



ES3A THRU ES3J

超快恢复整流二极管 Super Fast Recovery Rectifier Diode

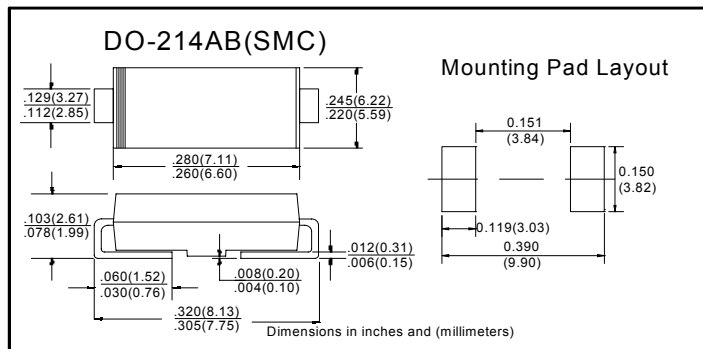
■特征 Features

- I_o 3.0A
- V_{RRM} 50V-600V
- 耐正向浪涌电流能力高
High surge current capability
- 封装: 模压塑料
Cases: Molded plastic

■用途 Applications

- 整流用 Rectifier

■外形尺寸和印记 Outline Dimensions and Mark



■极限值 (绝对最大额定值)

Limiting Values (Absolute Maximum Rating)

参数名称 Item	符号 Symbol	单位 Unit	测试条件 Test Conditions	ES3							
				A	B	C	D	F	G	H	J
反向重复峰值电压 Repetitive Peak Reverse Voltage	V_{RRM}	V		50	100	150	200	300	400	500	600
正向平均电流 Average Forward Current	$I_{F(AV)}$	A	正弦半波 60Hz, 电阻负载, $T_L=100^\circ\text{C}$ 60Hz Half-sine wave, Resistance load, $T_L=100^\circ\text{C}$	3.0							
正向 (不重复) 浪涌电流 Surge(Non-repetitive)Forward Current	I_{FSM}	A	正弦半波 60Hz, 一个周期, $T_a=25^\circ\text{C}$ 60Hz Half-sine wave, 1 cycle, $T_a=25^\circ\text{C}$	100							
结温 Junction Temperature	T_J	$^\circ\text{C}$		-55~+150							
储存温度 Storage Temperature	T_{STG}	$^\circ\text{C}$		-55 ~ +150							

■电特性 (Ta=25°C 除非另有规定)

Electrical Characteristics (Ta=25°C Unless otherwise specified)

参数名称 Item	符号 Symbol	单位 Unit	测试条件 Test Condition	ES3							
				A	B	C	D	F	G	H	J
正向峰值电压 Peak Forward Voltage	V_F	V	$I_F=3.0\text{A}$	0.95			1.3		1.7		
最大反向恢复时间 Maximum reverse recovery time	t_{rr}	ns	$I_F=0.5\text{A}, I_R=1.0\text{A}, I_r=0.25\text{A}$	35							
反向漏电流 Peak Reverse Current	I_{RRM1}	μA	$V_{RM}=V_{RRM}$				10				
	I_{RRM2}						500				
热阻 (典型) Thermal Resistance(Typical)	$R_{\theta J-A}$	$^\circ\text{C}/\text{W}$	结和环境之间 Between junction and ambient	47 ¹⁾							
	$R_{\theta J-L}$		结和终端之间 Between junction and terminal	12 ¹⁾							

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)

