

US2A THRU US2M

US2A THRU US2M 2.0Amp Ultra Fast Surface Mount Rectifiers

General description

2.0Amp Ultra Fast Surface Mount Rectifiers

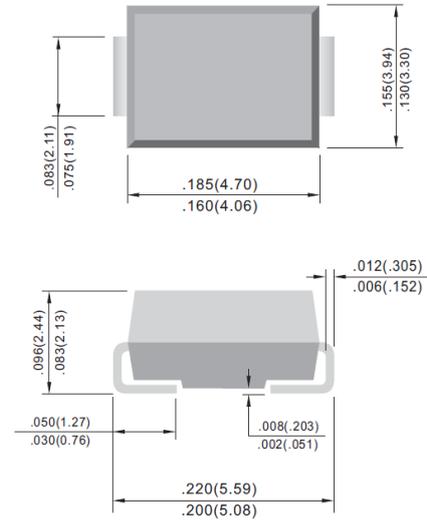
FEATURES

- 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							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	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.



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Ratings And Characteristic Curves

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

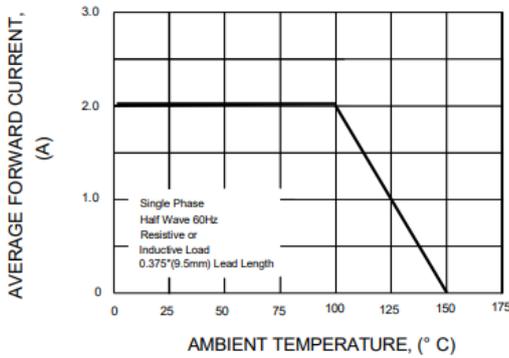


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

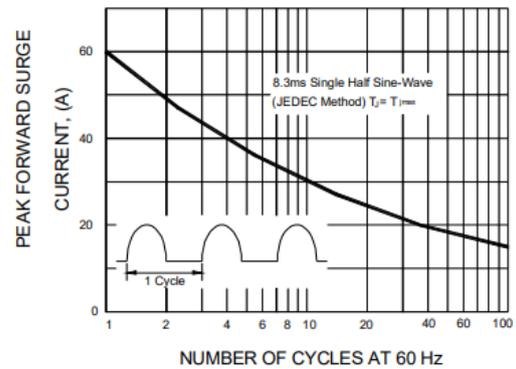


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

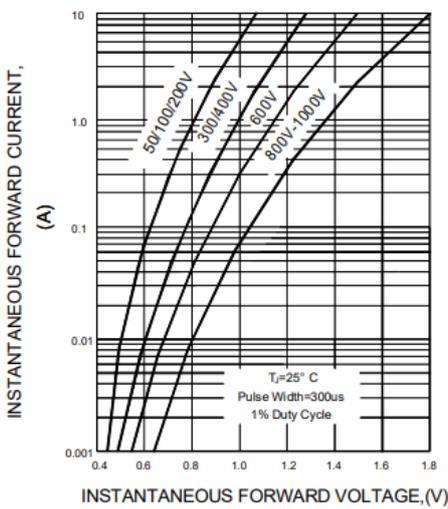


FIG.4-TYPICAL REVERSE CHARACTERISTICS

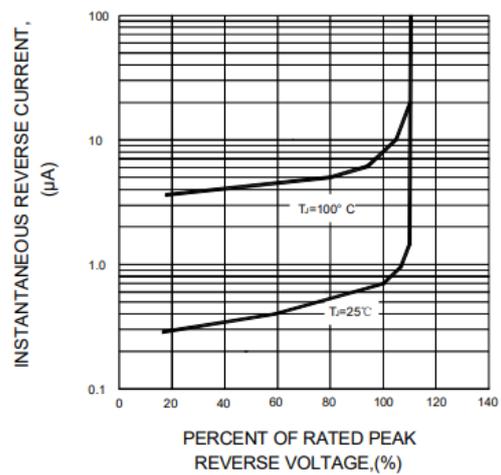


FIG.5-TYPICAL JUNCTION CAPACITANCE

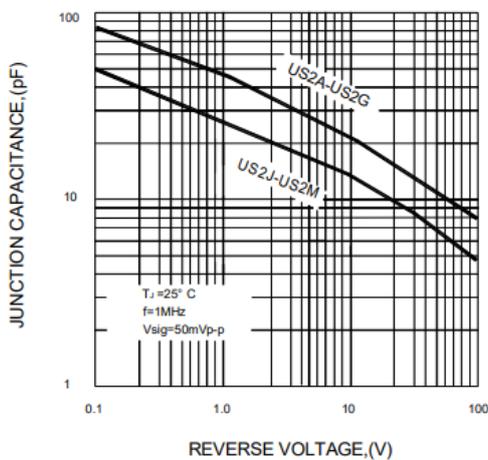
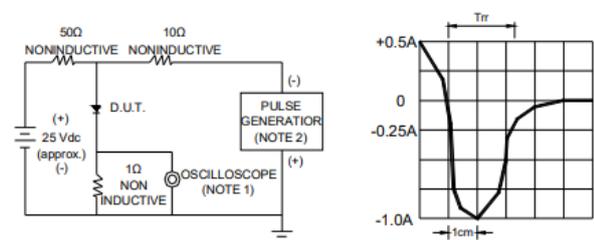


FIG.6-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



- 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

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