

SODU1A THRU SODU1M

SODU1A THRU SODU1M Ultra-Fast Surface Mount Rectifiers

General description

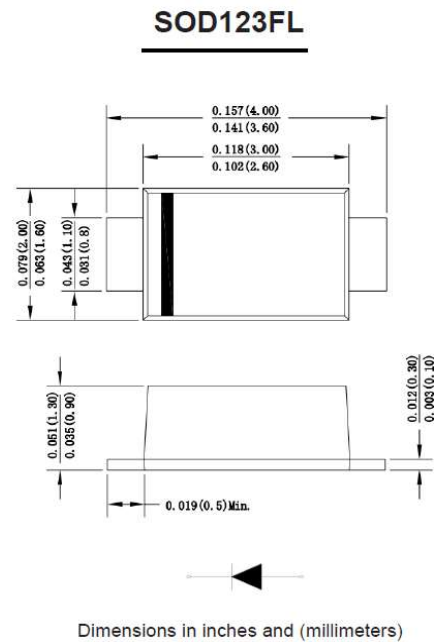
Ultra fast Silicon Rectifier
Reverse Voltage : 50 to 1000V
Forward Current:1.0A

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 250 C/10 seconds at terminals

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: 0.0007 ounce, 0.02 grams



Absolute Maximum Ratings ($T_A=25^\circ\text{C}$ unless otherwise specified)

Single phase half-wave 60 Hz, resistive or inductive load, for capacitive load current derate by 20 %.

Parameter	SYMBOLS	SOD U1A	SOD U1B	SOD U1D	SOD U1G	SOD U1J	SOD U1K	SOD U1M	UNITS
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 $T_L=100^\circ\text{C}$	$I_{(AV)}$	1.0							A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	35.0							A
Maximum instantaneous forward voltage at 1.0A	V_F	1.0			1.4	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				500			μA
Maximum reverse recovery time(Note 1)	T_{rr}	50				75			ns
Typical junction capacitance (Note2)	C_J	9.0							pF
Typical thermal resistance	R_{qJA}	85.0							$^\circ\text{C/W}$
Operating junction and storage temperature range	T_J, T_{STG}	-55 to +150							$^\circ\text{C}$

NOTES: 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 1 MHz and applied $V_r = 4.0$ volts.

