



# 安徽富信半导体科技有限公司

ANHUI FOSAN SEMICONDUCTOR TECHNOLOGY CO., LTD.

ES1A-ES1M

## SMA 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:SMA



### ■ 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	ES 1A	ES 1B	ES 1C	ES 1D	ES 1E	ES 1G	ES 1J	ES 1M	Unit 单位
Repetitive Peak Reverse Voltage 重复峰值反向电压	$V_{RRM}$	50	100	150	200	300	400	600	1000	V
DC Reverse Voltage 直流反向电压	$V_R$	50	100	150	200	300	400	600	1000	V
RMS Reverse Voltage 反向电压均方根值	$V_{R(RMS)}$	35	70	105	140	210	280	420	700	V
Forward Rectified Current 正向整流电流	$I_F$	1								A
Peak Surge Current 峰值浪涌电流	$I_{FSM}$	30								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  $25^{\circ}\text{C}$ )

Characteristic 特性参数	Symbol 符号	ES1A-ES1D	ES1E-ES1G	ES1J-ES1M	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( $T_A=100^{\circ}\text{C}$ )			$\mu\text{A}$	$V_R=V_{RRM}$
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	$C_J$	10			pF	$V_R=4\text{V}, f=1\text{MHz}$

## ■ Typical Characteristic Curve 典型特性曲线

FIG.1-TYPICAL FORWARD CHARACTERISTICS

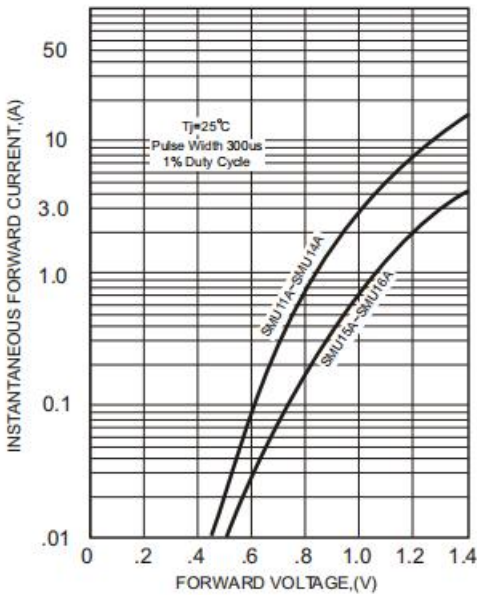


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

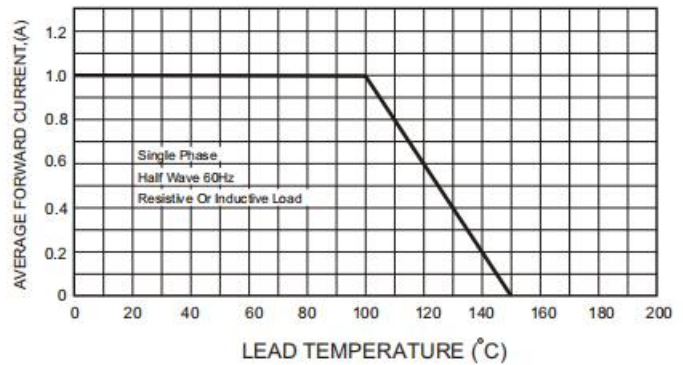


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

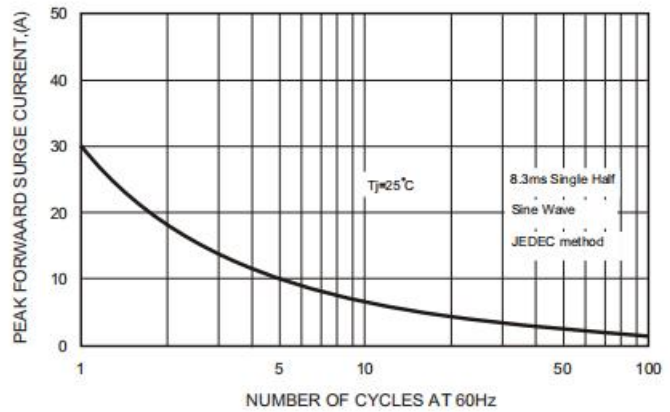
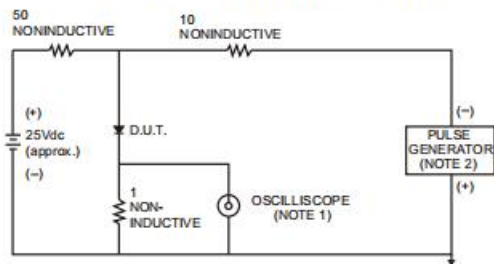


FIG.3- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS



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

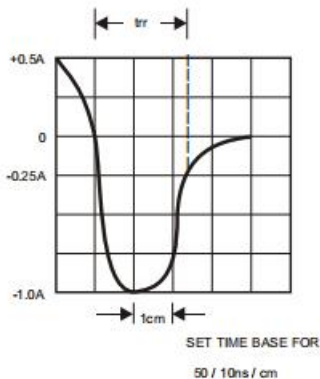
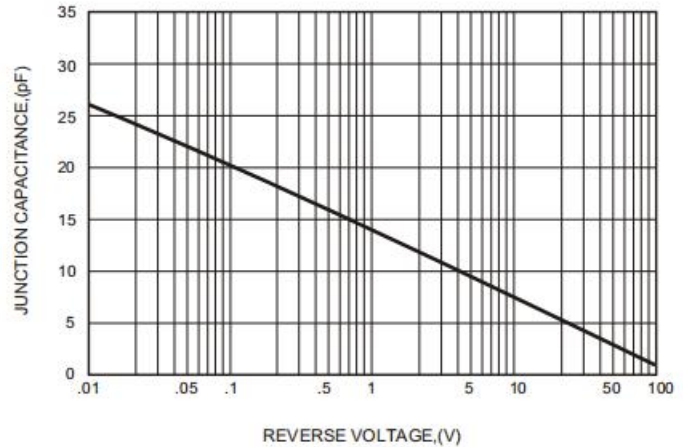
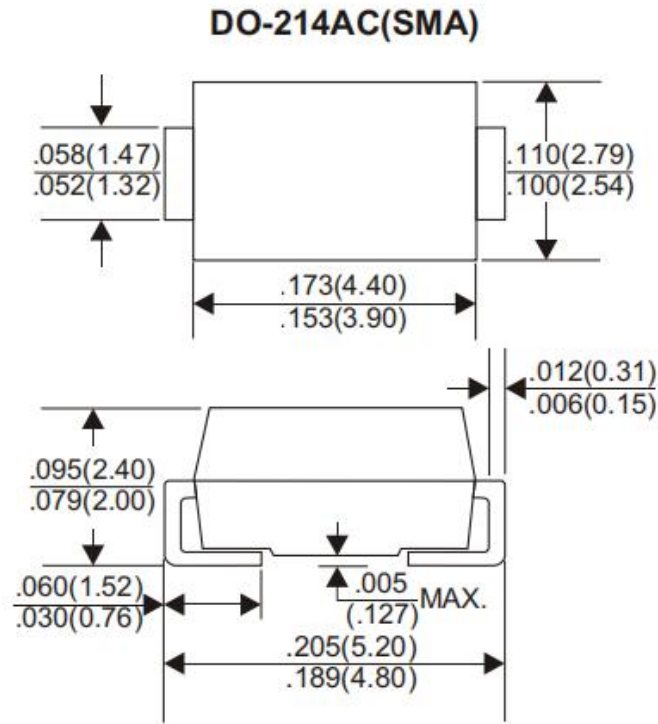


FIG.5-TYPICAL JUNCTION CAPACITANCE



## ■Dimension 外形封装尺寸



Dimensions in inches and (millimeters)