

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

FEATURES

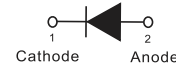
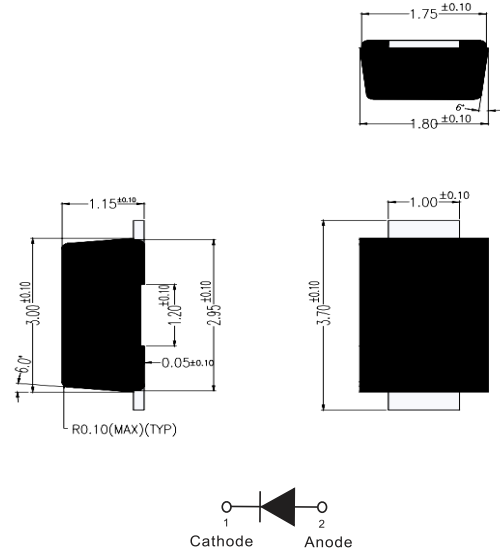
- Glass passivated junction chip
- Ideal for automated placement
- Low profile package
- Low power loss, high efficiency
- Compliant to RoHS Directive 2011/65/EU and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21

MECHANICAL DATA

- Case: SOD-123FL
- 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)

SOD-123FL

Unit : inch(mm)



ABSOLUTE MAXIMUM RATINGS (T_A = 25°C unless otherwise noted)

PARAMETER	SYMBOL	ES 2002 FL	ES 2004 FL	ES 2006 FL	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			°C
Storage temperature	T _{STG}	- 55 to +150			°C

THERMAL PERFORMANCE

PARAMETER	SYMBOL	TYP	UNIT
Junction to Lead Thermal Resistance	R _{θJL}	81	°C/W
Junction to Ambient Thermal Resistance	R _{θJA}	116	°C/W

ELECTRICAL SPECIFICATIONS (T_A = 25°C unless otherwise noted)

PARAMETER	CONDITIONS	SYMBOL	TYP	MAX	UNIT
Forward voltage ⁽¹⁾	I _F = 2A, T _J = 25°C	V _F	-	1.0	V
			-	1.3	V
			-	1.7	V
Reverse current @ rated V _R per diode ⁽²⁾	T _J = 25°C	I _R	-	5	μA
	T _J = 125°C		-	100	μA
Junction capacitance	1 MHz, V _R =4V	C _J	15	-	pF
Reverse recovery time	I _F =0.5A, I _R =1.0A I _{RR} =0.25A	t _{rr}	-	35	nS

Notes:

