

**Trench MOS Barrier Schottky Rectifier**

**Reverse Voltage - 45 V**

**Forward Current - 5 A**

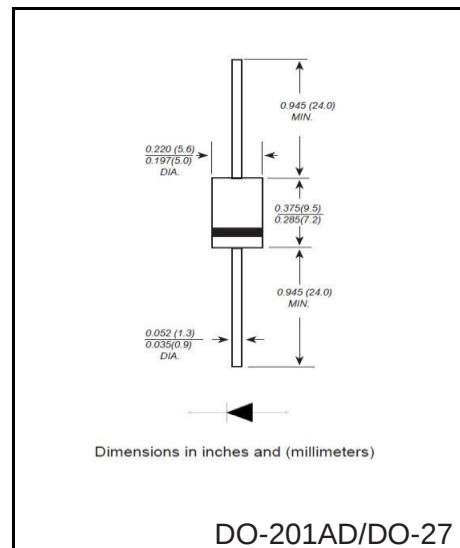


**FEATURES**

- ♦ Advanced trench technology
- ♦ Low forward voltage drop
- ♦ Low power losses
- ♦ High efficiency operation
- ♦ Lead free in comply with EU RoHS 2011/65/EU directives

**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                                                      |           | $V_{RRM}$       | 45         | V     |
| Maximum RMS voltage                                                                          |           | $V_{RMS}$       | 45         | V     |
| Maximum DC Blocking Voltage                                                                  |           | $V_{DC}$        | 45         | V     |
| Maximum Average Forward Rectified Current                                                    | Per diode | $I_{F(AV)}$     | 5          | A     |
| Peak Forward Surge Current, 8.3ms Single Half Sine-wave superimposed on rated load per diode |           | $I_{FSM}$       | 120        | A     |
| Operating Temperature Range                                                                  |           | $T_J$           | -40 ~ +150 | °C    |
| Storage Temperature Range                                                                    |           | $T_{STG}$       | -40 ~ +150 | °C    |
| Typical Thermal Resistance Per diode(munted on FR-4 PCB)                                     | DO-27     | $R_{\theta JC}$ | 20         | °C/W  |

Note1: Thermal resistance from Junction to case per leg mounted on heatsink.

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

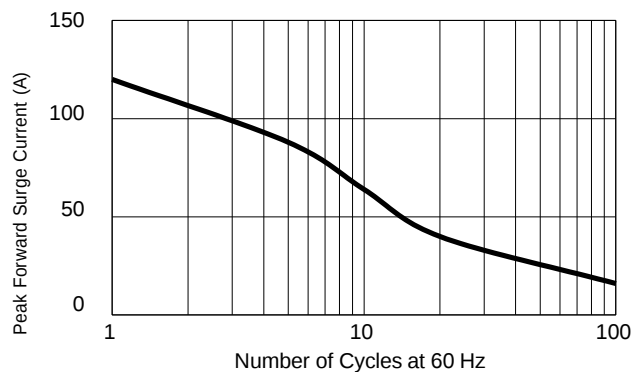
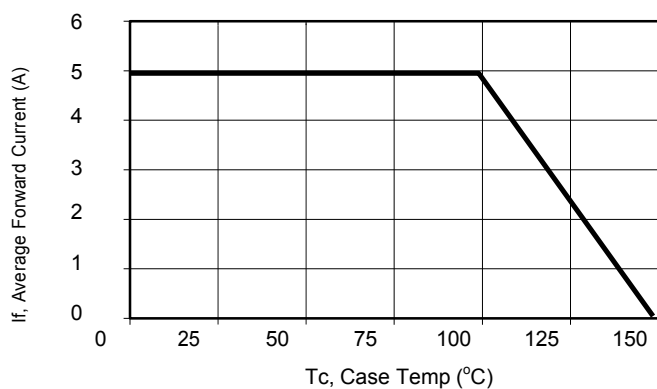
| Characteristics                                                  |          | Symbols | Value |     | Units |
|------------------------------------------------------------------|----------|---------|-------|-----|-------|
| Forward Voltage Drop(Note2)                                      |          | $V_F$   | Typ   | Max | V     |
| at $I_F=5A$ Instantaneous forward voltage per diode              | TA=25°C  |         | 0.41  | -   |       |
|                                                                  | TA=125°C |         | -     | -   |       |
| at $I_F=5A$ Instantaneous forward voltage per diode              | TA=25°C  |         | -     | -   |       |
|                                                                  | TA=125°C |         | 0.35  | -   |       |
| Instantaneous reverse current per diode at rated reverse voltage | TA=25°C  | $I_R$   | 80    | 100 | uA    |
|                                                                  | TA=125°C |         | -     | 10  | mA    |

