

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°C)

Characteristic 特性参数	Symbol 符号	ES 3AC	ES 3BC	ES 3CC	ES 3DC	ES 3EC	ES 3GC	ES 3JC	Unit 单位
Marking 印字		ES 3A	ES 3B	ES 3C	ES 3D	ES 3E	ES 3G	ES 3J	
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	3							A
Peak Surge Current 峰值浪涌电流	I_{FSM}	90							A
Thermal Resistance J-A 结到环境热阻	$R_{\theta JA}$	20							$^{\circ}\text{C/W}$
Operating and Storage Temperature Range 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°C)

Characteristic 特性参数	Symbol 符号	ES3AC-ES3DC	ES3EC-ES3GC	ES3JC	Unit 单位	Condition 条件
Forward Voltage 正向电压	V_F	0.95	1.25	1.7	V	$I_F=3\text{A}$
Reverse Current 反向电流	I_R	10($T_A=25^{\circ}\text{C}$) 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	45			pF	$V_R=4\text{V}$, $f=1\text{MHz}$

■ Typical Characteristic Curve 典型特性曲线

FIG.1-TYPICAL FORWARD

CHARACTERISTICS

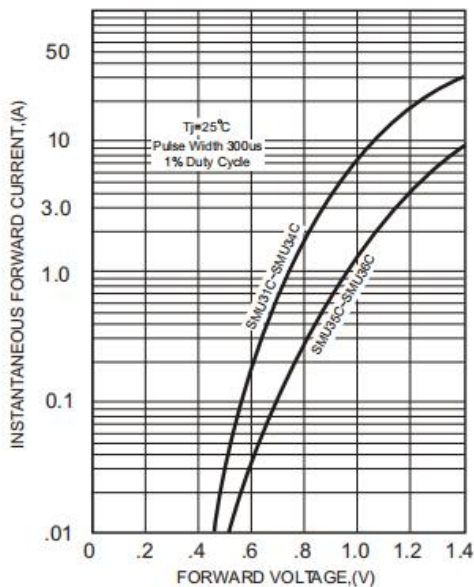


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

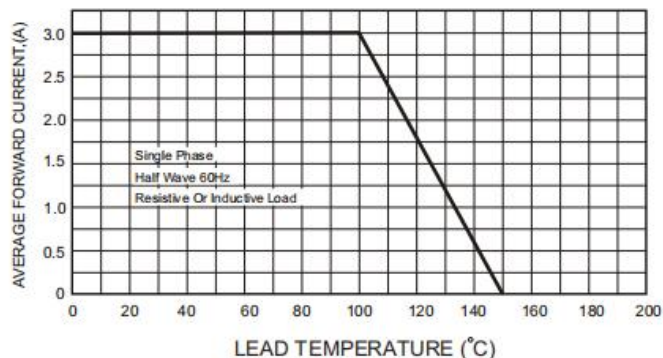


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

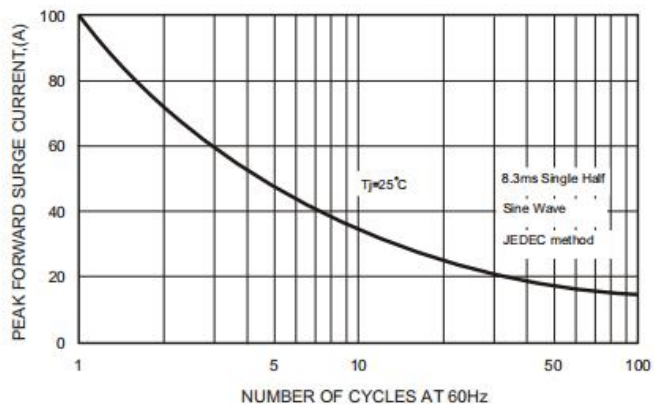
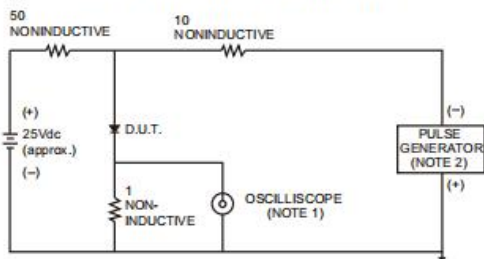


FIG.3- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS



NOTES: 1. Rise Time $\approx 7\text{ns}$ max., Input Impedance $\approx 1\text{ megohm}$, 22pF .

2. Rise Time $\approx 10\text{ns}$ max., Source Impedance $\approx 50\text{ ohms}$.

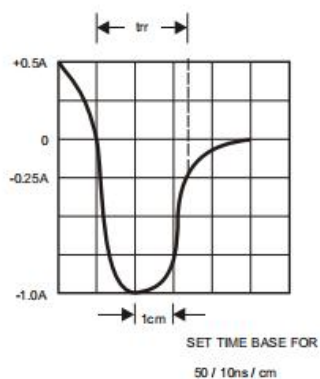
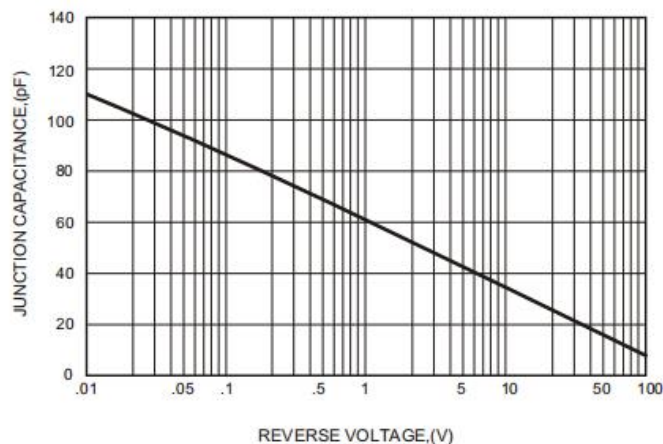
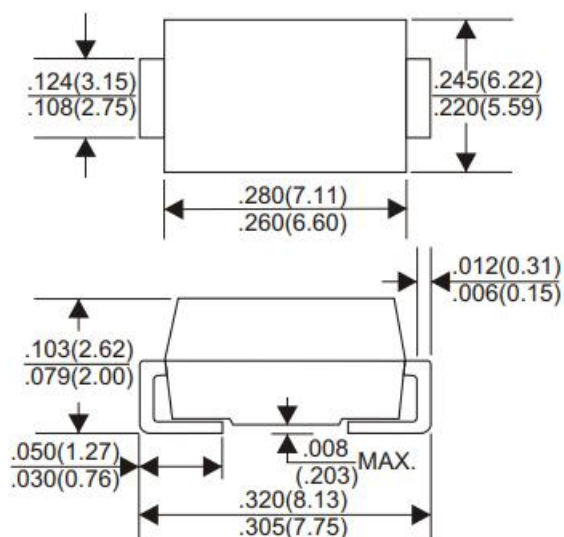


FIG.5-TYPICAL JUNCTION CAPACITANCE



■Dimension 外形封装尺寸

DO-214AB(SMC)



Dimensions in inches and (millimeters)