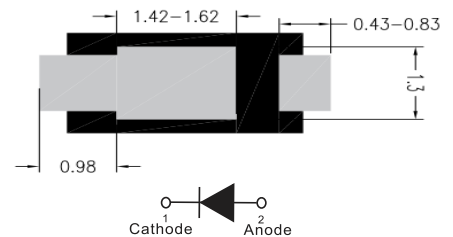
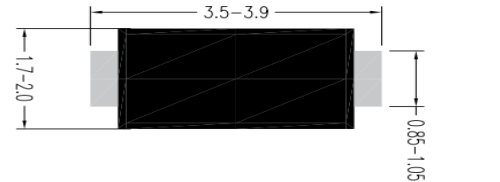
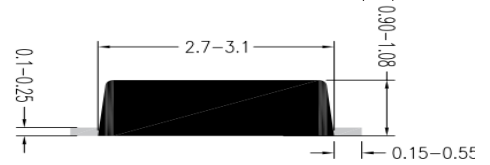


2A, 200V - 600V Surface Mount Super Fast Rectifier

SOD-123HE

Unit : inch(mm)



FEATURES

- Glass passivated junction chip
- Ideal for automated placement
- Low profile package
- Low power loss, high efficiency
- Compliant to RoHS Directive 2011/65/EU and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21

MECHANICAL DATA

- Case: SOD-123HE
- Molding compound meets UL 94 V-0 flammability rating
- Moisture sensitivity level: level 1, per J-STD-020
- Terminal: Matte tin plated leads, solderable per J-STD-002
- Meet JESD 201 class 1A whisker test
- Polarity: As marked
- Weight: 16 mg (approximately)

ABSOLUTE MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$ unless otherwise noted)

PARAMETER	SYMBOL	ES 2002 HE	ES 2004 HE	ES 2006 HE	UNIT
Repetitive peak reverse voltage	V_{RRM}	200	400	600	V
Reverse voltage, total rms value	V_{RMS}	140	280	420	V
Maximum DC blocking voltage	V_{DC}	200	400	600	
Forward current	$I_{F(AV)}$	2			A
Surge peak forward current, 8.3 ms single half sine-wave superimposed on rated load per diode	I_{FSM}	40			A
Junction temperature	T_J	- 55 to +150			$^\circ\text{C}$
Storage temperature	T_{STG}	- 55 to +150			$^\circ\text{C}$

THERMAL PERFORMANCE

PARAMETER	SYMBOL	TYP	UNIT
Junction to Lead Thermal Resistance	$R_{\theta JL}$	15	$^\circ\text{C}/\text{W}$
Junction to Ambient Thermal Resistance	$R_{\theta JA}$	90	$^\circ\text{C}/\text{W}$

ELECTRICAL SPECIFICATIONS ($T_A = 25^\circ\text{C}$ unless otherwise noted)

PARAMETER	CONDITIONS	SYMBOL	TYP	MAX	UNIT
Forward voltage ⁽¹⁾	$I_F = 2\text{A}, T_J = 25^\circ\text{C}$	V_F	-	1.0	V
			-	1.3	V
			-	1.7	V
Reverse current @ rated V_R per diode ⁽²⁾	$T_J = 25^\circ\text{C}$	I_R	-	5	μA
	$T_J = 125^\circ\text{C}$		-	100	μA
Junction capacitance	1 MHz, $V_R = 4\text{V}$	C_J	15	-	pF
Reverse recovery time	$I_F = 0.5\text{A}, I_R = 1.0\text{A}$ $I_{RR} = 0.25\text{A}$	t_{rr}	-	35	nS

Notes:

1. Pulse test with $PW = 0.3\text{ ms}$
2. Pulse test with $PW = 30\text{ ms}$



CHARACTERISTICS CURVES

($T_A = 25^\circ\text{C}$ unless otherwise noted)

