SEMICONDUCTOR

US2AB THRU US2MB

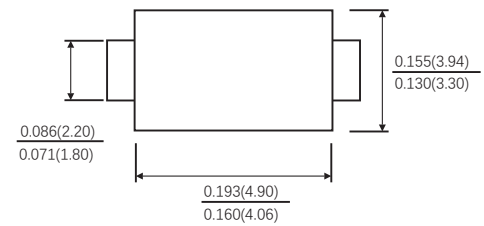
GLASS PASSIVATED JUNCTION ULTRA FAST RECOVERY RECTIFIER

Reverse Voltage: 50 to 1000 Volts
Forward Current: 2.0Ampere

FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Glass passived junction
- Low forward voltage drop
- High current capability, High reliability
- Low power loss, high efficiency
- High surge current capability
- High speed switching, Low leakage
- High temperature soldering guaranteed: 260℃/10 seconds at terminals
- Component in accordance to RoHS 2015/863/EU

SMB(DO-214AA)



Dimensions in inches and (millimeters)

MECHANICAL DATA

- Case: JEDEC SMB(DO-214AA) molded plastic body
- Terminals: solder plated ,solderable per MIL-STD-750,method 2026
- Polarity: color band denotes cathode end
- Weight: 0.003ounce,0.093 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

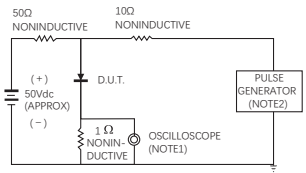
(Ratings at 25℃ ambient temperature unless otherwise specified ,Single phase ,half wave ,resistive or inductive load. For capacitive load,derate by 20%.)

Parameters		Symbol	US2AB	US2BB	US2DB	US2FB	US2GB	US2JB	US2KB	US2MB	Units
Maximum repetitive peak reverse voltage		V_{RRM}	50	100	200	300	400	600	800	1000	Volts
Maximum RMS Voltage		V_{RMS}	35	70	140	210	280	420	560	700	Volts
Maximum DC Blocking Voltage		V_{DC}	50	100	200	300	400	600	800	1000	Volts
Maximum Average Forward Rectified Current		$I_{F(AV)}$	2.0								Amps
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)		I_{FSM}	50								Amps
Maximum Instantaneous Forward Voltage at 2.0 A		V_F	1.0				1.4	1.7			Volts
Maximum DC Reverse Current at rated DC blocking voltage	T_j=25℃	I_R	5.0								uA
	T_j=125℃		100								
Maximum reverse recovery time(Note1)		trr	50					75			ns
Typical junction capacitance(Note2)		C_J	20								pF
Operating junction and storage temperature range		T_J/T_{STG}	-50 to+150								℃

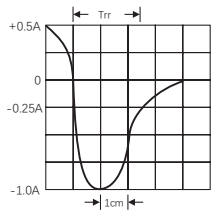
Note: 1.Reverse Recovery Test conditions: I_F=0.5A,I_R=1.0A,I_{RR}=0.25A.
2.Measured at 1MHZ and applied reverse voltage of 4.0 Volts.

RATINGS AND CHARACTERISTIC CURVES US2A THRU US2M

FIG.1-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



NOTES:1.Rise Time=7ns max. input impedance=1 MΩ 22pF
2.Rise Time=10ns max. source impedance=50Ω



SET TIME BASE FOR 50/100 ns/cm

FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

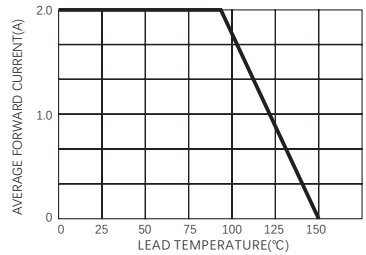


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

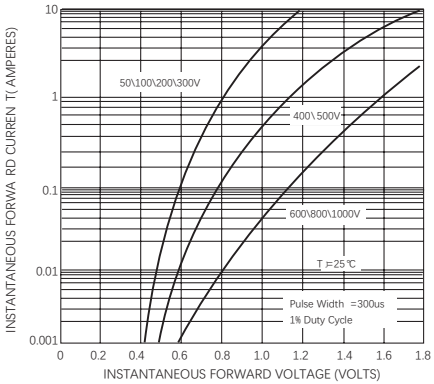


FIG.4-TYPICAL REVERSE CHARACTERISTICS

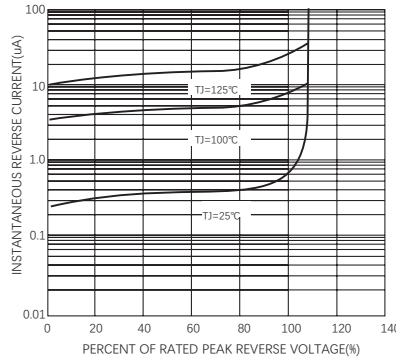


FIG.5-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

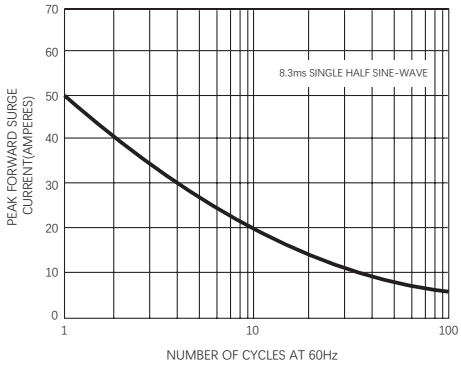
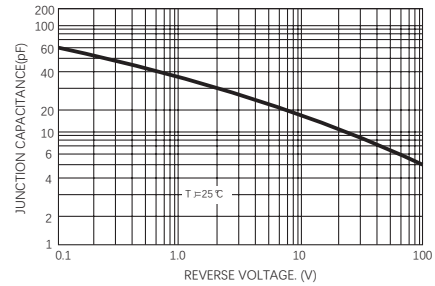


FIG.6-TYPICAL JUNCTION CAPACITANCE



Friendship Reminder

■ JiNan JingHeng （hereinafter referred to as JH） reserves the right to make changes to this document and its products and specifications at anytime without notice.

■ Customers should obtain and confirm the latest product information and specifications before final design, purchase or use.

■ JH makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, nor does JH assume any liability for application assistance or customer product design.

■ JH does not warrant or accept any liability with products which are purchased or used for any unintended or unauthorized application.

■ No license is granted by implication or otherwise under any intellectual property rights of JH.

■ JH’s products are not authorized for use as critical components in life support devices or systems without express written approval of JH.