

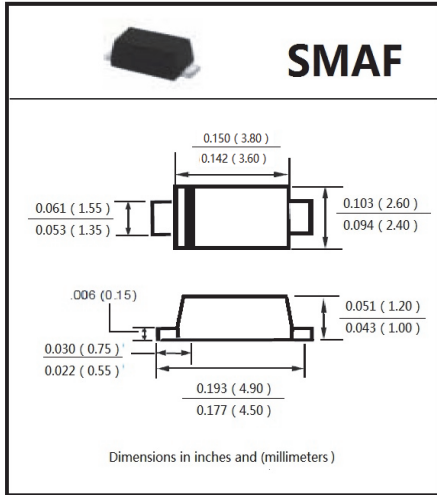


SHANGSI

# US1AF thru US1MF

表面安装超快速整流二极管  
反向电压 50 --- 1000 V  
正向电流 1.0A

Surface Mount Super Fast Recover Rectifiers  
Reverse Voltage 50 to 1000 V  
Forward Current 1.0 A



## 特征 Features

- 低的反向漏电流 Low reverse leakage
- 玻璃钝化芯片 Glass passivated chip junction
- 较强的正向浪涌承受能力 High forward surge capability
- 快速开关高频应用 Fast switching for high efficiency
- 高温焊接保证 260°C/10秒 High temperature soldering guaranteed: 260°C/10 seconds at terminals
- 引线 and 管体皆符合 RoHS 标准。Lead and body according with RoHS standard

## 机械数据 Mechanical Data

- 封装: 塑料封装 Case: Molded plastic body
- 端子: 焊料被镀 Terminals: Solder plated
- 极性: 色环端为负极 Polarity: Color band denotes cathode end
- 安装位置: 任意 Mounting Position: Any

极限值和温度特性  $T_A = 25^\circ\text{C}$  除非另有规定。

**Maximum Ratings & Thermal Characteristics** Ratings at 25°C ambient temperature unless otherwise specified.

	Symbols	US1AF	US1BF	US1DF	US1GF	US1JF	US1KF	US1MF	Unit
最大反向峰值电压 Maximum repetitive peak reverse voltage	$V_{RRM}$	50	100	200	400	600	800	1000	V
最大反向有效值电压 Maximum RMS voltage	$V_{RMS}$	35	70	140	280	420	560	700	V
最大直流阻断电压 Maximum DC blocking voltage	$V_{DC}$	50	100	200	400	600	800	1000	V
最大正向平均整流电流 Maximum average forward rectified current	$I_{F(AV)}$	1.0							A
正向峰值浪涌电流 8.3ms 单一正弦半波 Peak forward surge current 8.3 ms single half sine-wave	$I_{FSM}$	30							A
最大反向峰值电流 @ $T_A = 75^\circ\text{C}$ Maximum peak reverse current full cycle	$I_{R(AV)}$	30							$\mu\text{A}$
典型热阻 Typical thermal resistance	$R_{\theta JA}$	50							$^\circ\text{C/W}$
工作结温和存储温度 Operating junction and storage temperature range	$T_J, T_{STG}$	-50---+150							$^\circ\text{C}$

电特性  $T_A = 25^\circ\text{C}$  除非另有规定。

**Electrical Characteristics** Ratings at 25°C ambient temperature unless otherwise specified.

	Symbols	US1AF	US1BF	US1DF	US1GF	US1JF	US1KF	US1MF	Unit
最大正向电压 $I_F = 1.0\text{A}$ Maximum forward voltage	$V_F$	1.0			1.3	1.7			V
最大反向漏电流 $T_A = 25^\circ\text{C}$ Maximum reverse current	$I_R$	5.0							$\mu\text{A}$
最大反向恢复时间 $I_F = 0.5\text{A}$ $I_R = 1.0\text{A}$ $I_{RR} = 0.25\text{A}$ MAX. Reverse Recovery Time	$t_{rr}$	50				75			nS
典型结电容 $V_R = 4.0\text{V}$ , $f = 1\text{MHz}$ Type junction capacitance	$C_J$	15							pF



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## 特性曲线 Characteristic Curves

