

SMAF 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:SMAF



SMAF

■ **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°C)

| Characteristic 特性参数 | Symbol 符号 | ES1 AF | ES1 BF | ES1 CF | ES1 DF | ES1 EF | ES1 GF | ES1 JF | Unit 单位 |
|--|-----------------|------------------------------|--------|--------|--------|--------|--------|--------|-----------------------------|
| Repetitive Peak Reverse Voltage 重复峰值反向电压 | V_{RRM} | 50 | 100 | 150 | 200 | 300 | 400 | 600 | V |
| DC Reverse Voltage 直流反向电压 | V_R | 50 | 100 | 150 | 200 | 300 | 400 | 600 | V |
| RMS Reverse Voltage 反向电压均方根值 | $V_{R(RMS)}$ | 35 | 70 | 105 | 140 | 210 | 280 | 420 | V |
| Forward Rectified Current 正向整流电流 | I_F | 1 | | | | | | | A |
| Peak Surge Current 峰值浪涌电流 | I_{FSM} | 25 | | | | | | | A |
| Thermal Resistance J-A 结到环境热阻 | $R_{\theta JA}$ | 80 | | | | | | | $^{\circ}\text{C}/\text{W}$ |
| Junction/Storage Temperature 结温/储藏温度 | T_J, T_{stg} | -50to+150 $^{\circ}\text{C}$ | | | | | | | $^{\circ}\text{C}$ |

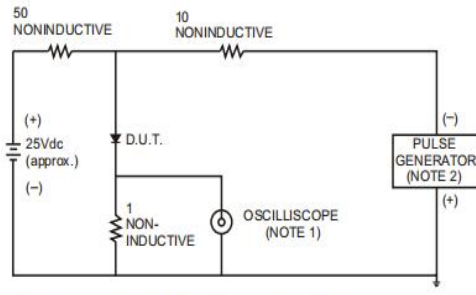
■ **Electrical Characteristics 电特性**

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

| Characteristic 特性参数 | Symbol 符号 | ES1AF-ES1DF | ES1EF-ES1GF | ES1JF | Unit 单位 | Condition 条件 |
|------------------------------|-----------|---|-------------|-------|---------------|---|
| Forward Voltage 正向电压 | V_F | 0.95 | 1.25 | 1.7 | V | $I_F=1\text{A}$ |
| Reverse Current 反向电流 | I_R | 5($T_A=25^{\circ}\text{C}$) 500($T_A=100^{\circ}\text{C}$) | | | μA | $V_R=V_{RRM}$ |
| Reverse Recovery Time 反向恢复时间 | T_{rr} | 35 | | | nS | $I_F=0.5\text{A}, I_R=1\text{A}$ $I_{rr}=0.25\text{A}$ |
| Junction Capacitance 结电容 | C_J | 15 | | | pF | $V_R=4\text{V}, f=1\text{MHz}$ |

■ 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.

