

## US2AG THRU US2MG

### 2.0AMPS. SURFACE MOUNT ULTRA FAST RECTIFIERS

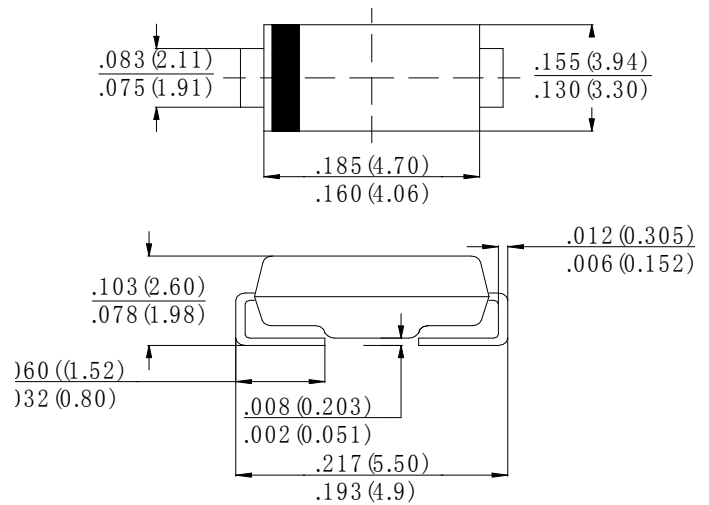
#### FEATURE

- . Low leakage
- . Low forward voltage drop
- . High current capability
- . High surge capability
- . High reliability
- . High temperature soldering guaranteed:  
260°C/10 seconds at terminals.
- . For surface mounted application.

#### MECHANICAL DATA

- . Terminal: Plated axial leads solderable per MIL-STD 202E, method 208C
- . Case: Molded with UL-94 Class V-0 recognized Flame Retardant Epoxy
- . Polarity: color band denotes cathode
- . Mounting position: any

#### SMB (DO-214AA)



#### 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, derate current by 20%

Type Number	SYM BOL	US 2AG	US 2BG	US 2DG	US 2GG	US 2JG	US 2KG	US 2MG	units	
Maximum Recurrent 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 .375"(9.5mm) lead length at $T_A = 55^\circ\text{C}$	$I_{F(AV)}$	2.0							A	
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	50.0							A	
Maximum Instantaneous forward Voltage at 2.0A DC	$V_F$	1.0		1.3		1.7			V	
Maximum DC Reverse Current @ $T_A = 25^\circ\text{C}$ at rated DC blocking voltage @ $T_A = 125^\circ\text{C}$	$I_R$	5.0				100.0				$\mu\text{A}$
Maximum Reverse Recovery Time (Note 1)	$t_{rr}$	50				75				nS
Typical Junction Capacitance (Note 2)	$C_J$	50							pF	
Typical Thermal Resistance (Note 3)	$R_{(JA)}$	75							$^\circ\text{C}/\text{W}$	
	$R_{(JC)}$	20								
Storage Temperature	$T_{STG}$	-55 to +150							$^\circ\text{C}$	
Operation Junction Temperature	$T_J$	-55 to +150							$^\circ\text{C}$	

#### Note:

1. Test Conditions:  $I_F = 0.5\text{A}$ ,  $I_R = 1.0\text{A}$ ,  $I_{RR} = 0.25\text{A}$
2. Measured at 1.0 MHz and applied reverse voltage of 4.0Vdc
3. Measured on P.C.Board with  $0.2 \times 0.2''$  ( $5.0 \times 5.0\text{mm}$ ) Copper Pad Areas.