Note2: (1)Pulse test: 300  $\mu$ s pulse width, 1 % duty cycle

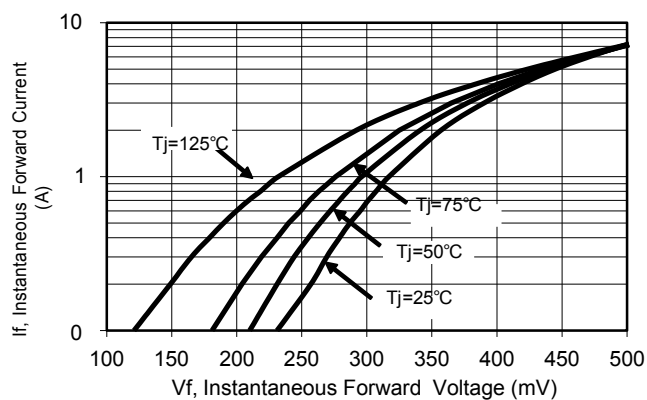
(2) Pulse test: Pulse width  $\leq$  40 ms

**RATINGS AND CHARACTERISTIC CURVES**

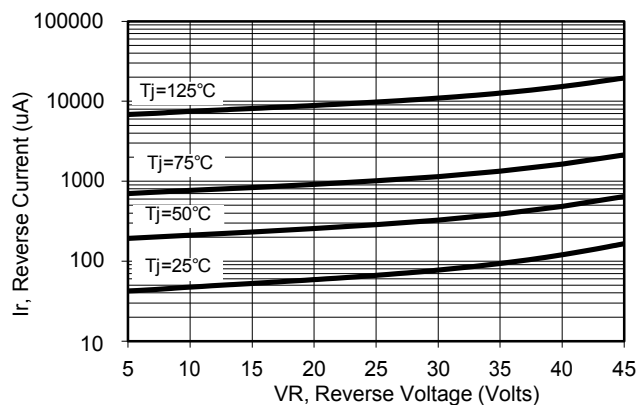
**RATINGS AND CHARACTERISTICS CURVES** ( $T_A = 25^\circ\text{C}$  unless otherwise noted)



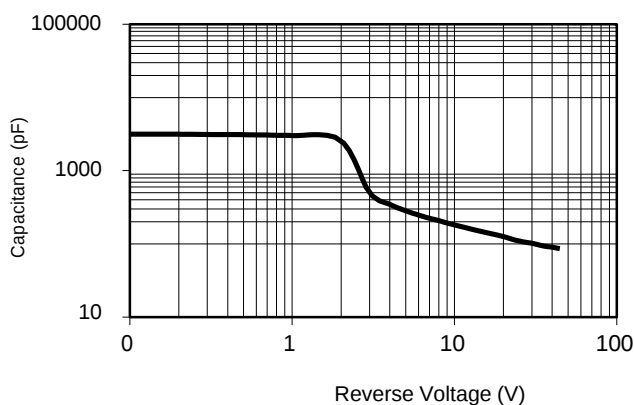
**Current Derating, Case**



**Maximum Repetitive Surge Current**

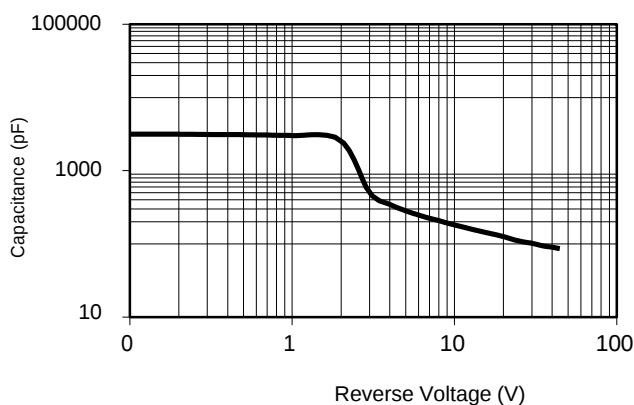


**Typical Forward Voltage**

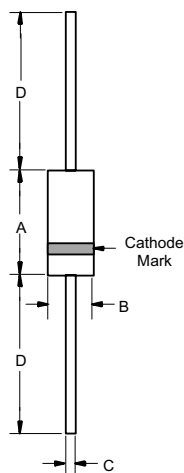


**Typical Reverse Current**

**Typical Junction Capacitance**



Package Outline DO-201AD(DO-27)



| DIMENSIONS |        |      |       |      |      |
|------------|--------|------|-------|------|------|
| DIM        | INCHES |      | MM    |      | NOTE |
|            | 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         |