

US2AG THRU US2MG

2.0AMPS. SURFACE MOUNT ULTRA FAST RECTIFIERS

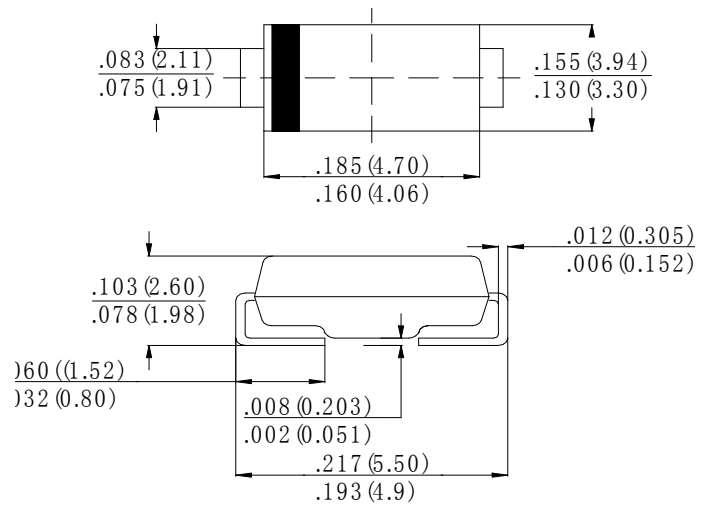
FEATURE

- . 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				μA
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

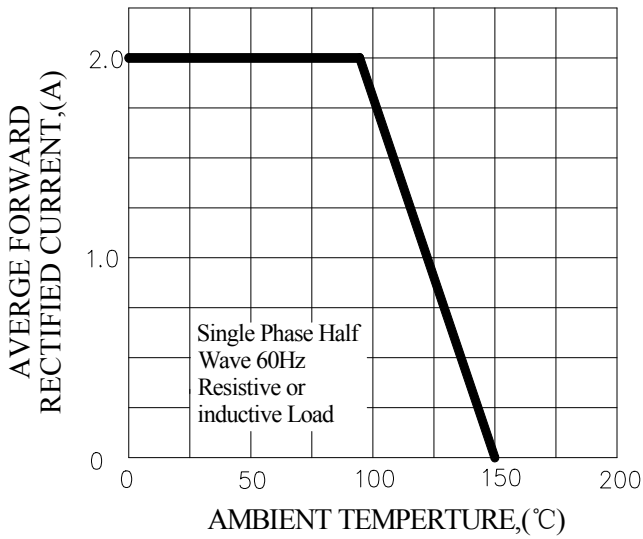


FIG.2-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

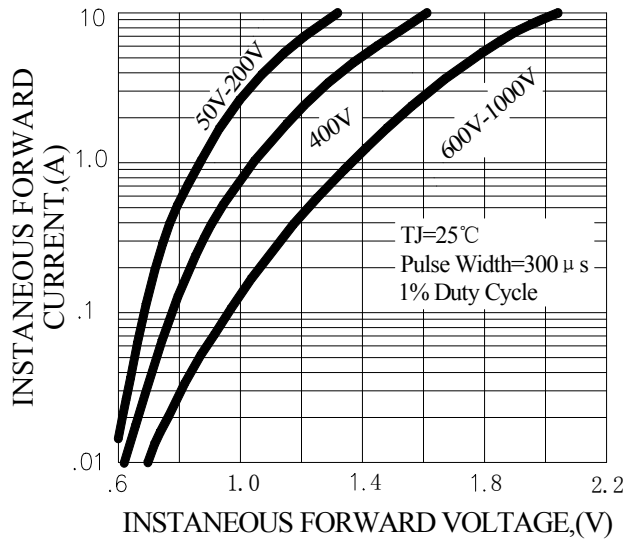


FIG.3-MAXIMUN NON-REPETITIVE FORWARD SURGE CURRENT

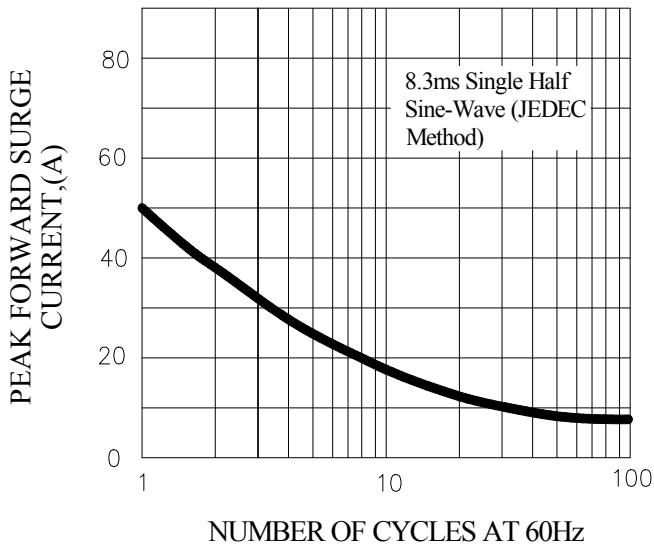


FIG.4-TYPICAL REVERSE CHARACTERISTICS

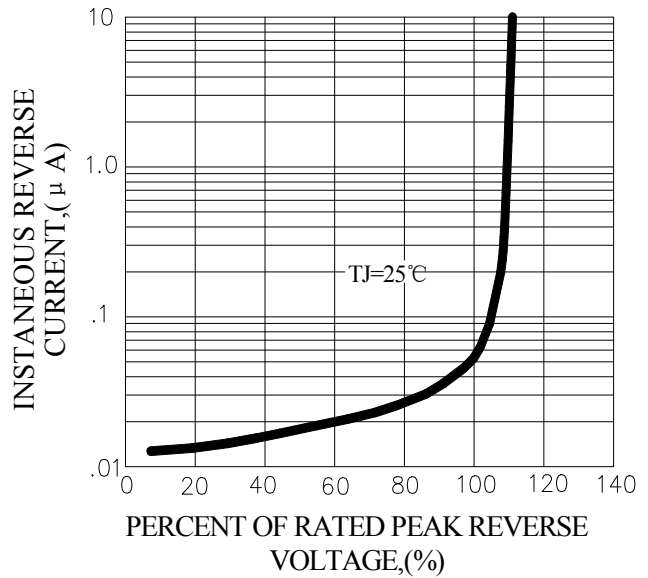
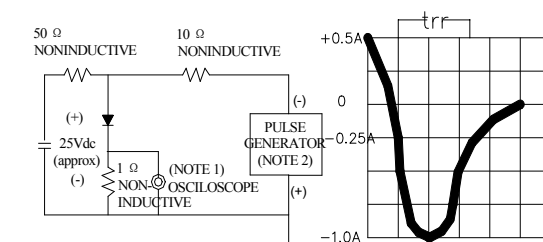


FIG.5-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



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