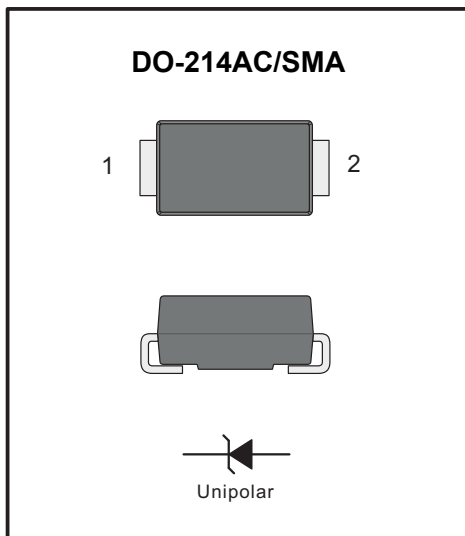


## SURFACE MOUNT ULTRA FAST RECTIFIER

### PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



### Features

- ◆ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ◆ For surface mounted applications
- ◆ Ultra fast switching for high efficiency
- ◆ Low reverse leakage
- ◆ Built-in strain relief, ideal for automated placement
- ◆ High forward surge current capability
- ◆ High temperature soldering guaranteed 250 °C/10 seconds at terminals

### Mechanical Data

- ◆ **Case** : JEDEC DO-214AC/SMA Molded plastic body
- ◆ **Terminals** : Solder plated, solderable per MIL-STD-750, Method 2026
- ◆ **Polarity** : Polarity symbol marking on body
- ◆ **Mounting Position** : Any
- ◆ **Weight** : 0.002 ounce, 0.055 grams

## Maximum Ratings And Electrical Characteristics

US1AG US1BG US1DG US1GG US1JG US1KG US1MG

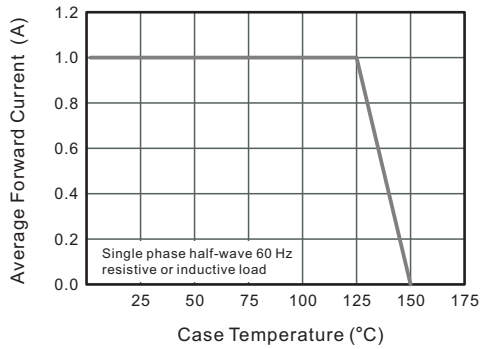
Ratings at 25°C ambient temperature unless otherwise specified.

Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

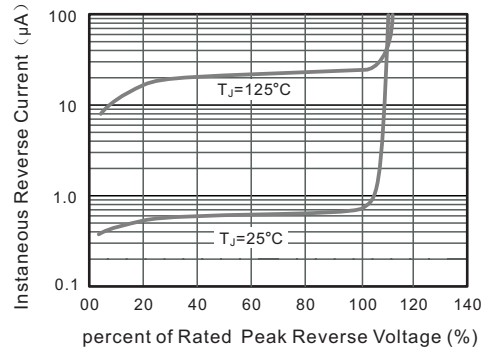
Parameter	SYMBOLS	US1A	US1B	US1D	US1G	US1J	US1K	US1M	UNITS
Maximum repetitive peak reverse voltage	$V_{RMM}$	50	100	200	400	600	800	1000	V
Maximum RMS voltage	$V_{RMS}$	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	$V_{DC}$	50	100	200	400	600	800	1000	V
Maximum average forward rectified current at $T_L=55^\circ\text{C}$	$I_{(AV)}$	1.0							A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	30							A
Maximum instantaneous forward voltage at 1.0A	$V_F$	1.0			1.30	1.65			V
Maximum DC reverse current $T_A=25^\circ\text{C}$ at rated DC blocking voltage $T_A=125^\circ\text{C}$	$I_R$	5.0				50.0			$\mu\text{A}$
Maximum reverse recovery time (NOTE 1)	$t_{rr}$	50				75			ns
Typical junction capacitance (NOTE 2)	$C_J$	15.0							pF
Typical thermal resistance (NOTE 3)	$R_{\theta JA}$	75.0							$^\circ\text{C}/\text{W}$
Operating junction and storage temperature range	$T_J, T_{STG}$	-55 to +150							$^\circ\text{C}$

- Note:**
1. Reverse recovery condition  $I_F=0.5\text{A}, I_R=1.0\text{A}, t_{rr}=0.25\text{A}$
  2. P.C.B. mounted with 2.0x2.0" (5.0x5.0cm) copper pad areas.
  3. Measured at 1MHz and applied reverse voltage of 4.0V D.C.
  4. The typical data above is for reference only.

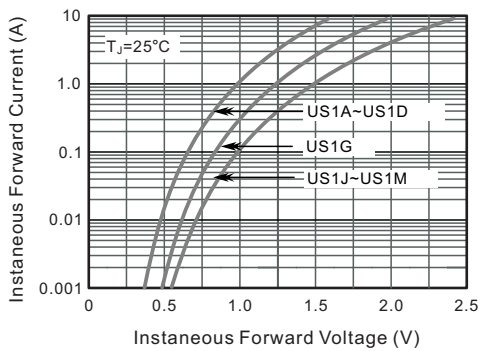
**Fig.1 Forward Current Derating Curve**



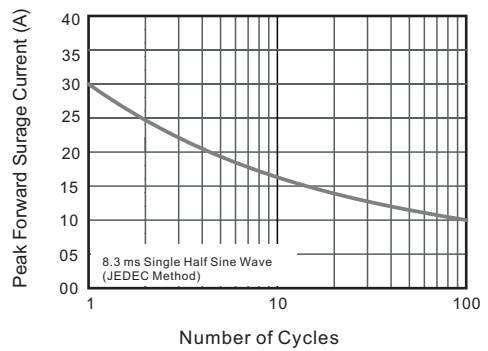
**Fig.2 Typical Reverse Characteristics**