1. Pulse test with PW=0.3 ms
2. Pulse test with PW=30 ms

CHARACTERISTICS CURVES

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

Fig1. Forward Current Derating Curve

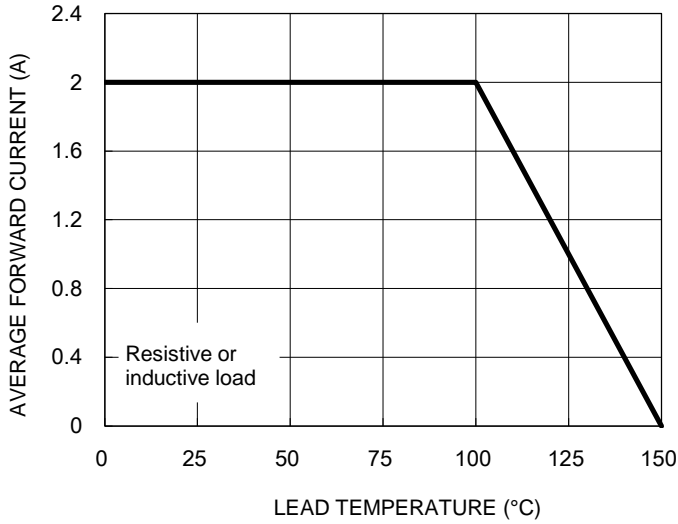


Fig2. Typical Junction Capacitance

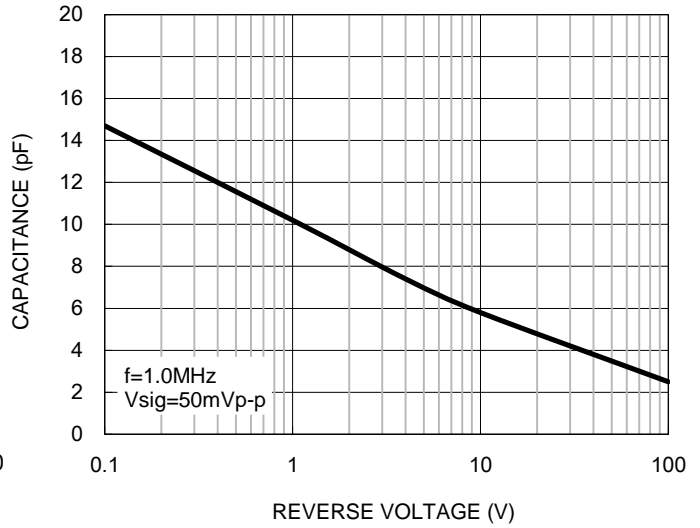


Fig3. Typical Reverse Characteristics

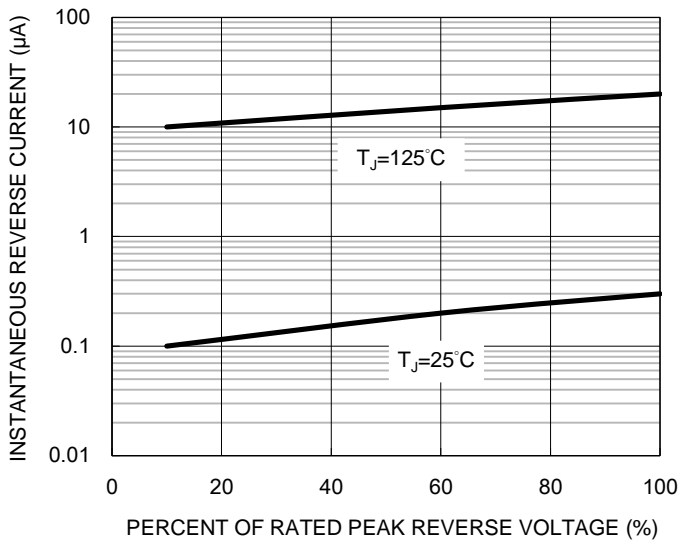


Fig4. Typical Forward Characteristics

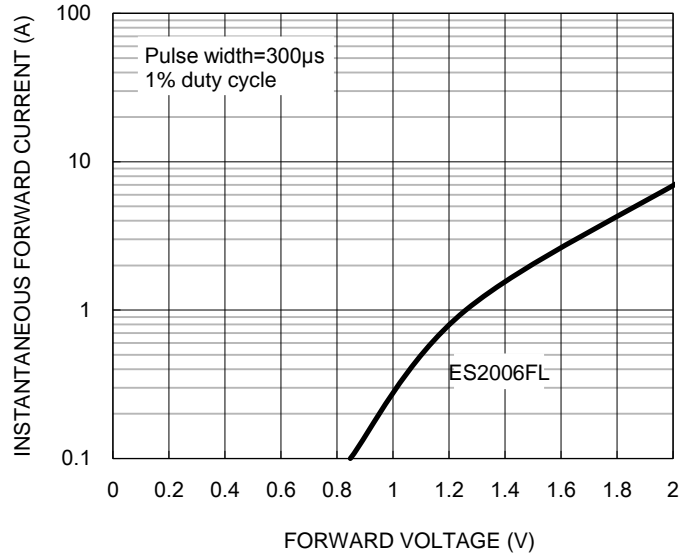


Fig5. Maximum Non-repetitive Forward Surge Current

