



Ultra Fast Rectifier

US2A THRU US2M 50 to 1000 V 2.0A

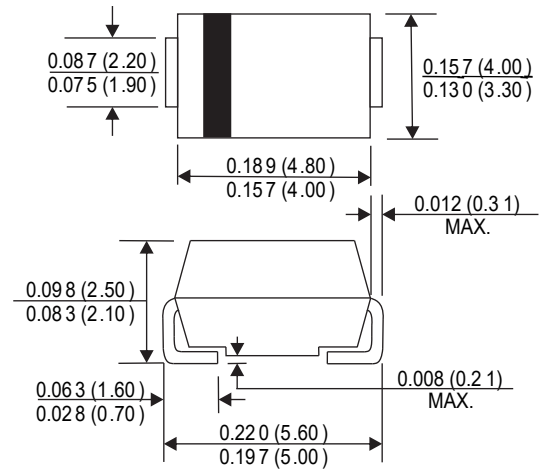
FEATURES

- For surface mounted applications
- Low profile package
- Built-in strain relief
- Easy pick and place
- Fast Recovery times for high efficiency
- Plastic package has Underwriters Laboratory
- Flammability Classification 94V-O
- High temperature soldering : 260°C /10 seconds at terminals

MECHANICAL DATA

- Case: Molded plastic, SMB and DO-214AA
- Terminals: Solder Plated, Solderable per MIL-STD-750, Method 2026
- Polarity: Cathode Band or Cathode Notch
- Marking: Type Number

SMB(DO-214AA)



Dimensions in inches and (millimeters)

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 or marks	Symbols	US 2A	US 2B	US 2C	US 2D	US 2J	US 2K	US 2M	Units
Maximum Recurrent Peak Reverse Voltage	VRRM	50	100	200	400	600	800	1000	Volts
Maximum RMS Voltage	VRMS	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage	VDC	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Rectified Current. Lead Length @Ta(Fig 1)	I(AV)	2.0							Amp
Peak Forward Surge Current,8.3ms single half-sine-wave superimposed on rated load (JEDEC method)	IFSM	60							Amp
Maximum Forward Voltage at 2.0A	VF	1.0			1.3	1.7			Volts
Maximum DC reverse current at rated DC blocking voltage per Tj=25℃ Tj=100℃	IR	5.0 100							uAmp
Typical Thermal Resistance	Rθ JA	55							℃/W
Typical Junction capacitance (Note2)	CJ	60							pF
Maximum Thermal Resistance (Note1	TRR	50				75			nS
Operating Temperature Range	TJ	-55 to +150							℃
Storage Temperature Range	TSTG	-55 to +150							℃

NOTES:

1. Measured with $I_F=0.5\text{A}$, $I_R=1\text{A}$, $I_{RR}=0.25\text{A}$.
2. Measured at 1.0 MHz and applied reverse voltage of 4.0 V DC.
3. The typical data above is for reference only.



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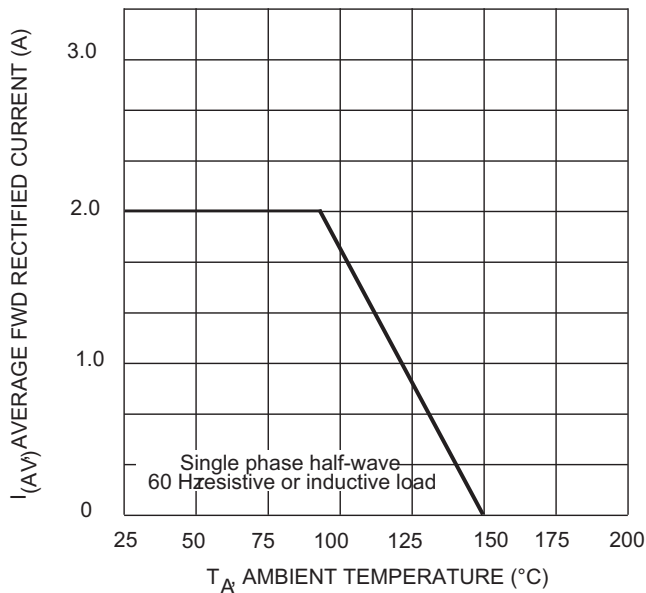


