

US2A THRU US2M

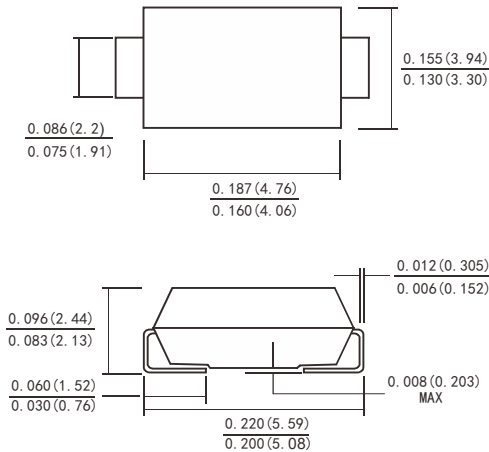
RoHS
COMPLIANT



SURFACE HIGH EFFICIENCY RECTIFIERS

Reverse Voltage 50 to 1000 Volts Forward Current 2.0 Ampere

SMB(DO-214AA)



Dimensions in inches and (millimeters)

FEATURES

- Glass passivated cavity-free junction
- Ideal for surface mount automotive applications
- Ultrafast recovery time for high efficiency
- Built-in strain relief
- Easy pick and place
- Plastic package has Underwriters Laboratory Flammability
- Classification 94V-0
- Lead (Pb)-free component
- Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC
- High temperature soldering guaranteed: 260°C/10 seconds at terminals

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
- **Mounting Position:** Any
- **Weight:** 0.003ounce, 0.093 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(Rating at 25°C ambient temperature unless otherwise specified, Single phase, half wave, 60HZ, resistive or inductive load. For capacitive load, derate current by 20%.)

		Symbols	US2						Units	
			A	B	D	G	J	K		M
Maximum Repetitive Peak Reverse Voltage		V _{RRM}	50	100	200	400	600	800	1000	Volts
Maximum RMS Voltage		V _{RMS}	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage		V _{DC}	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Rectified Current At T _L =110°C		I _(AV)	2.0						Amps	
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load		I _{FSM}	60						Amps	
Maximum Instantaneous Forward Voltage at 2.0 A		V _F	1.0			1.3	1.7			Volts
Maximum DC Reverse Current At Rated DC Blocking Voltage	T _A =25°C	I _R	5.0						μA	
	T _A =125°C		100							
Maximum Reverse Recovery Time(Note1)		T _{rr}	50				75		ns	
Typical Junction Capacitance(Note2)		C _J	25						pF	
Typical Thermal Resistance (NOTE3)		R θ JA	20						°C/W	
Operating Junction and Storage Temperature Range		T _J , T _{STG}	-55 to +150						°C	

Note: 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 1MHz and applied reverse voltage of 4.0 Volts.

3. Thermal Resistance From Junction To Ambient P.C.B. Mounted On 0.2x0.2" (5.0x5.0mm) Copper Pad Areas.

RATINGS AND CHARACTERISTIC CURVES US2A THRU US2M

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

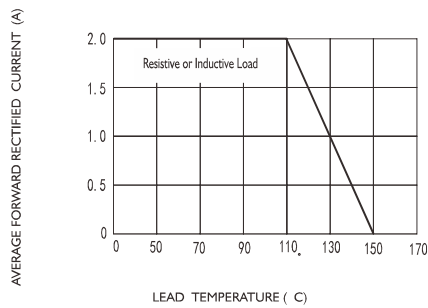


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

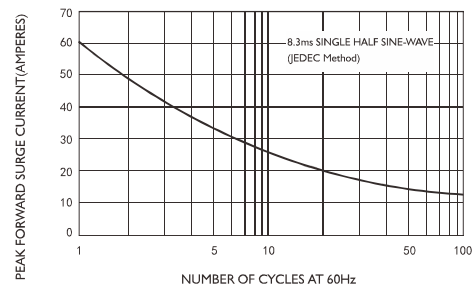


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

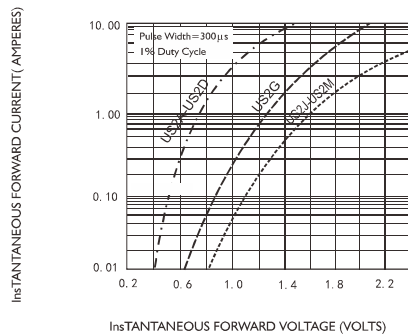


FIG.4-TYPICAL REVERSE CHARACTERISTICS

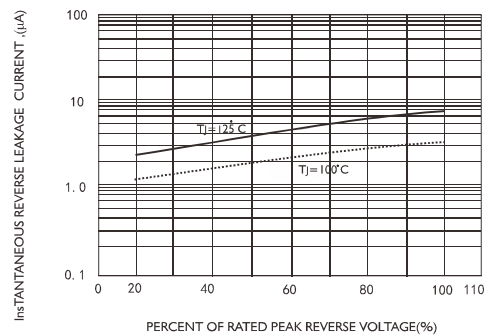


FIG.5-TYPICAL JUNCTION CAPACITANCE

