

## 2.0Amp Surface Mount Ultra Fast Rectifiers

## US2A~US2M

### 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:  
260°C/10 seconds at terminals
- ◆ Glass passivated chip junction

### Mechanical Data

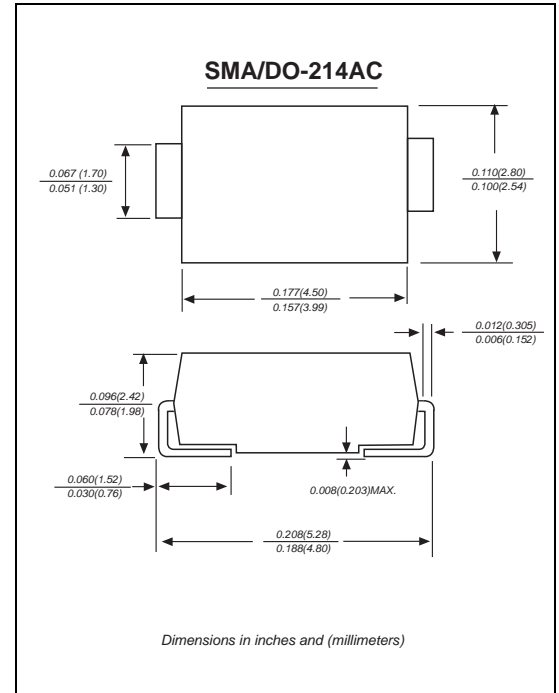
**Case:** JEDEC DO-214AC molded plastic body

**Terminals:** Solder plated, solderable per MIL-STD-750, Method 2026

**Polarity:** Color band denotes cathode end

**Mounting Position:** Any

**Weight :** 0.003 ounce, 0.093 grams



## Maximum Ratings And Electrical Characteristics

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%.

	SYMBOLS	US2A	US2B	US2D	US2G	UFSJ	US2K	US2M	UNITS
Maximum repetitive peak reverse voltage	$V_{RRM}$	50	100	200	400	600	800	1000	VOLTS
Maximum RMS voltage	$V_{RMS}$	35	70	140	280	420	560	700	VOLTS
Maximum DC blocking voltage	$V_{DC}$	50	100	200	400	600	800	1000	VOLTS
Maximum average forward rectified current at $T_L=55^\circ\text{C}$	$I_{(AV)}$	2.0							Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	50.0							Amps
Maximum instantaneous forward voltage at 2.0A	$V_F$	1.0		1.4		1.7		Volts	
Maximum DC reverse current $T_A=25^\circ\text{C}$ at rated DC blocking voltage $T_A=100^\circ\text{C}$	$I_R$	5.0			50.0				$\mu\text{A}$
Maximum reverse recovery time (NOTE 1)	$t_{rr}$	50				75			ns
Typical junction capacitance (NOTE 2)	$C_J$	20.0							pF
Typical thermal resistance (NOTE 3)	$R_{\theta JA}$	50.0							$^\circ\text{C/W}$
Operating junction and storage temperature range	$T_J, T_{STG}$	-65 to +150							$^\circ\text{C}$

- Note:**
- 1.Reverse recovery condition  $I_F=0.5\text{A}, I_R=1.0\text{A}, I_{rr}=0.25\text{A}$
  - 2.Measured at 1MHz and applied reverse voltage of 4.0V D.C.
  - 3.P.C.B. mounted with 0.2x0.2" (5.0x5.0mm) copper pad areas

# Ratings And Characteristic Curves

## US2A~US2M

FIG. 1- FORWARD CURRENT DERATING CURVE

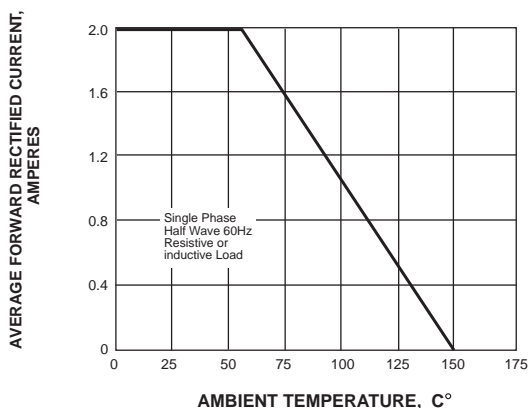


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

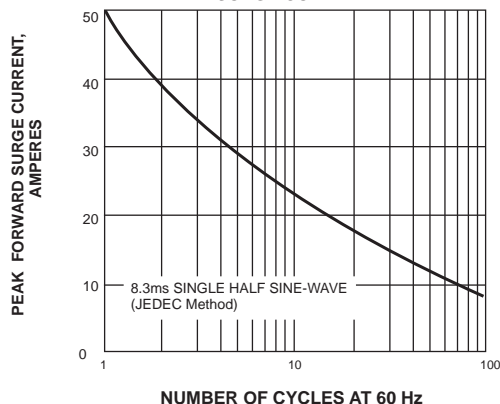


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

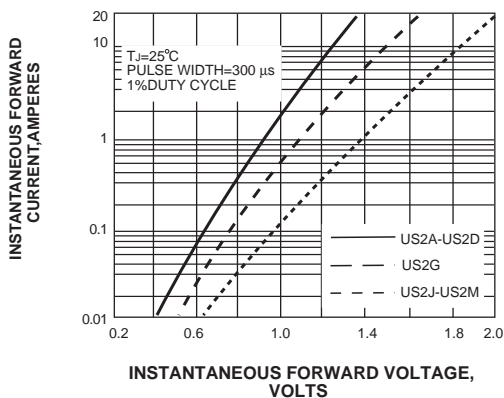


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

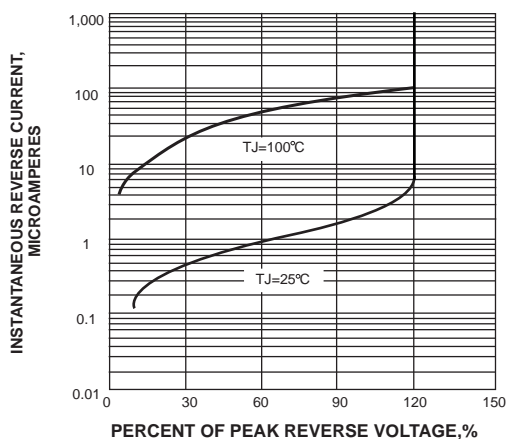


FIG. 5-TYPICAL JUNCTION CAPACITANCE

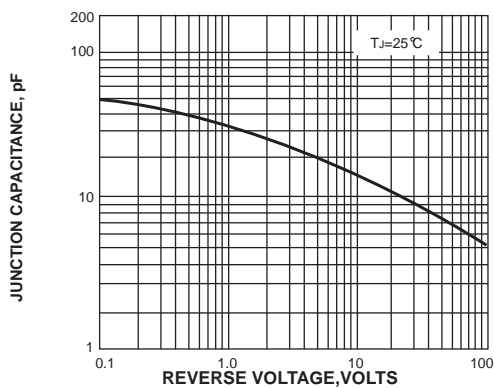


FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE

