



# ES5A THRU ES5J

## 超快恢复二极管 Super Fast Rectifier

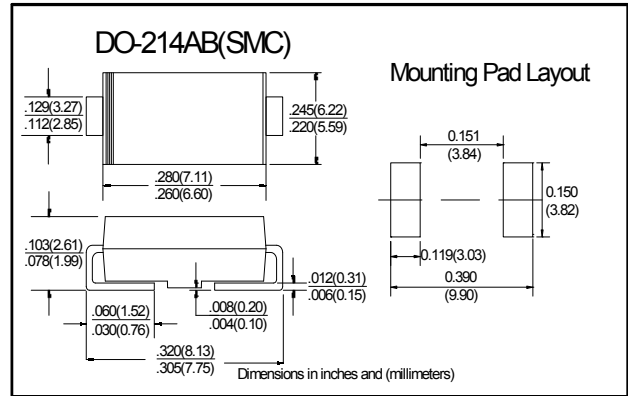
### ■特征 Features

- $I_o$  5.0A
- VRRM 50V-600V
- 耐正向浪涌电流能力高
- High surge current capability

### ■用途 Applications

- 整流用 Rectifier

### ■外形尺寸 Outline Dimensions



### ■极限值（绝对最大额定值）

#### Limiting Values (Absolute Maximum Rating)

| 参数名称<br>Item  | 符号<br>Symbol | 单位<br>Unit       | 条件<br>Conditions  | ES5        |     |     |     |     |     |     |     |
|---|--------------|------------------|---|------------|-----|-----|-----|-----|-----|-----|-----|
|   |              |                  |   | A          | B   | C   | D   | F   | G   | H   | J   |
| 反向重复峰值电压<br>Repetitive Peak Reverse Voltage         | $V_{RRM}$    | V                |   | 50         | 100 | 150 | 200 | 300 | 400 | 500 | 600 |
| 正向平均电流<br>Average Forward Current                   | $I_{F(AV)}$  | A                | 正弦半波 60Hz, 电阻负载, $T_a=50^\circ\text{C}$<br>60Hz Half-sine wave, Resistance load, $T_a=50^\circ\text{C}$ | 5.0        |     |     |     |     |     |     |     |
| 正向（不重复）浪涌电流<br>Surge(Non-repetitive)Forward Current | $I_{FSM}$    | A                | 正弦半波 60Hz, 一个周期, $T_a=25^\circ\text{C}$<br>60Hz Half-sine wave, 1 cycle, $T_a=25^\circ\text{C}$         | 150        |     |     |     |     |     |     |     |
| 结温<br>Junction Temperature                          | $T_J$        | $^\circ\text{C}$ |   | -55~+150   |     |     |     |     |     |     |     |
| 储存温度<br>Storage Temperature                         | $T_{STG}$    | $^\circ\text{C}$ |   | -55 ~ +150 |     |     |     |     |     |     |     |

### ■电特性（ $T_a=25^\circ\text{C}$ 除非另有规定）

#### Electrical Characteristics ( $T_a=25^\circ\text{C}$ Unless otherwise specified)

| 参数名称<br>Item                          | 符号<br>Symbol     | 单位<br>Unit                | 测试条件<br>Test Condition                 | ES5                     |   |   |     |   |     |   |   |
|---------------------------------------|------------------|---------------------------|--|-------------------------|---|---|-----|---|-----|---|---|
|                                       |                  |                           |  | A                       | B | C | D   | F | G   | H | J |
| 正向峰值电压<br>Peak Forward Voltage        | $V_{FM}$         | V                         | $I_{FM}=5.0A$                          | 0.95                    |   |   | 1.3 |   | 1.7 |   |   |
| 反向峰值电流<br>Peak Reverse Current        | $I_{RRM1}$       | $\mu\text{A}$             | $V_{RM}=V_{RRM}$                       | $T_a=25^\circ\text{C}$  |   |   |     |   |     |   |   |
|                                       | $I_{RRM2}$       |                           |  | $T_a=125^\circ\text{C}$ |   |   |     |   |     |   |   |
| 反向恢复时间<br>Reverse Recovery time       | $t_r$            | ns                        | $I_F=0.5A$ $I_R=1A$<br>$I_{RR}=0.25A$  | 35                      |   |   |     |   |     |   |   |
| 热阻(典型)<br>Thermal Resistance(Typical) | $R_{\theta J-A}$ | $^\circ\text{C}/\text{W}$ | 结和环境之间<br>Between junction and ambient | 50                      |   |   |     |   |     |   |   |
|                                       | $R_{\theta J-L}$ |                           | 结和引线之间<br>Between junction and lead    | 15                      |   |   |     |   |     |   |   |

### 备注: Notes:

1) 热阻从结到环境及从结到引线, 在电路板的0.3" x 0.3" (8.0毫米 x 8.0毫米)铜垫片区

Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 0.3" x 0.3" (8.0 mm x 8.0 mm) copper pad areas