Fig. 1 Forward Derating Curve

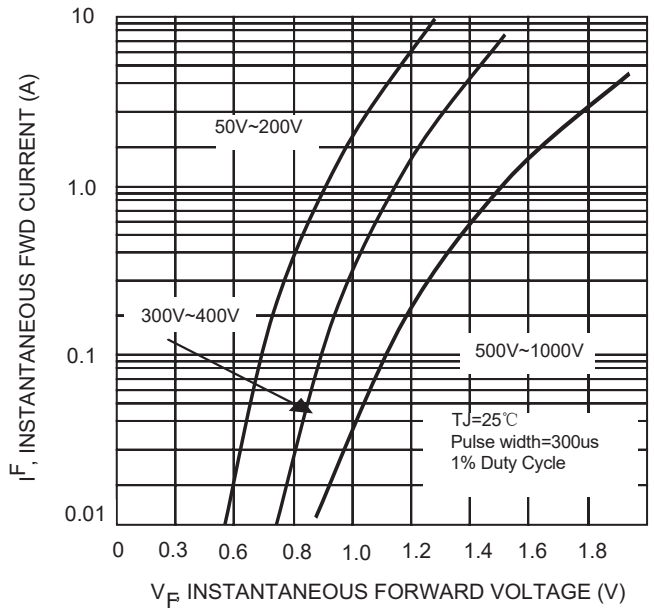


Fig. 2 Typical Forward Characteristics

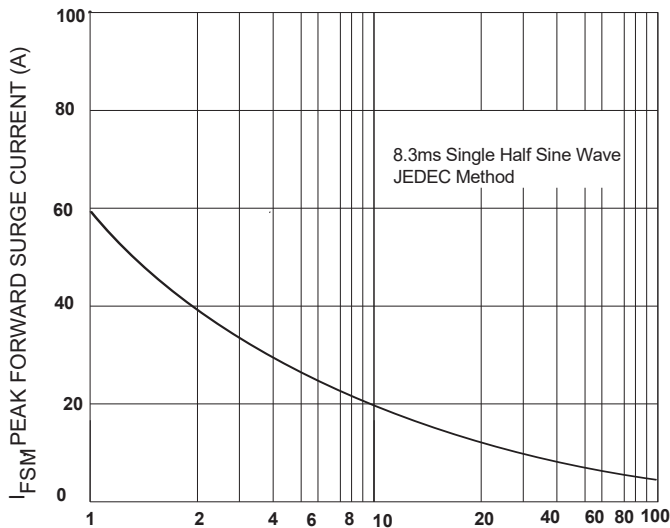


Fig. 3 Peak Forward Surge Current

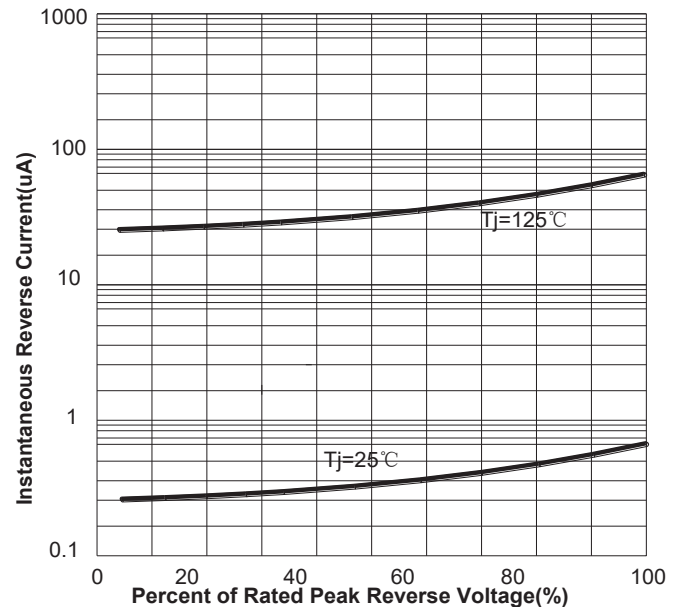
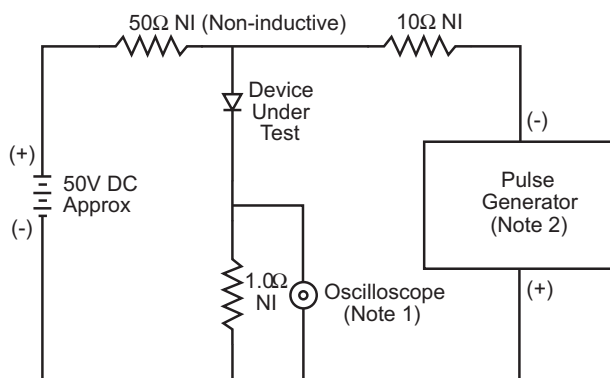


FIG4: Typical Reverse Characteristics



Notes:

1. Rise Time=7ns max .Input Impedance=1MΩ 22pf
2. Rise Time=10ns max.Source Impedance=50Ω

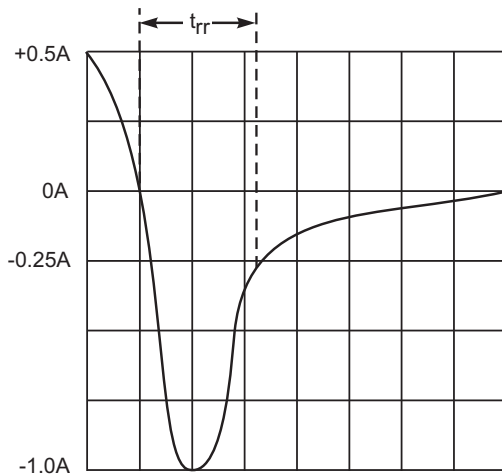


Fig. 5 Reverse Recovery Time Characteristic and Test Circuit