

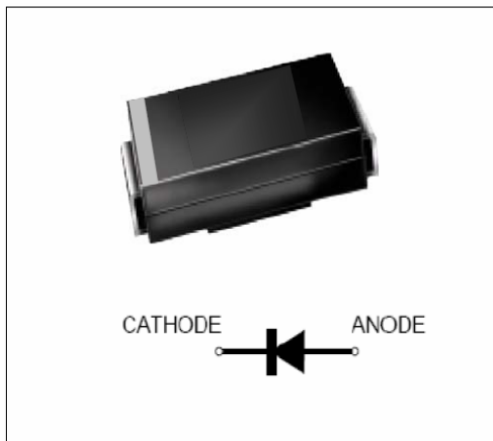
# SM2150A thru SM2200A

## Schottky Barrier Rectifiers

Reverse Voltage 150 to 200V Forward Current 2.0A

### FEATURES

- \* Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- \* Low power loss, high efficiency
- \* For use in low voltage high frequency inverters, free wheeling, and polarity protection applications
- \* Guardring for over voltage protection
- \* High temperature soldering guaranteed: 260°C/10 seconds at terminals



We declare that the material of product compliance with ROHS requirements

### Mechanical Data

**Case:** JEDEC DO-214AC,  
molded plastic over glass die

**Terminals:** Plated axial leads, solderable per MIL-STD-750, Method 2026

**Polarity:** Color band denotes cathode end

**Mounting Position:** Any

**Weight:** 0.0023 oz., 0.065 g

**Handling precaution:** None

### Electrical Characteristic

#### 1. Maximum Ratings & Thermal Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

| Parameter Symbol                                                                                 | symbol          | SM2150A     | SM2200A | Unit |
|--------------------------------------------------------------------------------------------------|-----------------|-------------|---------|------|
| device marking code                                                                              |                 | S215        | S220    |      |
| Maximum repetitive peak reverse voltage                                                          | $V_{RRM}$       | 150         | 200     | V    |
| Maximum RMS voltage                                                                              | $V_{RMS}$       | 105         | 140     | V    |
| Maximum DC blocking voltage                                                                      | $V_{DC}$        | 150         | 200     | V    |
| Maximum average forward rectified current 0.375" (9.5mm) lead length (See fig. 1)                | $I_F(AV)$       | 2.0         |         | A    |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) | $I_{FSM}$       | 60          |         | A    |
| Typical thermal resistance (Note 1)                                                              | $R_{\theta JA}$ | 150         |         | °C/W |
| Operating junction and storage temperature range                                                 | $T_J, T_{STG}$  | -40 to +150 |         | °C   |

#### Electrical Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

| Parameter Symbol                                                                                           | symbol | SM2150A     | SM2200A | Unit |
|------------------------------------------------------------------------------------------------------------|--------|-------------|---------|------|
| Maximum instantaneous forward voltage at 2.0A                                                              | $V_F$  | 0.87        |         | V    |
| Maximum DC reverse current $T_A = 25^\circ\text{C}$ at rated DC blocking voltage $T_A = 100^\circ\text{C}$ | $I_R$  | 0.5<br>10.0 |         | mA   |
| Typical junction capacitance at 4.0V, 1MHz                                                                 | $C_J$  | 110         |         | PF   |

#### NOTES:

1. 8.0mm<sup>2</sup> (.013mm thick) land areas

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### 2. Ratings and Characteristic Curves (TA = 25°C unless otherwise noted)