## ■特性曲线（典型） Characteristics(Typical)

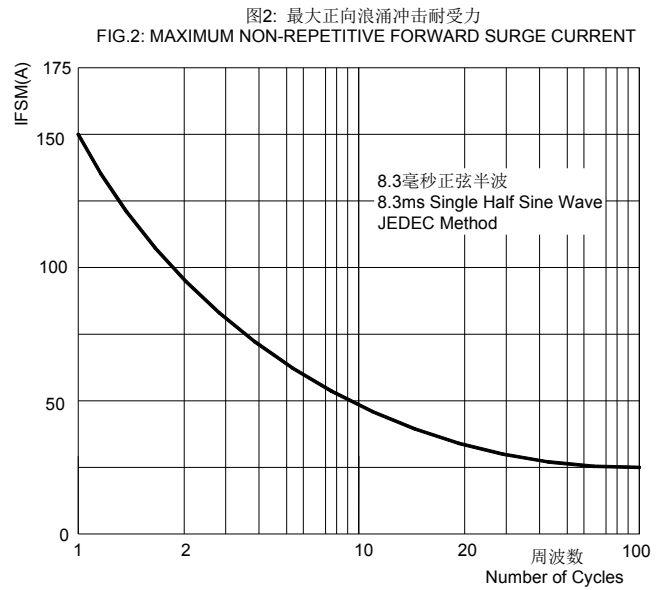
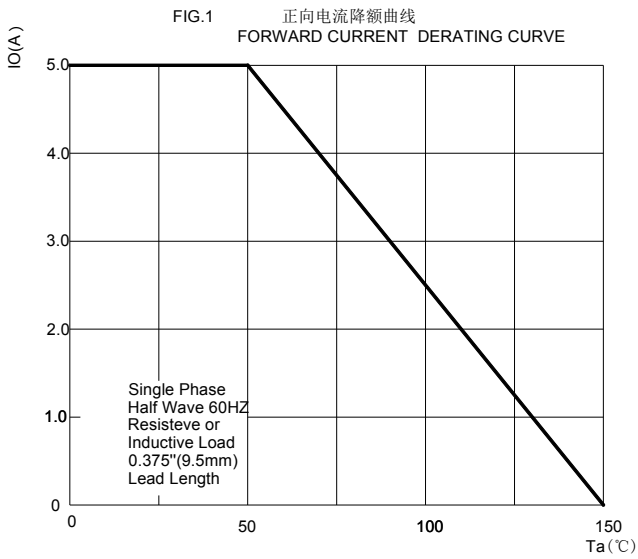


FIG.3 典型正向特性曲线  
TYPICAL FORWARD CHARACTERISTICS

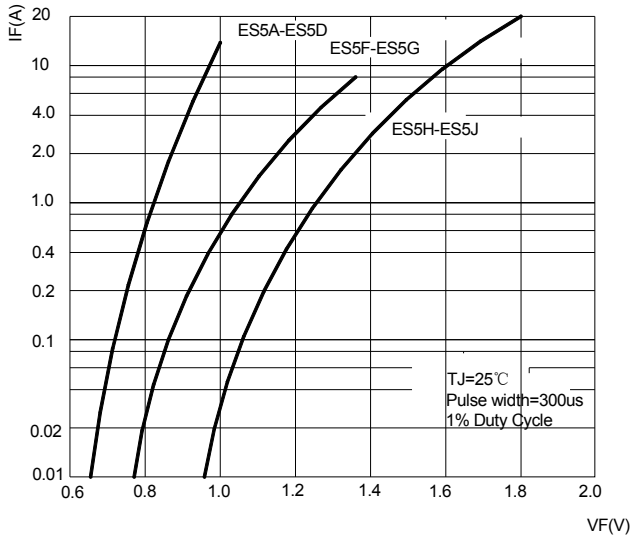


图4: 典型反向特性曲线  
FIG.4: TYPICAL REVERSE CHARACTERISTICS

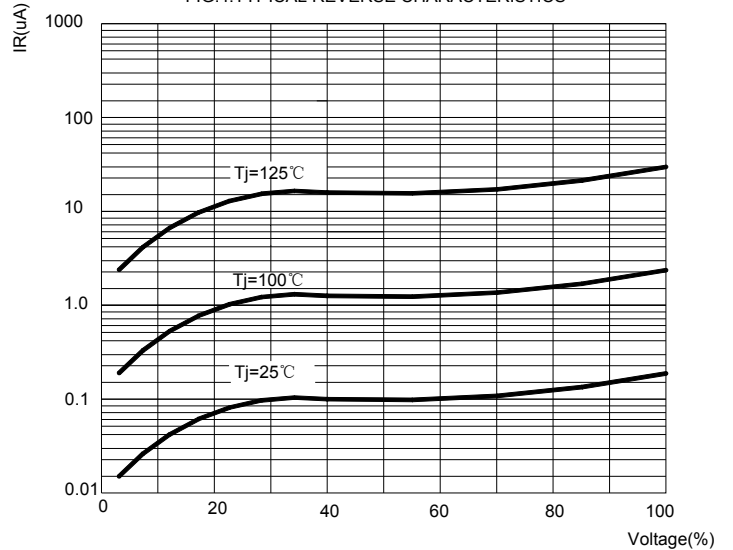


图5: 反向恢复时间试验电路及测试波形示意图  
FIG.5: Diagram of circuit and Testing wave form of reverse recovery time