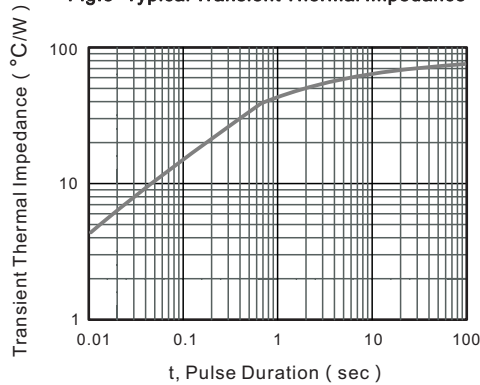
**Fig.3 Typical Forward Characteristics**



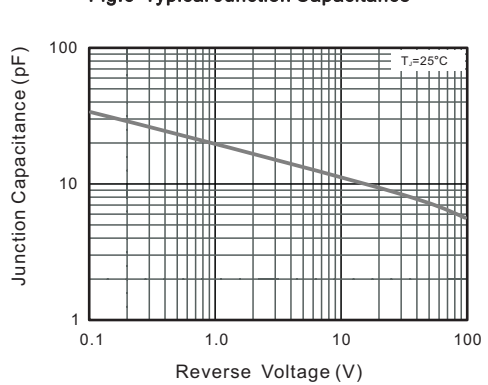
**Fig.4 Maximum Non-Repetitive Peak Forward Surge Current**



**Fig.5- Typical Transient Thermal Impedance**



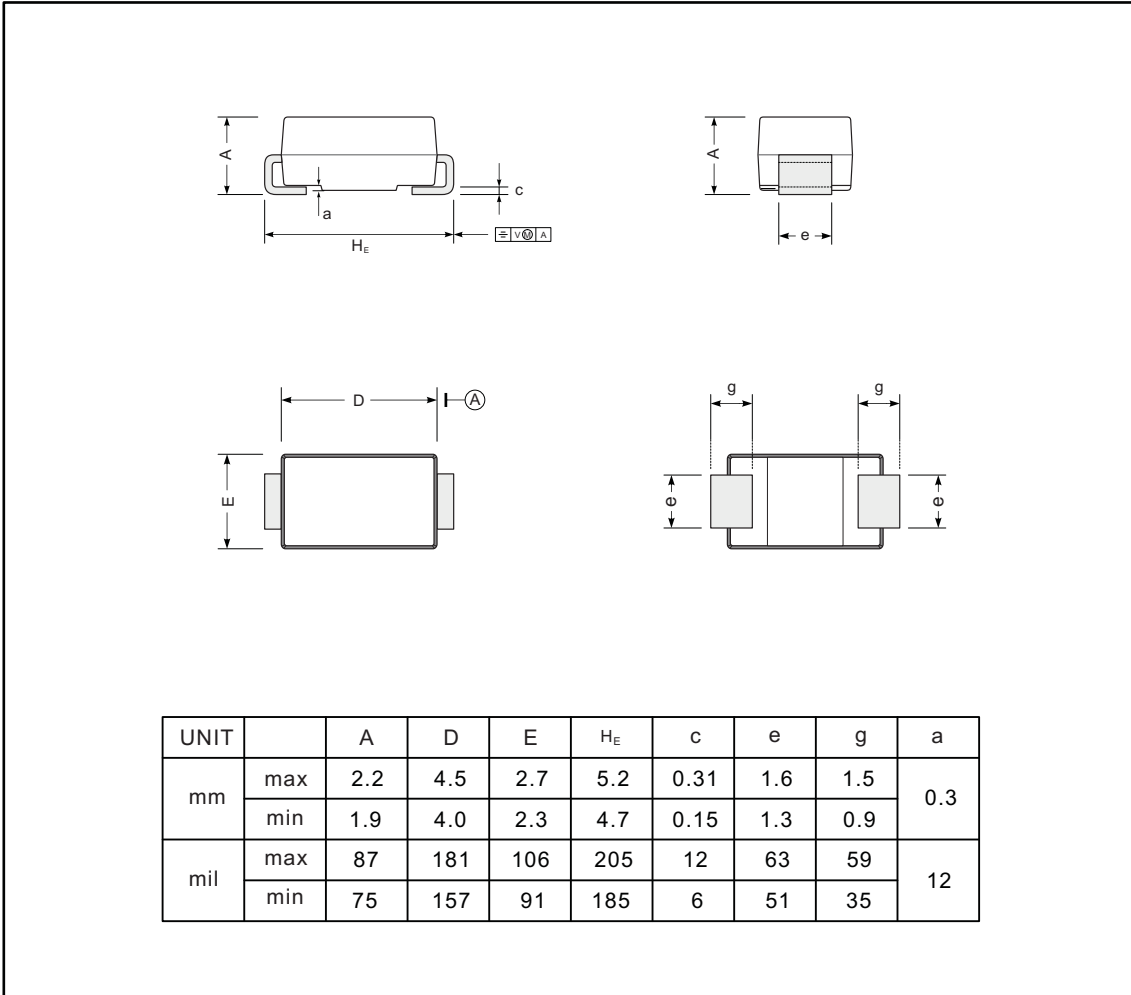
**Fig.6 Typical Junction Capacitance**



## PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

SMA



### The recommended mounting pad size

