

US3A THRU US3M

US3A THRU US3M 3.0Amp Ultra Fast Surface Mount Rectifiers

General description

3.0Amp Ultra Fast Surface Mount Rectifiers

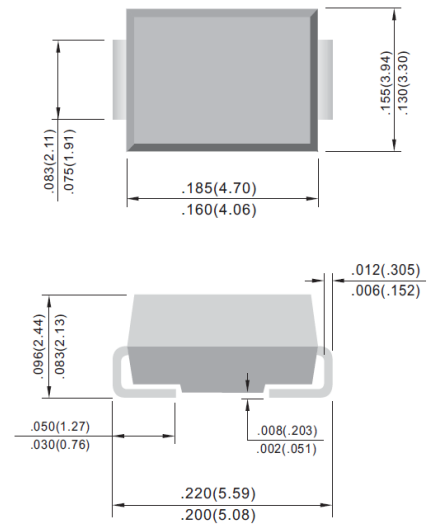
FEATURES

- The plastic package carries Underwriters Laboratory
- Flammability Classification 94V-0
- Idea for printed circuit board
- Glass passivated Junction chip
- Low reverse leakage
- High forward surge current capability
- High temperature soldering guaranteed
250 C/10 seconds at terminals

MECHANICAL DATA

- Case: SMB
- Terminals: Solderable per MIL-STD-750, Method 2026
- Weight: 0.0035 ounce, 0.098 grams

SMB/DO214AA



Unit: inch (mm)

Absolute Maximum Ratings ($T_a=25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbols	US3A	US3B	US3D	US3G	US3J	US3K	US3M	Units
Marking Code	Mark	US3A	US3B	US3D	US3G	US3J	US3K	US3M	N/A
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	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	$I_{F(AV)}$	3							A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load	I_{FSM}	100							A
Maximum Instantaneous Forward Voltage at 1 A	V_F	1.0		1.4		1.7		V	
Maximum DC Reverse Current at Rated DC Blocking Voltage $T_a = 25^\circ\text{C}$ $T_a = 100^\circ\text{C}$	I_R	5 500							μA
Maximum Reverse Recovery Time(Note 1) $T_J=25^\circ\text{C}$	T_{rr}	50				75			nS
Typical Junction Capacitance (Note 2)	C_j	65							pF
Maximum Thermal Resistance(Note 3) $R_{\theta JA}$	$R_{\theta JA}$	85							$^\circ\text{C/W}$
Operating and Storage Temperature Range	T_j, T_{stg}	-55 ~ +150							$^\circ\text{C}$

NOTES: 1. Reverse Recovery Test Conditions: $I_F=0.5A$, $I_R=1.0A$, $I_{rr}=0.25A$

2. Measured at 1 MHz and applied $V_r = 4.0$ volts.

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Ratings And Characteristic Curves

FIG. 1- DERATING CURVE OUTPUT RECTIFIED CURRENT

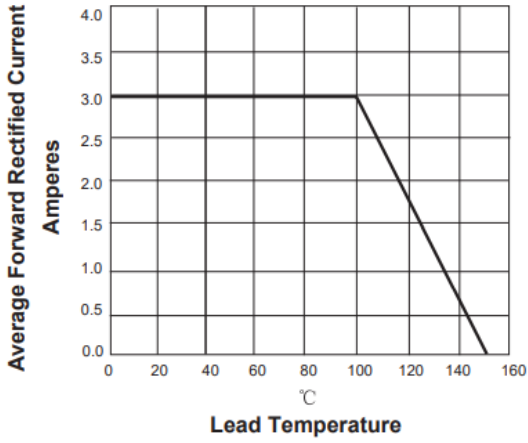


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

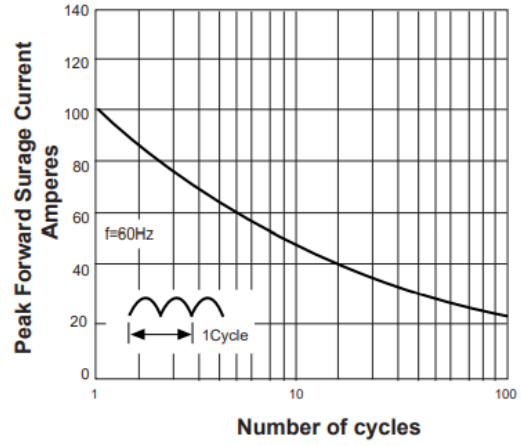


FIG. 3-TYPICAL FORWARD VOLTAGE CHARACTERISTICS

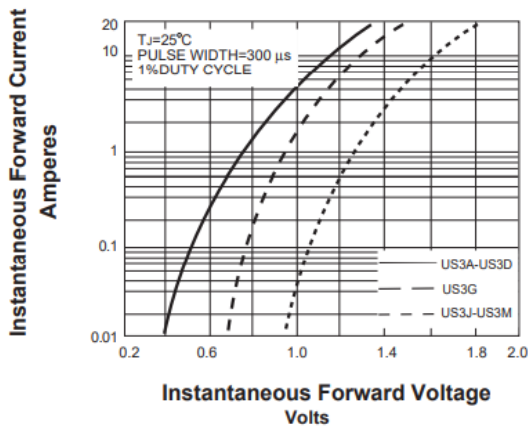
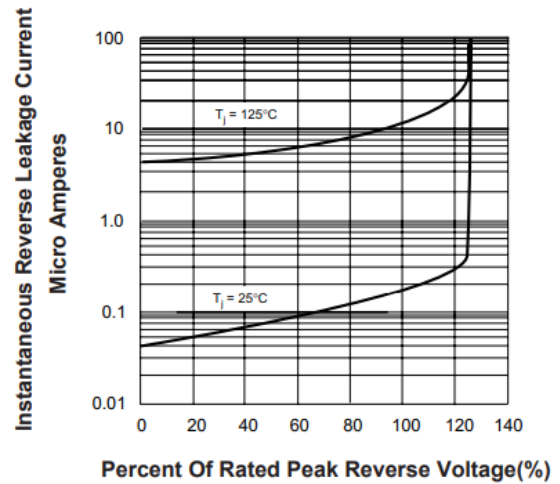


FIG. 4-TYPICAL REVERSE LEAKAGE CHARACTERISTICS



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