



# ES1A THRU ES1J

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

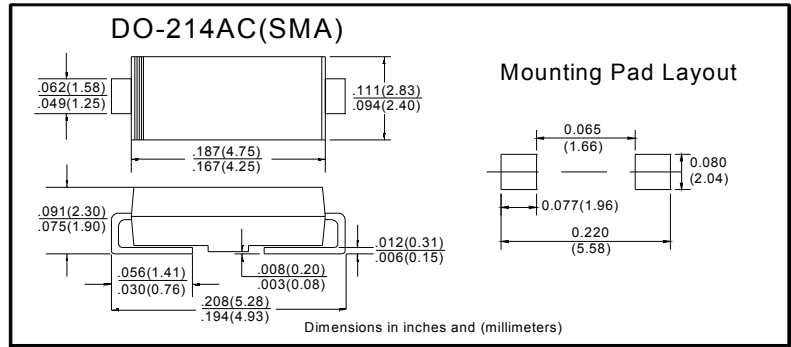
### ■特征 Features

- $I_o$  1.0A
- $V_{RRM}$  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
- 采用GPP工艺芯片  
Glass passivated chip

### ■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	ES1							
				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, $T_L=120^\circ\text{C}$ 60HZ Half-sine wave, Resistance load, $T_L=120^\circ\text{C}$	1.0							
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, $T_a=25^\circ\text{C}$	30							
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	ES1							
				A	B	C	D	F	G	H	J
正向峰值电压 Peak Forward Voltage	$V_F$	V	$I_F=1.0A$	0.95			1.3		1.7		
最大反向恢复时间 Maximum reverse recovery time	$t_r$	ns	$I_F=0.5A, I_R=1.0A, I_{rr}=0.25A$	35							
反向漏电流 Peak Reverse Current	$I_{RRM1}$	$\mu\text{A}$	$V_{RM}=V_{RRM}$	$T_a=25^\circ\text{C}$							
	$I_{RRM2}$			$T_a=100^\circ\text{C}$							
热阻(典型) Thermal Resistance(Typical)	$R_{\theta J-A}$	$^\circ\text{C/W}$	结和环境之间 Between junction and ambient	85 <sup>1)</sup>							
	$R_{\theta J-L}$		结和终端之间 Between junction and terminal	35 <sup>1)</sup>							

#### 备注: Notes:

<sup>1)</sup> 热阻从结到环境及从结到引线, 在电路板的0.2" x 0.2" (5.0毫米 x 5.0毫米)铜垫片区

Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 0.2" x 0.2" (5.0 mm x 5.0 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