图1: 正向电流降额曲线
FIG.1: FORWARD CURRENT DERATING CURVE

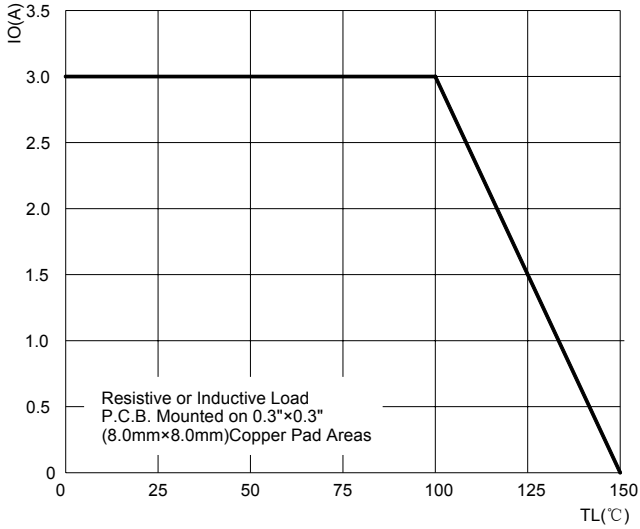


图2: 最大正向浪涌冲击耐受力
FIG.2: MAXIMUM NON-REPETITIVE FORWARD URGE CURRENT

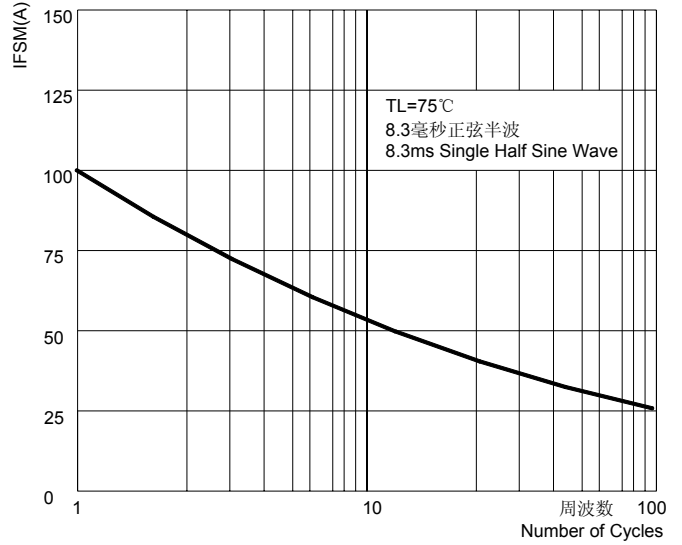


图3: 典型正向特性曲线
FIG.3: TYPICAL FORWARD CHARACTERISTICS

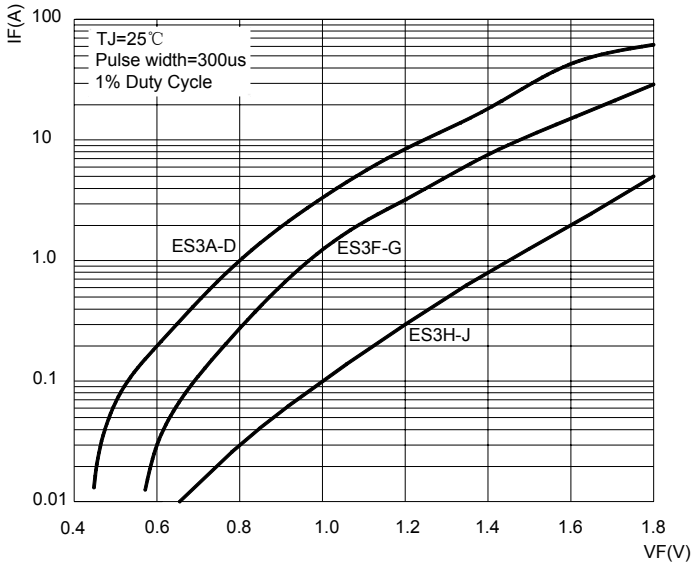


图4: 典型反向特性曲线
FIG.4: TYPICAL REVERSE CHARACTERISTICS

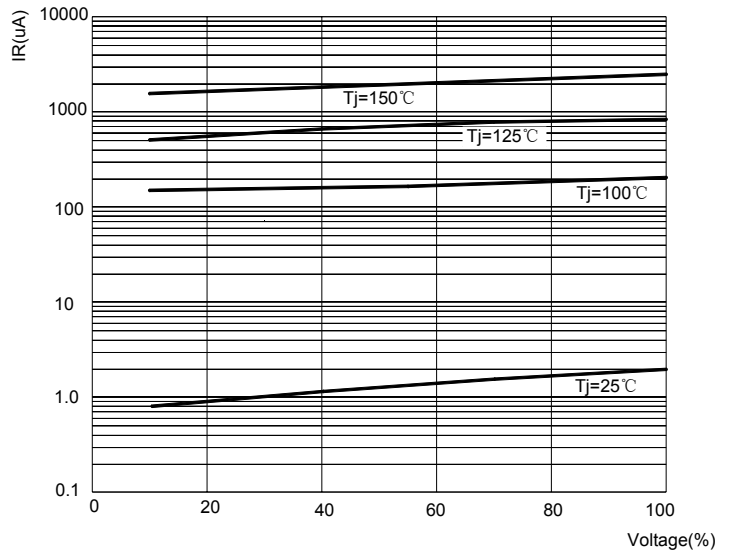


图5: 反向恢复时间试验电路及测试波形示意图
FIG.5: Diagram of circuit and Testing wave form of reverse recovery time