**RATING AND CHARACTERISTIC CURVES (US2AG THRU US2MG)**

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

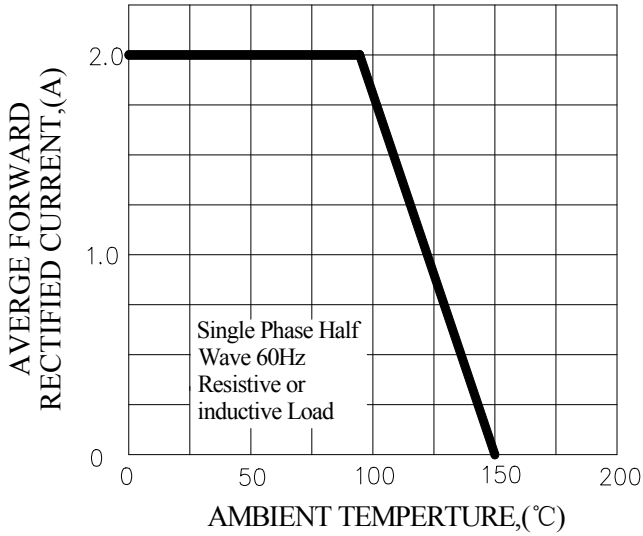


FIG.2-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

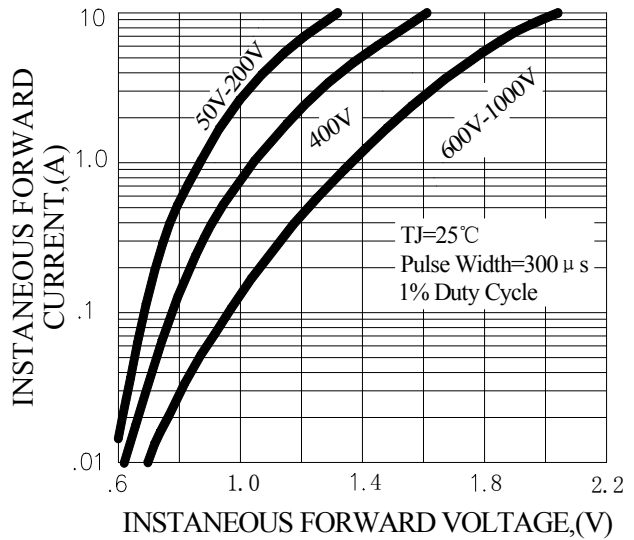


FIG.3-MAXIMUN NON-REPETITIVE FORWARD SURGE CURRENT

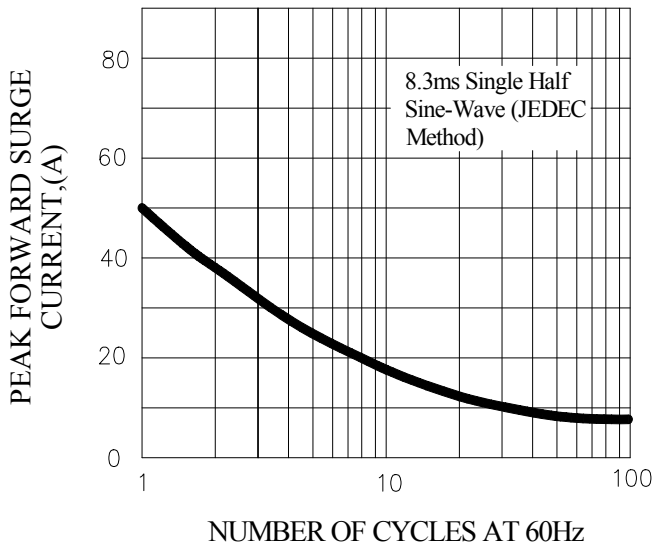


FIG.4-TYPICAL REVERSE CHARACTERISTICS

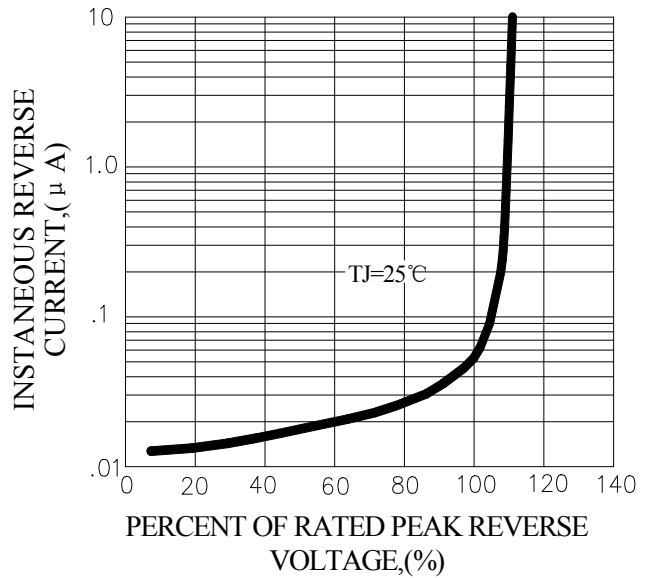
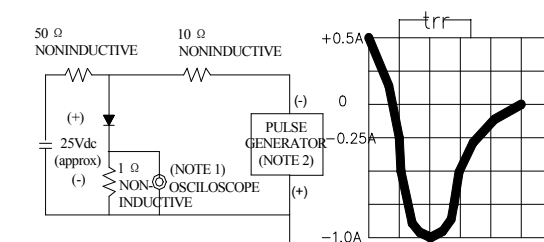


FIG.5-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



NOTES:1. Rise Time=7ns max, Input Impedance= 1 megohm,22pF.  
2. Rise Time=10ns max, Source Impedance= 50 ohms.

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