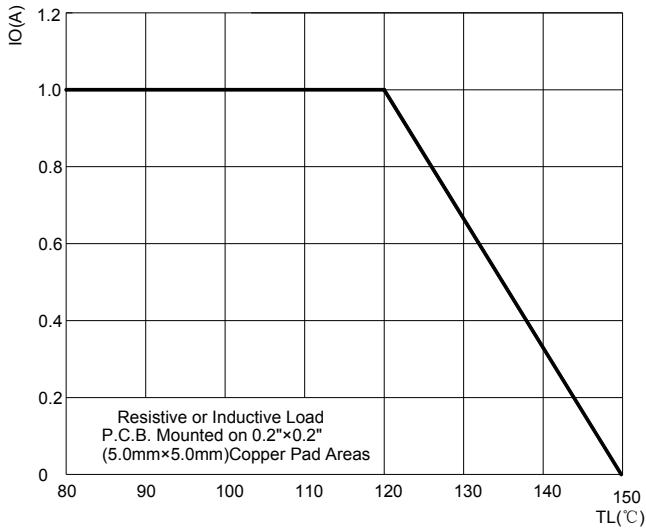


图2: 最大正向浪涌冲击耐受能力  
FIG.2: MAXIMUM NON-REPETITIVE FORWARD URGE CURRENT

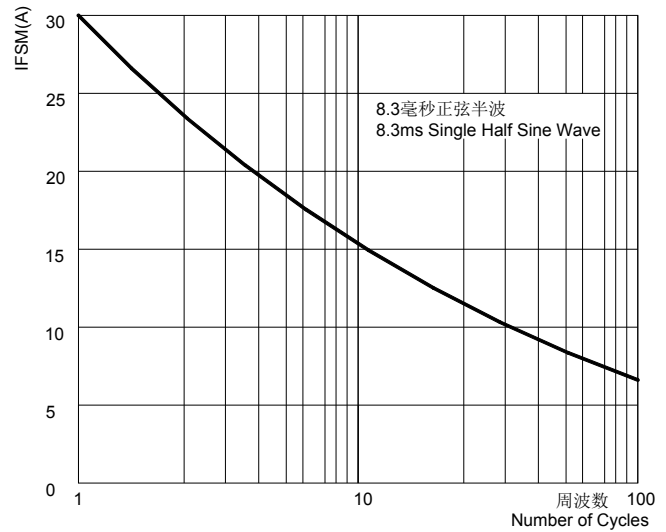


图3: 典型正向特性曲线  
FIG.3: TYPICAL FORWARD CHARACTERISTICS

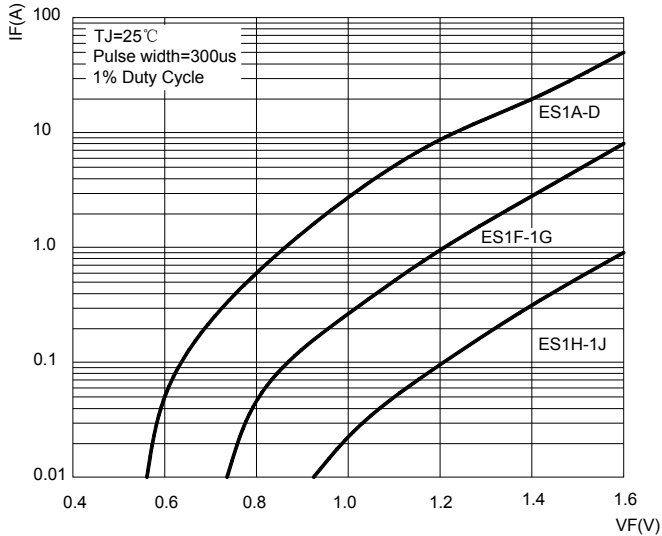


图4: 典型反向特性曲线  
FIG.4: TYPICAL REVERSE CHARACTERISTICS

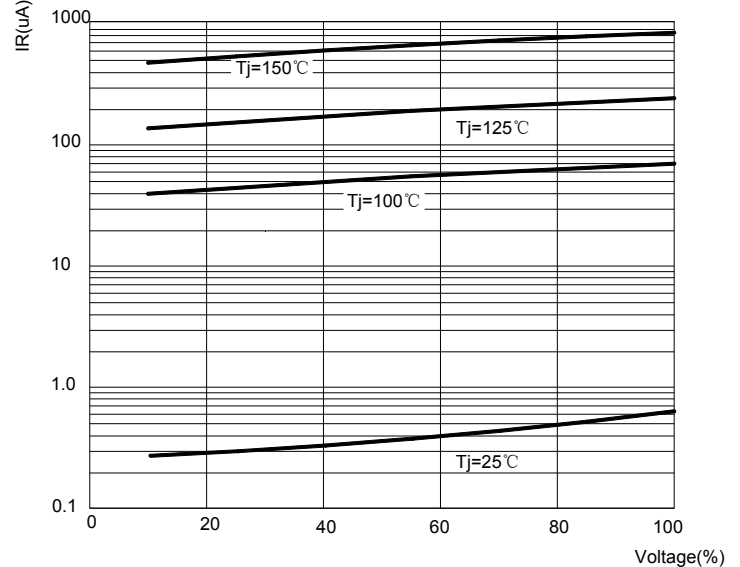


图5: 反向恢复时间试验电路及测试波形示意图  
FIG.5: Diagram of circuit and Testing wave form of reverse recovery time