FIG.1: FORWARD CURRENT DERATING CURVE

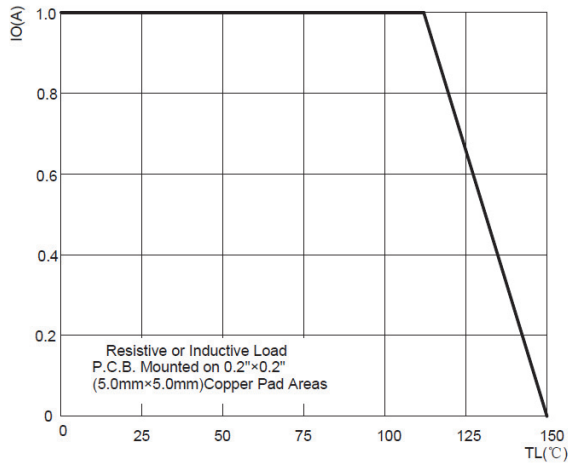


FIG.2: MAXIMUM NON-REPETITIVE FORWARD URGE CURRENT

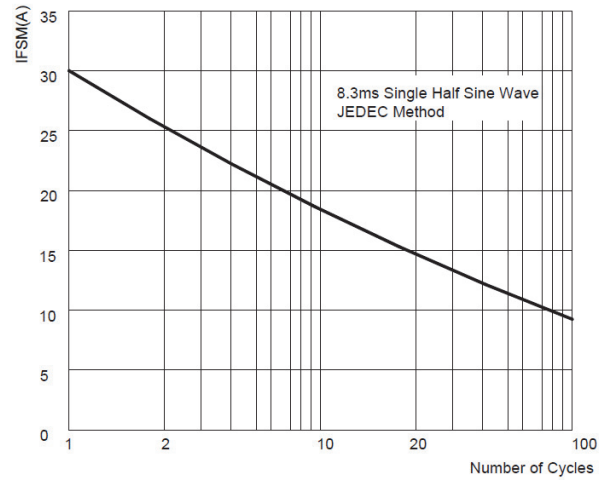


FIG.3: TYPICAL FORWARD CHARACTERISTICS

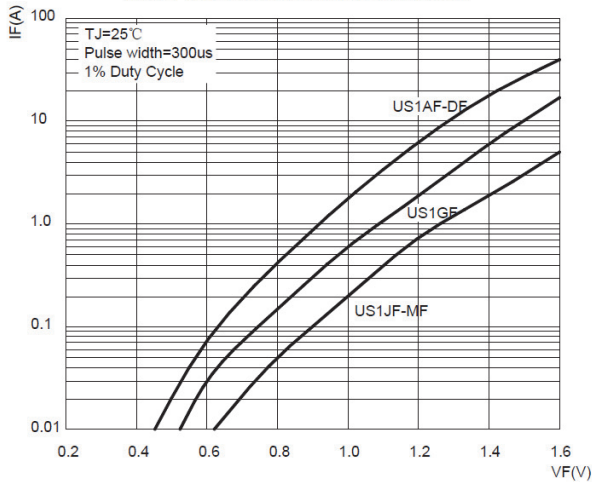


FIG.4: TYPICAL REVERSE CHARACTERISTICS

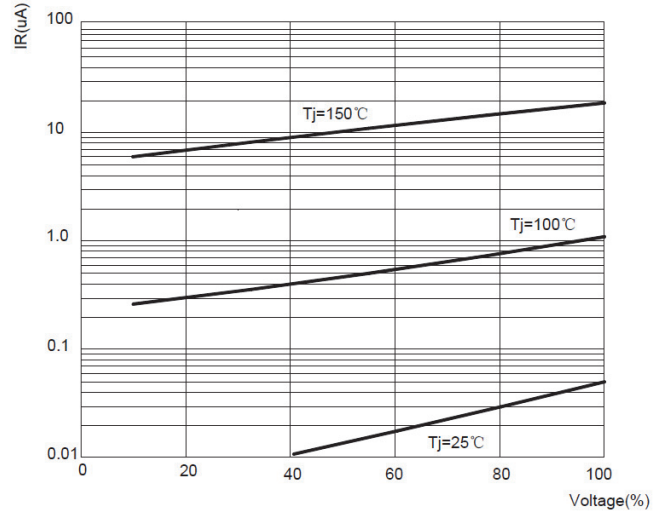
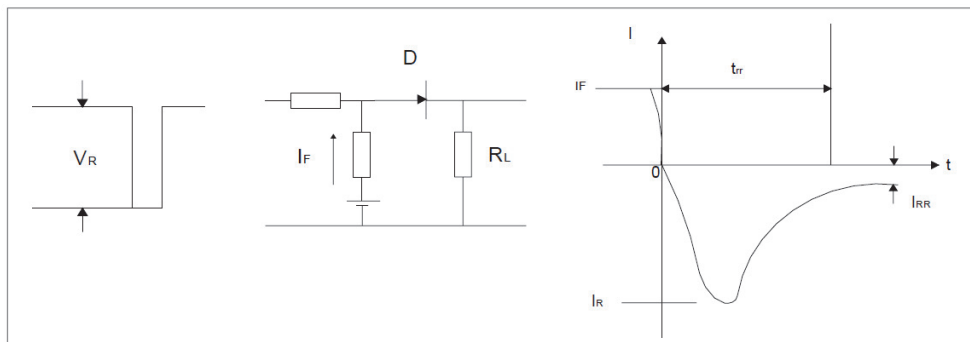
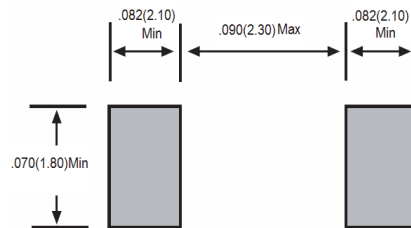


FIG.5: Diagram of circuit and Testing wave form of reverse recovery time



## Mounting Pad Layout



## Packing

Part number	Component Package	Quantity	Packaging Option
US1AF-US1MF	DO-214AC	10000	Tape & Reel – 12mm/13" tape

## Tape and Reel Specification