Fig1. Forward Current Derating Curve

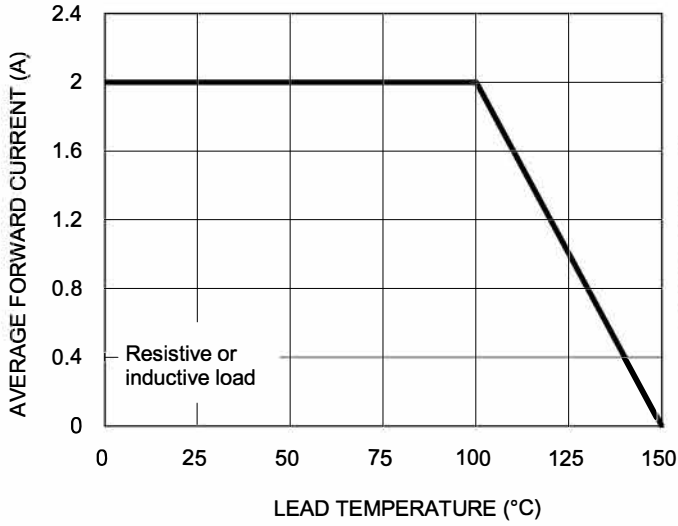


Fig2. Typical Junction Capacitance

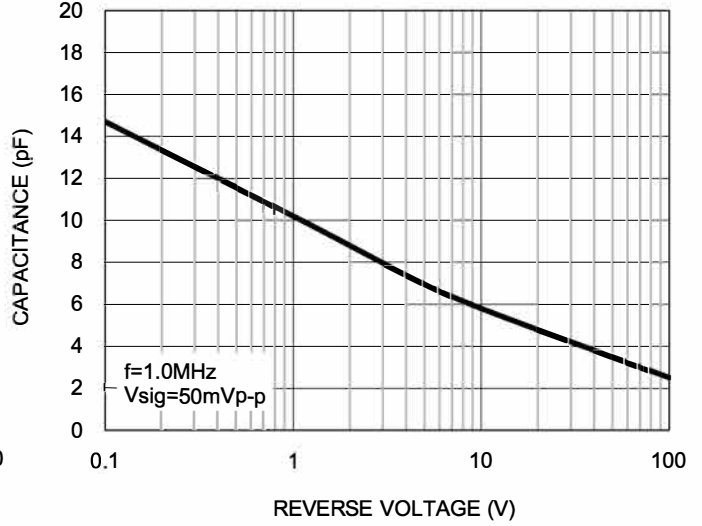


Fig3. Typical Reverse Characteristics

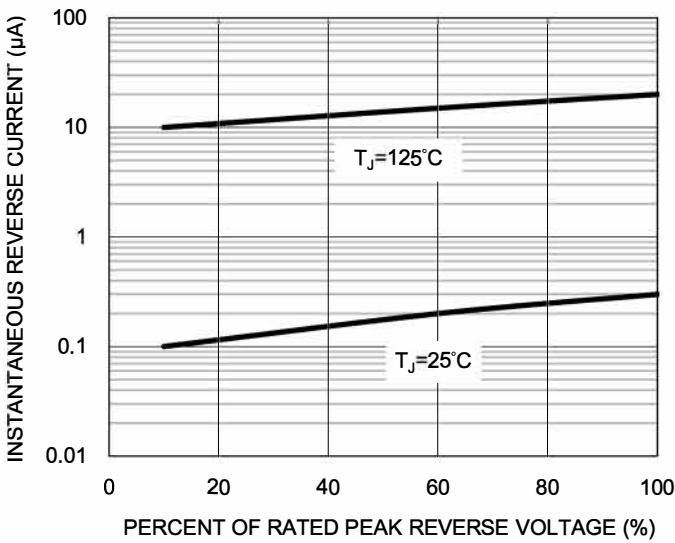


Fig4. Typical Forward Characteristics

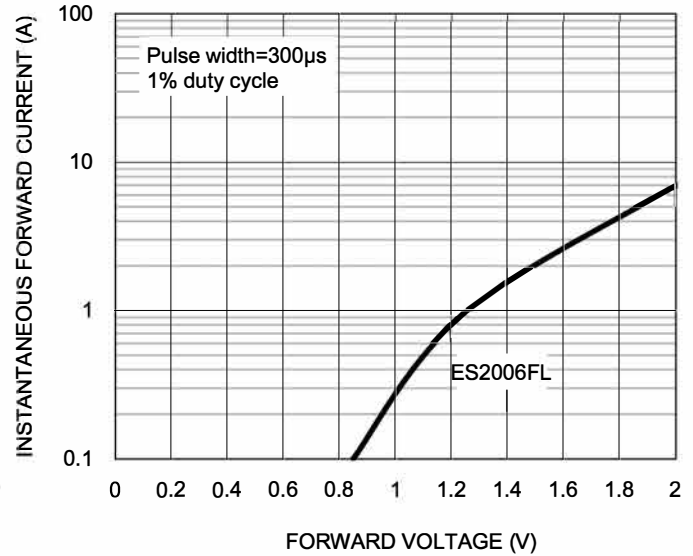


Fig5. Maximum Non-repetitive Forward Surge Current

