

# US2A THRU US2M

## US2A THRU US2M 2.0Amp Ultra Fast Surface Mount Rectifiers

### General description

2.0Amp Ultra Fast Surface Mount Rectifiers

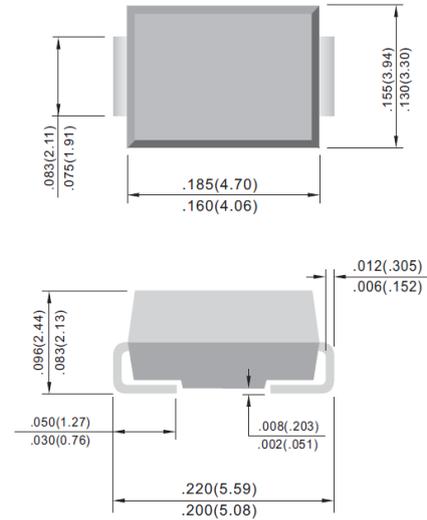
### FEATURES

- 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
- Both normal and Pb free product are available

### MECHANICAL DATA

- Case: SMB
- Terminals: Solderable per MIL-STD-750, Method 2026
- Weight: 0.003 ounce, 0.093 grams

### SMB/DO214AA



Unit: inch (mm)

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

Parameter	Symbols	US2A	US2B	US2D	US2G	US2J	US2K	US2M	Units
Marking Code	Mark	US2A	US2B	US2D	US2G	US2J	US2K	US2M	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	$I_{F(AV)}$	2							A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load	$I_{FSM}$	50							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 $T_a = 100^\circ\text{C}$	$I_R$	10 500							$\mu\text{A}$
Maximum Reverse Recovery Time(Note 1) $T_J=25^\circ\text{C}$	$T_{rr}$	50				75			nS
Typical Junction Capacitance (Note 2)	$C_j$	50							pF
Maximum Thermal Resistance(Note 3) $R_{\theta JA}$	$R_{\theta JA}$	20							$^\circ\text{C/W}$
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.



# US2A THRU US2M

## Ratings And Characteristic Curves

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

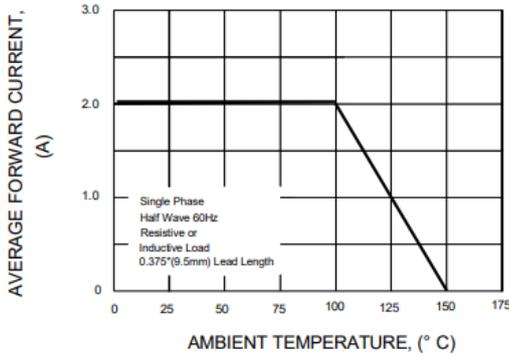


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

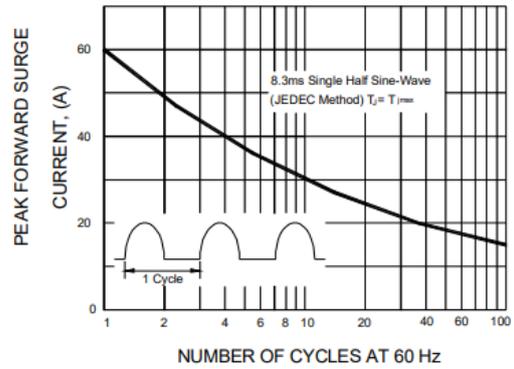


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

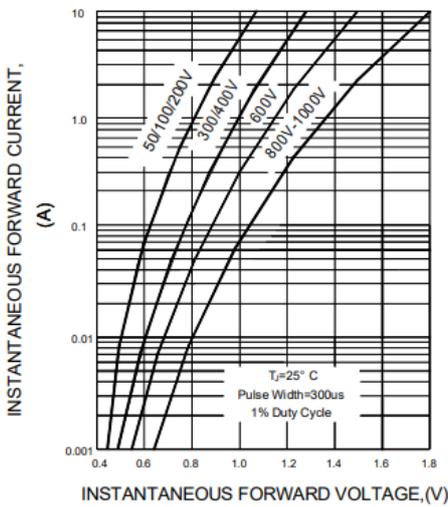


FIG.4-TYPICAL REVERSE CHARACTERISTICS

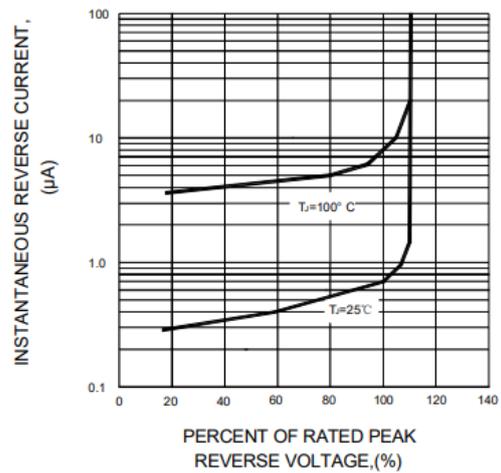


FIG.5-TYPICAL JUNCTION CAPACITANCE

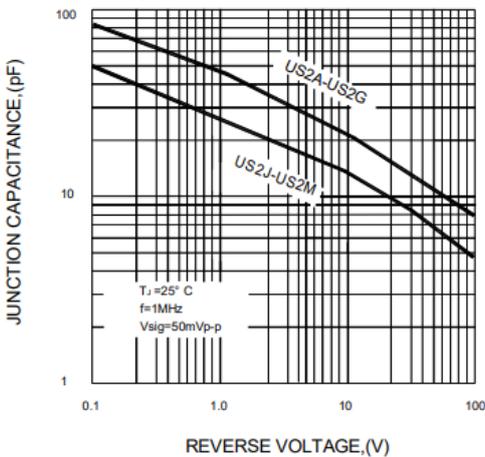
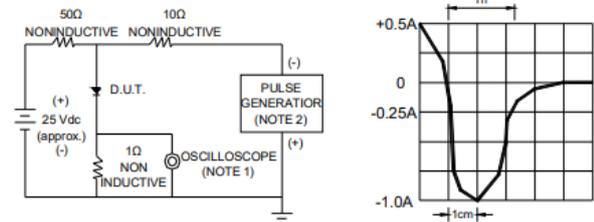


FIG.6-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



- NOTES : 1. Rise Time = 7ns max. Input Impedance = 1 magohm. 22pF  
2. Rise time = 10ns max. Source Impedance = 50 ohms

SET TIME BASE FOR 50/100ns/cm

# US2A THRU US2M

## Important Notice and Disclaimer

DOESHARE has used reasonable care in preparing the information included in this document, but DOESHARE does not warrant that such information is error free. DOESHARE assumes no liability whatsoever for any damages incurred by you resulting from errors in or omissions from the information included herein.

DOESHARE no warranty, representation or guarantee regarding the documents, circuits and products specification, DOESHARE reservation rights to make changes for any documents, products, circuits and specifications at any time without notice.

Purchasers are solely responsible for the choice, selection and use of the DOESHARE products and services described herein, and DOESHARE assumes no liability whatsoever relating to the choice, selection or use of the products and services described herein.

No license, express or implied, by implication or otherwise under any intellectual property rights of DOESHARE.

Resale of DOESHARE products with provisions different from the statements and/or technical features set forth in this document shall immediately void any warranty granted by DOESHARE for the DOESHARE product or service described herein and shall not create or extend in any manner whatsoever, any liability of DOESHARE.