

## SMC Super Fast Recovery Diode 超快恢复二极管

### ■Features 特点

Built-in Strain Relief 内应力释放  
Fast Switching Speed 快的开关速度  
Super Fast Recovery time 超快恢复时间  
Surface Mount Device 表面贴装器件  
Case 封装:SMC(DO214-AB)



### ■Maximum Rating 最大额定值

( $T_A=25^{\circ}\text{C}$  unless otherwise noted 如无特殊说明, 温度为  $25^{\circ}\text{C}$ )

| Characteristic 特性参数                              | Symbol 符号       | ES5AC              | ES5BC | ES5CC | ES5DC | ES5EC | ES5GC | ES5JC | Unit 单位              |
|--------------------------------------------------|-----------------|--------------------|-------|-------|-------|-------|-------|-------|----------------------|
| Marking 印字                                       |                 | ES5A               | ES5B  | ES5C  | ES5D  | ES5E  | ES5G  | ES5J  |                      |
| Repetitive Peak Reverse Voltage<br>重复峰值反向电压      | $V_{RRM}$       | 50                 | 100   | 150   | 200   | 300   | 400   | 600   | V                    |
| DC Reverse Voltage<br>直流反向电压                     | $V_R$           | 50                 | 100   | 150   | 200   | 300   | 400   | 600   | V                    |
| RMS Reverse Voltage<br>反向电压均方根值                  | $V_{R(RMS)}$    | 35                 | 70    | 105   | 140   | 210   | 280   | 420   | V                    |
| Forward Rectified Current<br>正向整流电流              | $I_F$           | 5                  |       |       |       |       |       |       | A                    |
| Peak Surge Current<br>峰值浪涌电流                     | $I_{FSM}$       | 120                |       |       |       |       |       |       | A                    |
| Thermal Resistance J-A<br>结到环境热阻                 | $R_{\theta JA}$ | 40                 |       |       |       |       |       |       | $^{\circ}\text{C/W}$ |
| Operating and Storage Temperature<br>工作温度和储藏温度范围 | $T_J, T_{stg}$  | $-65\text{to}+150$ |       |       |       |       |       |       | $^{\circ}\text{C}$   |

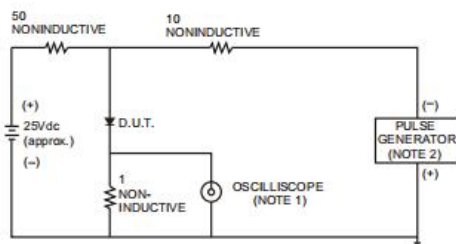
### ■Electrical Characteristics 电特性

( $T_A=25^{\circ}\text{C}$  unless otherwise noted 如无特殊说明, 温度为  $25^{\circ}\text{C}$ )

| Characteristic 特性参数             | Symbol 符号 | ES5AC-ES5DC                                                       | ES5EC-ES5GC | ES5JC | Unit 单位       | Condition 条件                                              |
|---------------------------------|-----------|-------------------------------------------------------------------|-------------|-------|---------------|-----------------------------------------------------------|
| Forward Voltage 正向电压            | $V_F$     | 0.95                                                              | 1.25        | 1.7   | V             | $I_F=5\text{A}$                                           |
| Reverse Current 反向电流            | $I_R$     | 5( $T_A=25^{\circ}\text{C}$ )<br>500( $T_A=100^{\circ}\text{C}$ ) |             |       | $\mu\text{A}$ | $V_R=V_{RRM}$                                             |
| Reverse Recovery Time<br>反向恢复时间 | $T_{rr}$  | 35                                                                |             |       | nS            | $I_F=0.5\text{A}, I_R=1\text{A}$<br>$I_{rr}=0.25\text{A}$ |
| Junction Capacitance<br>结电容     | $C_J$     | 40                                                                | 25          |       | pF            | $V_R=4\text{V}$ ,<br>$f=1\text{MHz}$                      |

## ■ Typical Characteristic Curve 典型特性曲线

FIG.1- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



NOTES: 1. Rise Time = 7ns max., Input Impedance = 1 megohm, 22pF.  
2. Rise Time = 10ns max., Source Impedance = 50 ohms.

