD(DO-27)**



| DIM | DIMENSIONS |      |       |      | NOTE |
|-----|------------|------|-------|------|------|
|     | INCHES     |      | MM    |      |      |
|     | MIN        | MAX  | MIN   | MAX  |      |
| A   | ---        | .370 | ---   | 9.50 |      |
| B   | ---        | .250 | ---   | 6.40 |      |
| C   | .048       | .052 | 1.20  | 1.30 |      |
| D   | 1.000      | ---  | 25.40 | ---  |      |

**Summary of Packing Options**

| Package         | Packing Description | Packing Quantity | Industry Standard |
|-----------------|---------------------|------------------|-------------------|
| DO-201AD(DO-27) | BOX                 | 250/1000/1250    | EIA-481-1         |

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