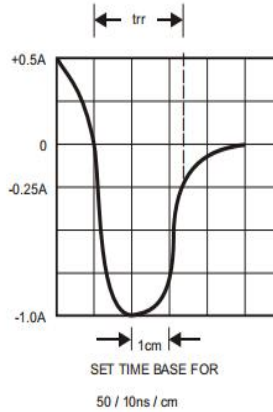


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

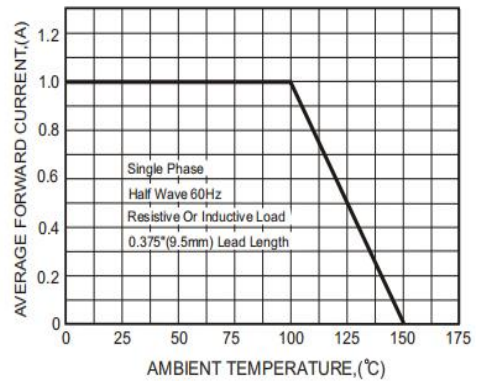


FIG.3-TYPICAL FORWARD CHARACTERISTICS

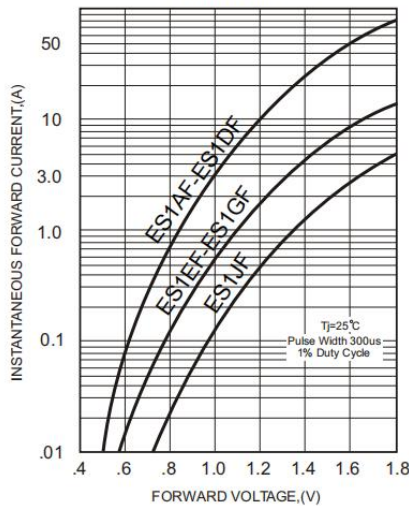


FIG.4-TYPICAL REVERSE CHARACTERISTICS

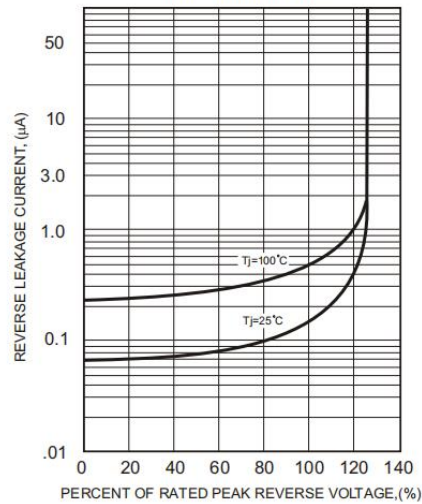


FIG.5-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

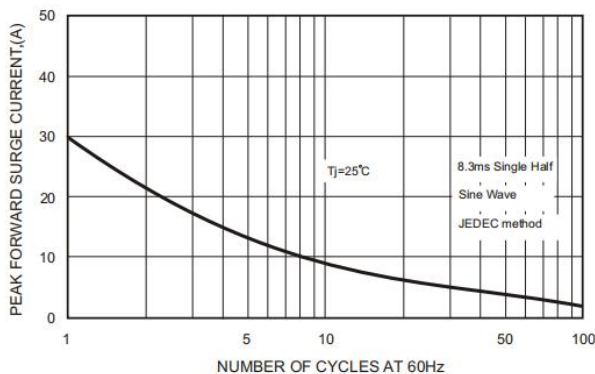
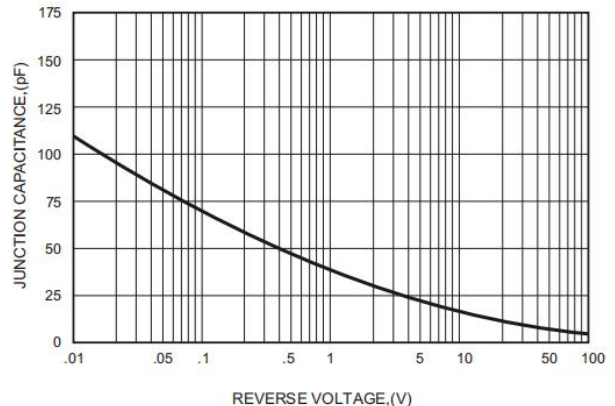
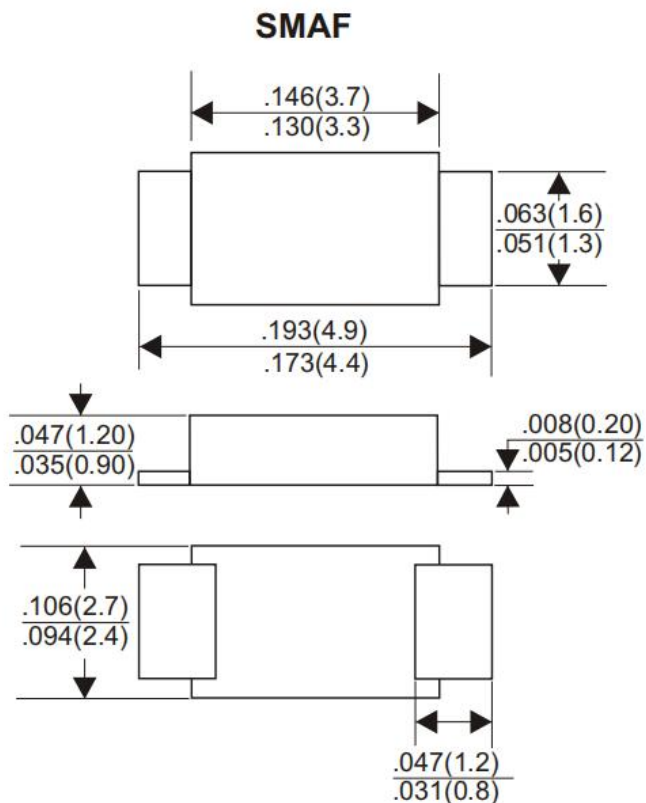


FIG.6-TYPICAL JUNCTION CAPACITANCE



■Dimension 外形封装尺寸



Dimensions in inches and (millimeters)