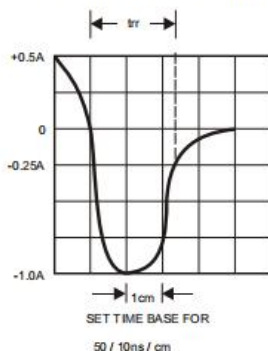


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

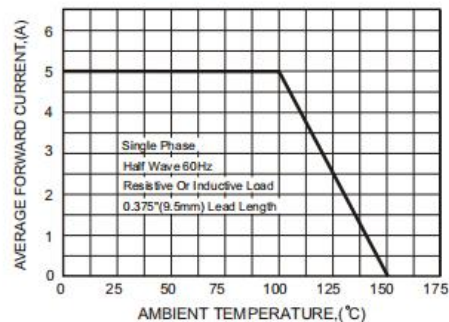


FIG.3-TYPICAL FORWARD CHARACTERISTICS

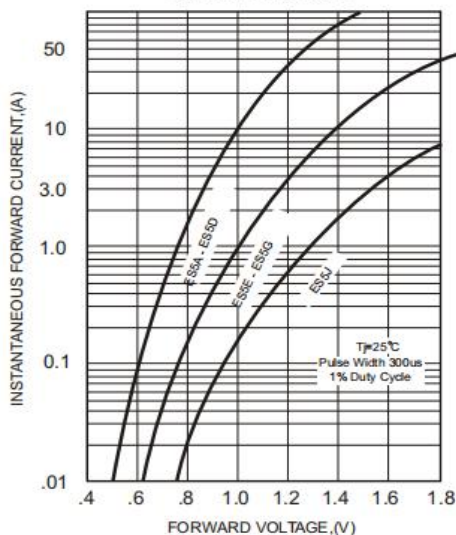


FIG.4-TYPICAL REVERSE CHARACTERISTICS

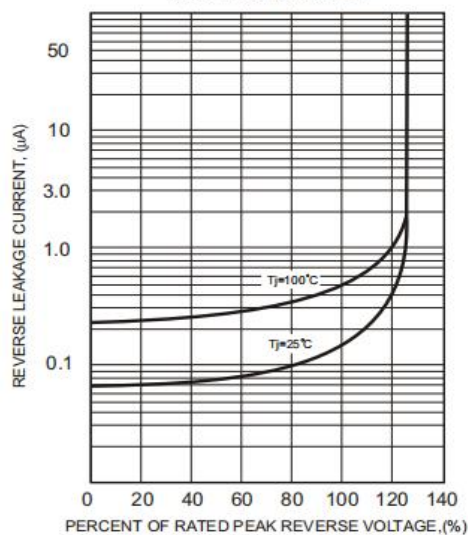


FIG.5-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

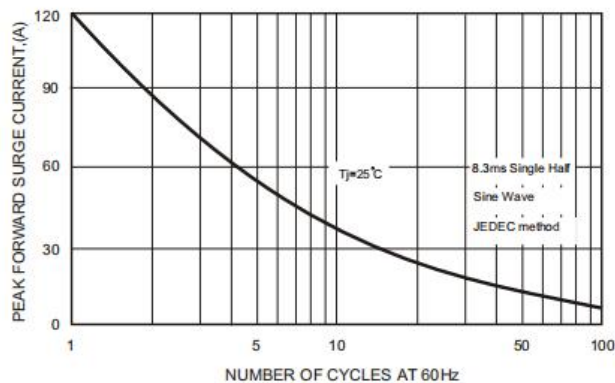
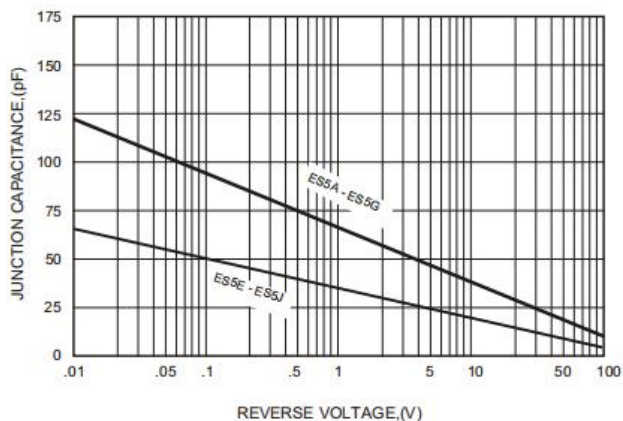
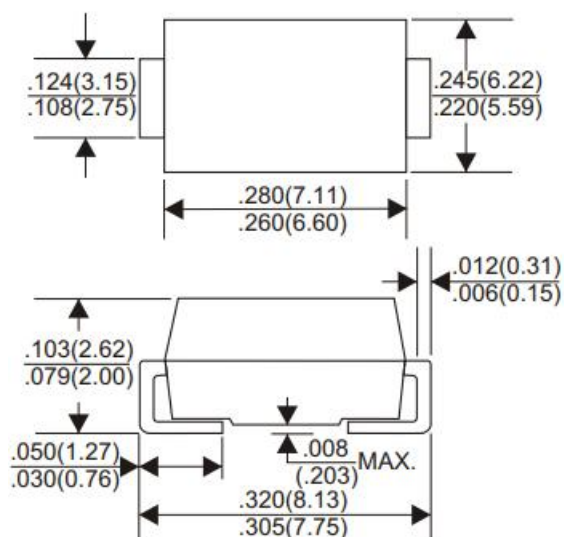


FIG.6-TYPICAL JUNCTION CAPACITANCE



■Dimension 外形封装尺寸

**DO-214AB(SMC)**



Dimensions in inches and (millimeters)