

SuperDiode – 2A, 50~1000V Ultra Fast Recovery Surface Mounted Rectifiers

1. Features

- The plastic package carries Underwriters Laboratory
- Flammability Classification 94V-0
- Idea for printed circuit board
- Glass passivated junction chip
- Low reverse leakage
- High forward surge current capability
- High temperature soldering guaranteed 260°C/10 seconds at terminals

2. Mechanical Data

- Case: Molded plastic body
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: Polarity symbol marking on body
- Mounting Position: Any
- Weight: 0.0023 ounce, 0.07 grams

3. Maximum Ratings and Electrical Characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

Single phase half-wave 60Hz, resistive or inductive load.

Characteristics	Symbol	US2AA	US2BA	US2DA	US2GA	US2JA	US2KA	US2MA	Unit
Maximum Repetitive 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 at TA=100°C	I _(AV)	2.0							A
Peak Forward Surge Current, 8.3mS Single Half Sine-Wave, Superimposed on Rated Load (JEDEC Method)	I _{FSM}	50							A
Peak Forward Voltage per bridge element at 2.0A	V _F	1.0			1.4	1.7		V	
Maximum DC Reverse Current at Rated DC Blocking Voltage per Diode	T _J =25°C	2.0							µA
	T _J =125°C	200							
Maximum Reverse Recovery Time (Note 1)	T _{RR}	50				75			ns
Typical Junction capacitance (Note 2)	C _J	50							pF
Typical Junction Resistance	R _{θJA}	80							°C/ W
Operating Junction Temperature Range	T _J	-55 to +150							°C
Storage Temperature Range	T _{STG}	-55 to +150							°C

NOTES:

1. Reverse Recovery Test Conditions: I_F=0.5A, I_R=1A, I_{rr}=.25A
2. Measured at 1 MHz and applied reverse voltage of 4.0 V_{DC}