Ratings And Characteristic Curves

FIG. 1- DERATING CURVE OUTPUT RECTIFIED CURRENT

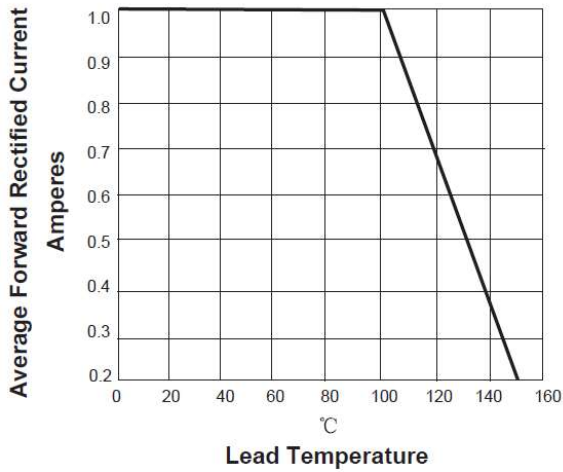


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

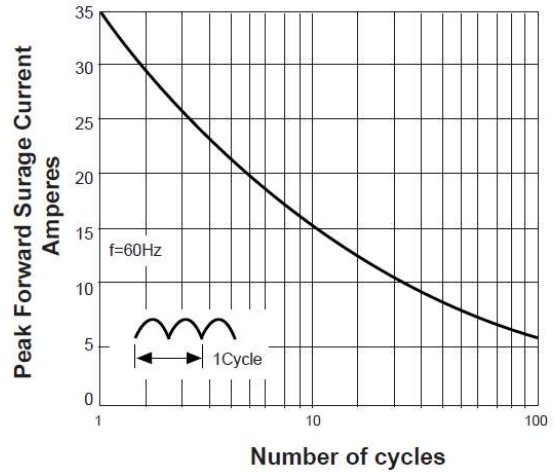


FIG. 3-TYPICAL FORWARD VOLTAGE CHARACTERISTICS

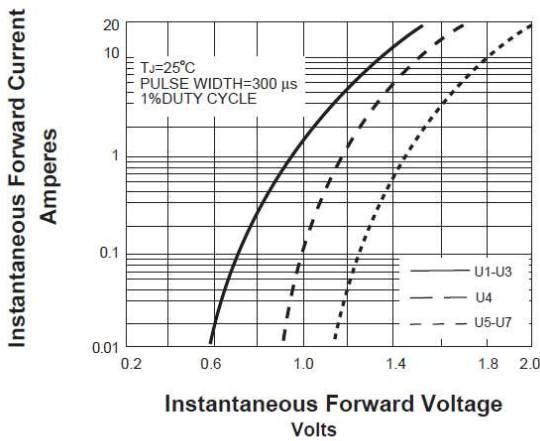
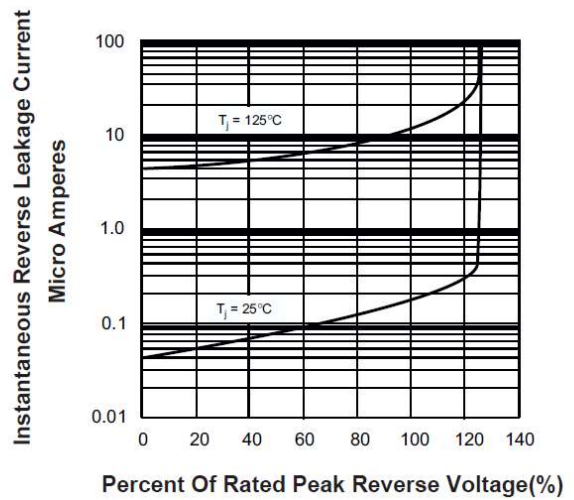
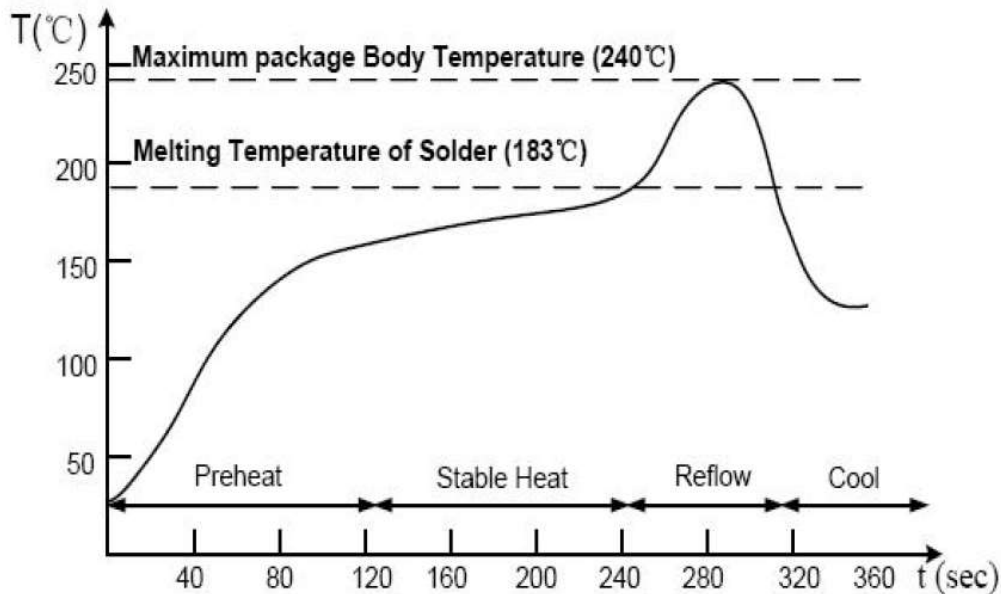


FIG. 4-TYPICAL REVERSE LEAKAGE CHARACTERISTICS



SODU1A THRU SODU1M

Suggested Soldering Temperature Profile



Note

- Recommended reflow methods: IR, vapor phase oven, hot air oven, wave solder.
- The device can be exposed to a maximum temperature of 265 $^{\circ}\text{C}$ for 10 seconds.
- Devices can be cleaned using standard industry methods and solvents.
- If reflow temperatures exceed the recommended profile, devices may not meet the performance requirements.

SODU1A THRU SODU1M

Important Notice and Disclaimer

DOESHARE has used reasonable care in preparing the information included in this document, but DOESHARE does not warrant that such information is error free. DOESHARE assumes no liability whatsoever for any damages incurred by you resulting from errors in or omissions from the information included herein.

DOESHARE no warranty, representation or guarantee regarding the documents, circuits and products specification, DOESHARE reservation rights to make changes for any documents, products, circuits and specifications at any time without notice.

Purchasers are solely responsible for the choice, selection and use of the DOESHARE products and services described herein, and DOESHARE assumes no liability whatsoever relating to the choice, selection or use of the products and services described herein.

No license, express or implied, by implication or otherwise under any intellectual property rights of DOESHARE.

Resale of DOESHARE products with provisions different from the statements and/or technical features set forth in this document shall immediately void any warranty granted by DOESHARE for the DOESHARE product or service described herein and shall not create or extend in any manner whatsoever, any liability of DOESHARE.