Fig. 1 - Forward Current Derating Curve

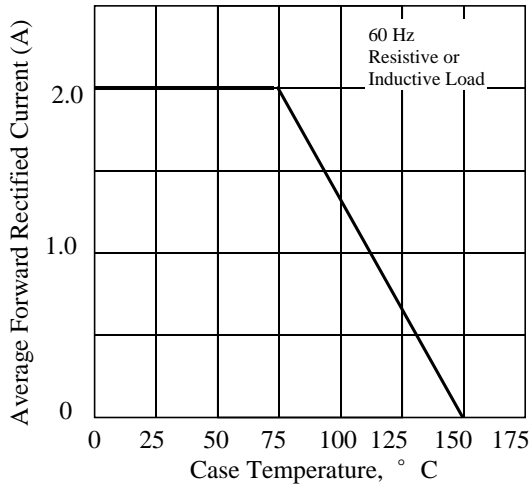


Fig. 2 - Maximum Non-repetitive Peak Forward Surge Current

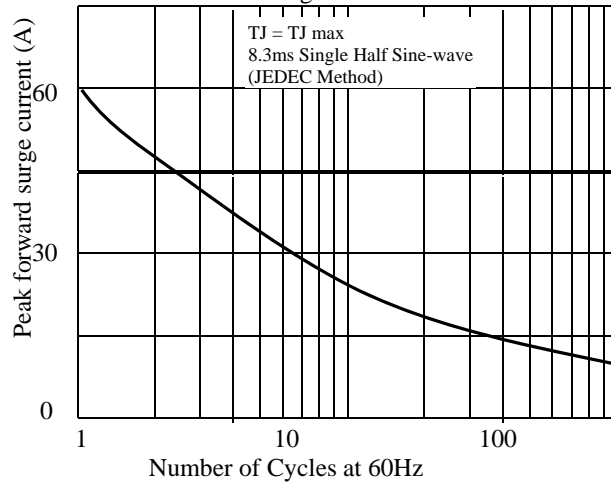


Fig 3. - Typical Instantaneous Forward Characteristics

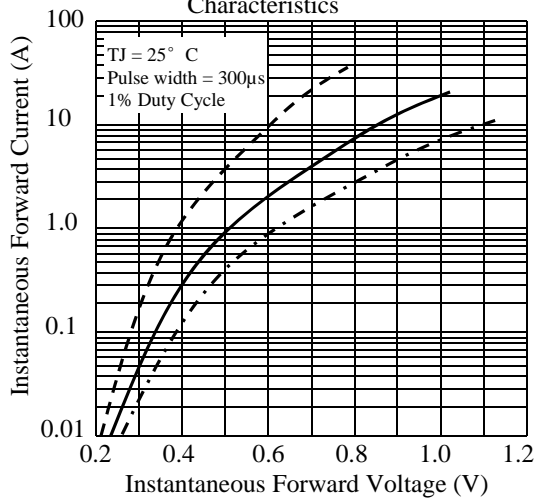


Fig 4. - Typical Reverse Characteristics

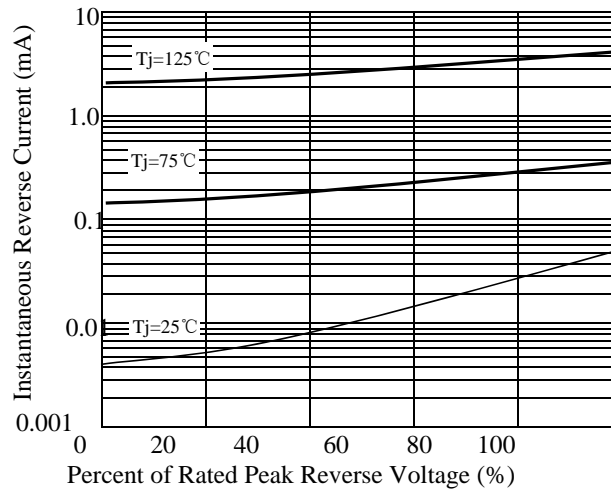


Fig 5. - typical transient thermal impedance

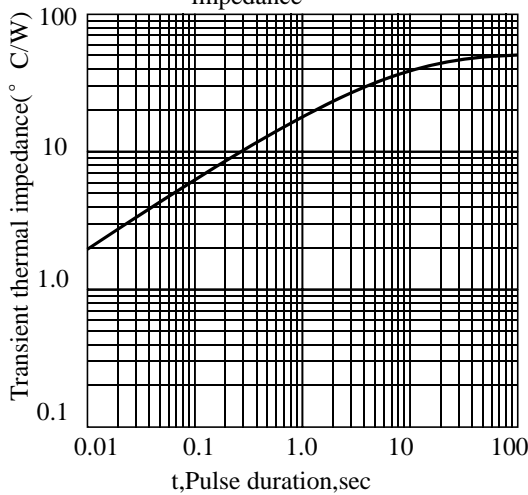
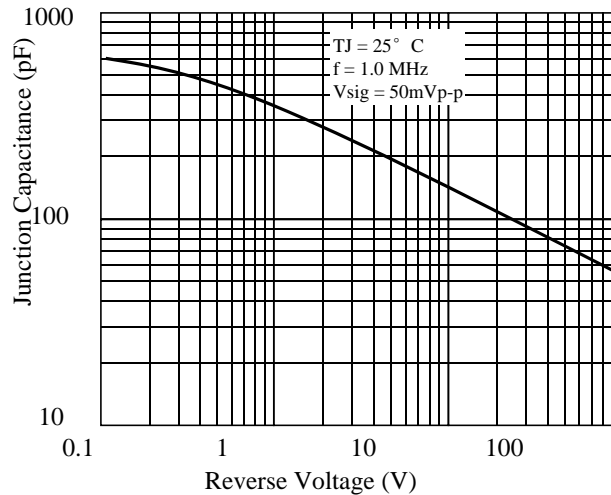