4. Typical Characteristic

FIG. 1- DERATING CURVE OUTPUT RECTIFIED CURRENT

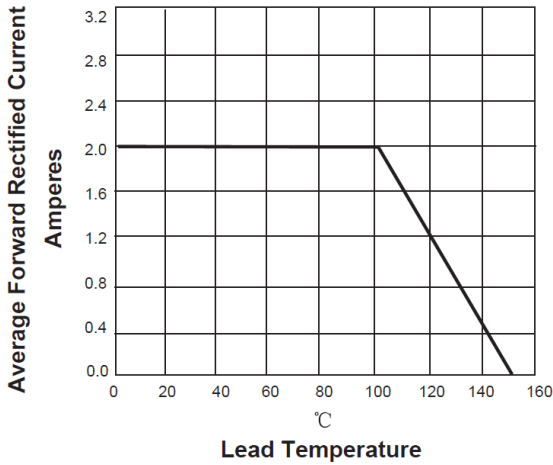


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

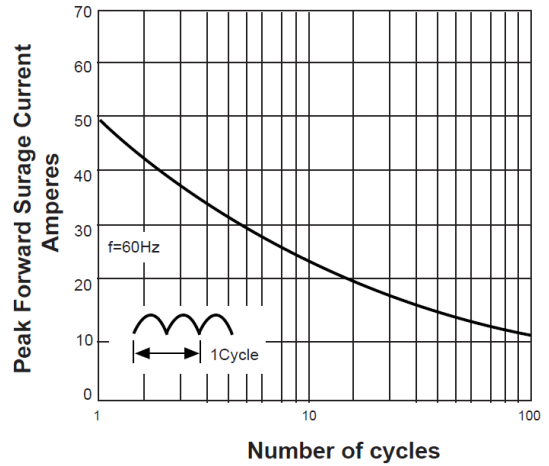


FIG. 3-TYPICAL FORWARD VOLTAGE CHARACTERISTICS

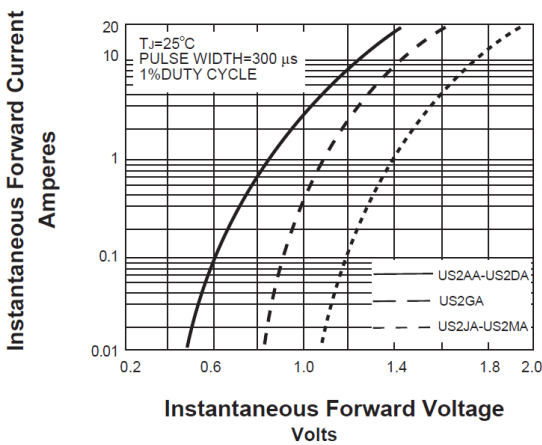
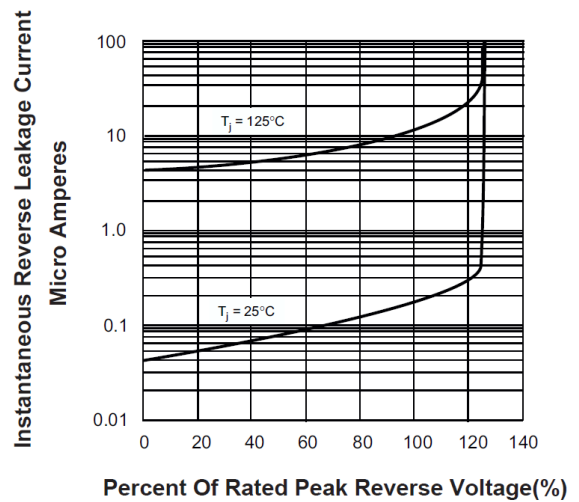
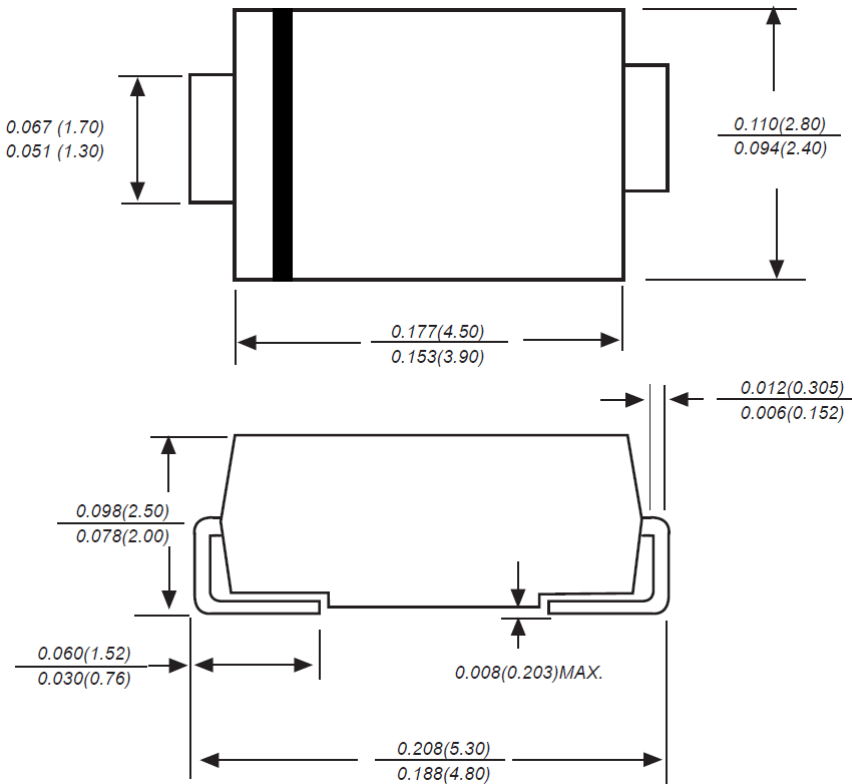


FIG. 4-TYPICAL REVERSE LEAKAGE CHARACTERISTICS

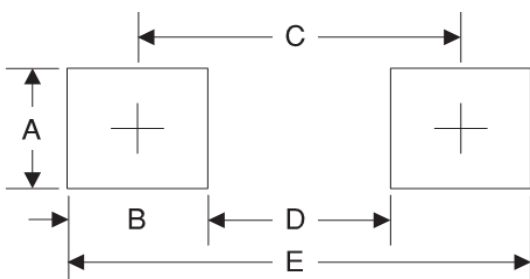


5. Dimension (DO-214AC/SMA)



Package outline dimension in inches (millimeters)

Suggested Pad Layout



Symbol	Unit (mm)	Unit (inch)
A	1.68	0.066
B	1.52	0.060
C	3.90	0.154
D	2.41	0.095
E	5.45	0.215

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