

# US1A THRU US1M

## US1A THRU US1M 1.0Amp Ultra Fast Surface Mount Rectifiers

### General description

1.0Amp Ultra Fast Surface Mount Rectifiers

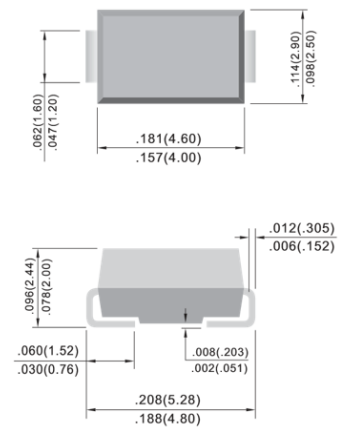
### FEATURES

- For surface mounted applications
- Low reverse leakage
- Built-in strain relief
- Easy pick and place
- Ultrafast recovery times for high efficiency.
- Plastic package has Underwriters Laboratory
- Flammability Classification 94V-0
- Glass passivated Junction chip
- High temperature soldering :  
260 9 /10 seconds at terminals

### MECHANICAL DATA

- Case: SMA
- Terminals: Solderable per MIL-STD-750, Method 2026
- Weight: 0.002 ounce, 0.064 grams

SMA/DO-214AC



Unit: inch (mm)

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

Parameter	Symbols	US1A	US1B	US1D	US1G	US1J	US1K	US1M	Units
Marking Code	Mark	US1A	US1B	US1D	US1G	US1J	US1K	US1M	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	$I_{F(AV)}$	1							A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load	$I_{FSM}$	30							A
Maximum Instantaneous Forward Voltage at 1 A	$V_F$	1.0		1.3		1.7		V	
Maximum DC Reverse Current $T_a = 25^\circ\text{C}$ at Rated DC Blocking Voltage $T_a = 100^\circ\text{C}$	$I_R$	5 500							$\mu\text{A}$
Maximum Reverse Recovery Time(Note 1) $T_J=25^\circ\text{C}$	$T_{rr}$	50				75			nS
Typical Junction Capacitance (Note 2)	$C_j$	17							pF
Maximum Thermal Resistance(Note 3) $R_{\theta JA}$	$R_{\theta JA}$	30							$^\circ\text{C/W}$
Operating and Storage Temperature Range	$T_j, T_{stg}$	-55 ~ +150							$^\circ\text{C}$

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

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



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## Ratings And Characteristic Curves

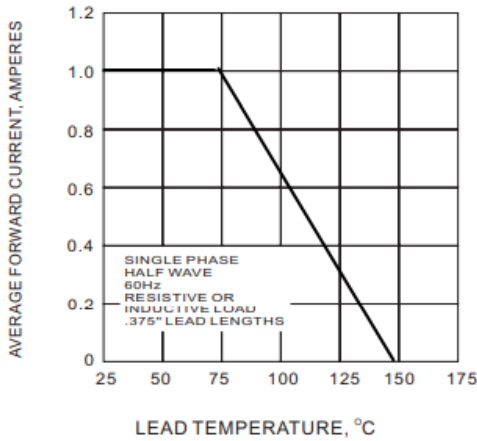


Fig.1 FORWARD CURRENT DERATING CURVE

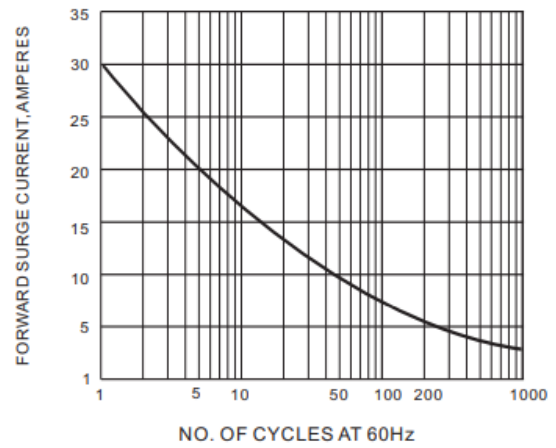


Fig.2 PEAK FORWARD SURGE CURRENT

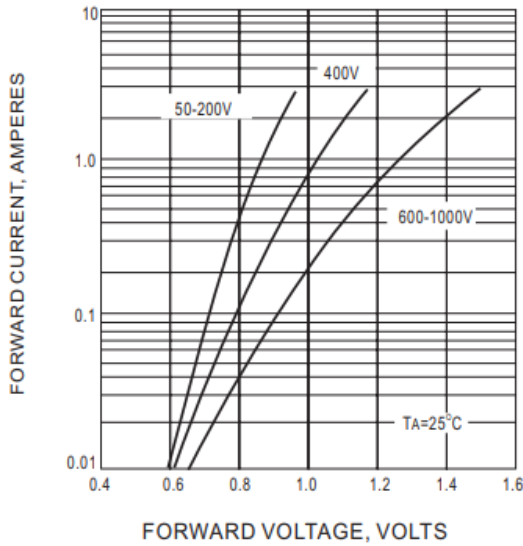


Fig.3 FORWARD CHARACTERISTICS

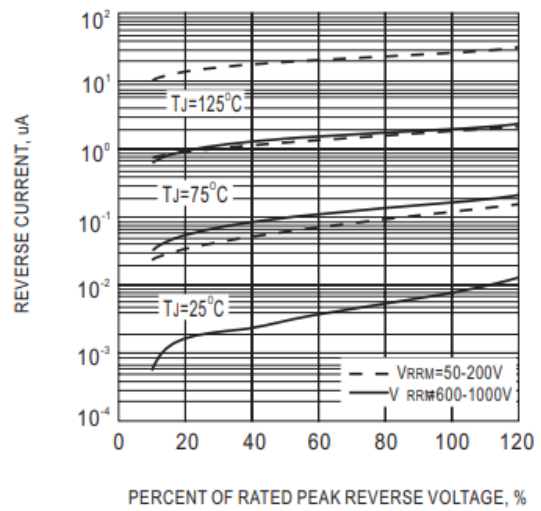


Fig.4 TYPICAL REVERSE CHARACTERISTICS

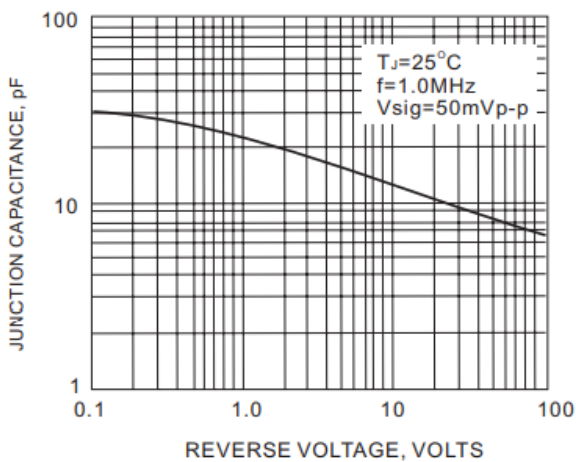


Fig.5 TYPICAL JUNCTION CAPACITANCE

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