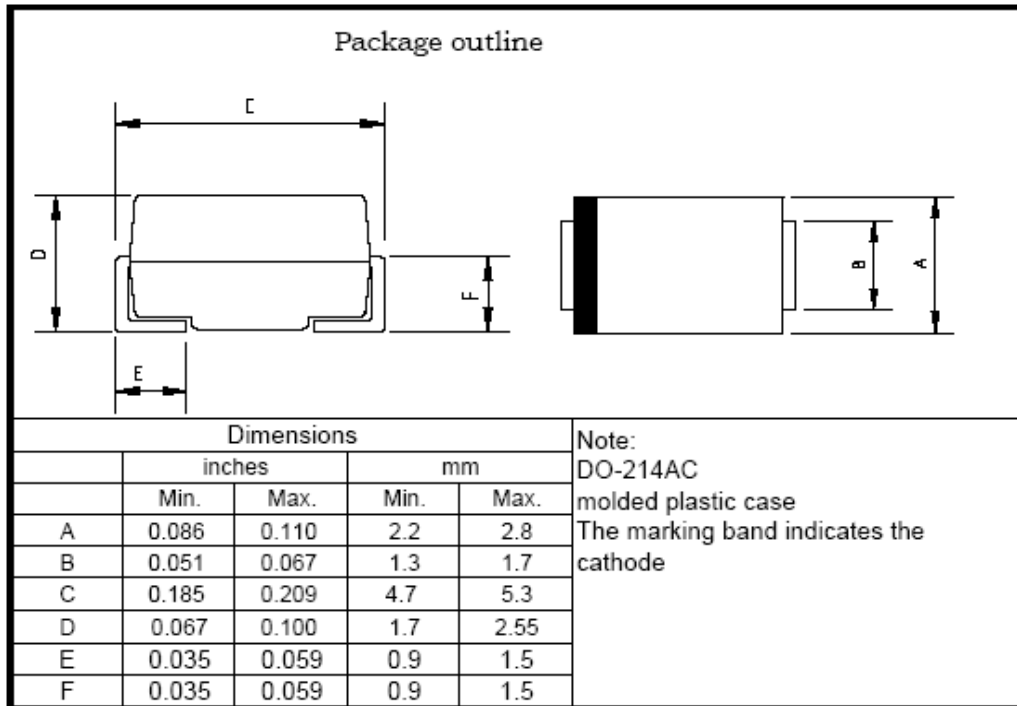


Fig 6. - Typical Junction Capacitance

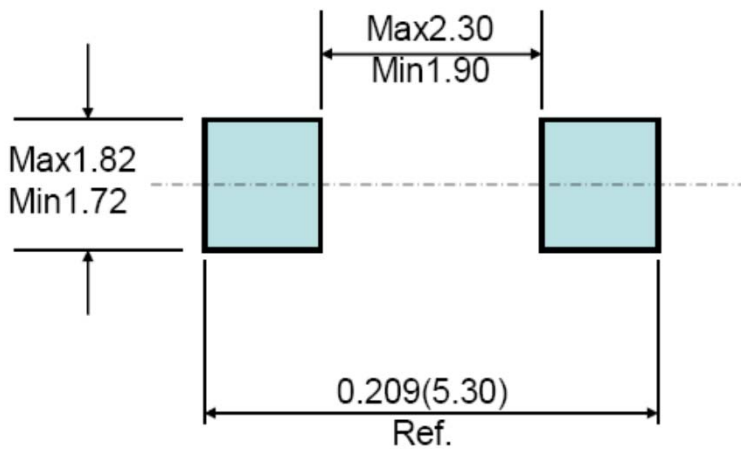


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### 3. dimension:



### Mounting Pad Layout ---SMA



SM2150A: "S"--肖特基产品; "M"--表面贴装; "2"--正向电流2A; "150"--VB为150V; "A"--SMA封装;

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### 4. Update Record

| 版次 | 更新记录 | 更新作者 | 更新日期       |
|----|------|------|------------|
| 1  | 第一版  | 周杰   | 2012.07.27 |