

1A, 400V - 1000V Surface Mount Rectifier

FEATURES

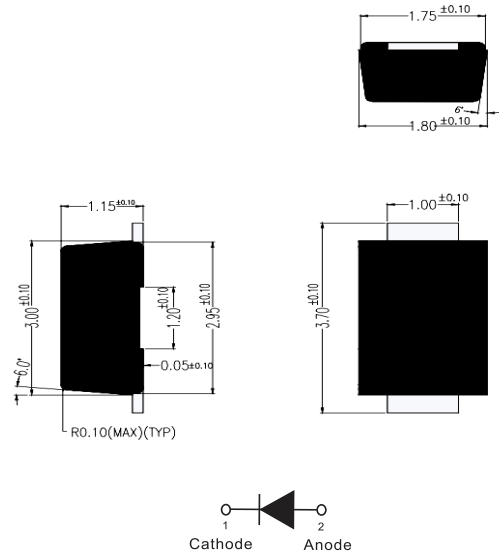
- Glass passivated junction chip
- Ideal for automated placement
- Low forward voltage drop
- High surge current capability
- Compliant to RoHS Directive 2011/65/EU and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21

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	A4	A5	A7	UNIT
Repetitive peak reverse voltage	V _{RRM}	400	600	1000	V
Reverse voltage, total rms value	V _{RMS}	280	420	700	V
Maximum DC blocking voltage	V _{DC}	400	600	1000	
Forward current	I _{F(AV)}	1			A
Surge peak forward current, 8.3 ms single half sine-wave superimposed on rated load per diode	I _{FSM}	30			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}	25	°C/W
Junction to Ambient Thermal Resistance	R _{θJA}	85	°C/W

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

PARAMETER	CONDITIONS	SYMBOL	TYP	MAX	UNIT
Forward voltage ⁽¹⁾	I _F = 1A, T _J = 25°C	V _F	-	1.1	V
Reverse current @ rated V _R per diode ⁽²⁾	T _J = 25°C	I _R	-	1	μA
	T _J = 125°C		-	50	μA
Junction capacitance	1 MHz, V _R = 4V	C _J	7	-	pF

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)

Fig.1 Forward Current Derating Curve

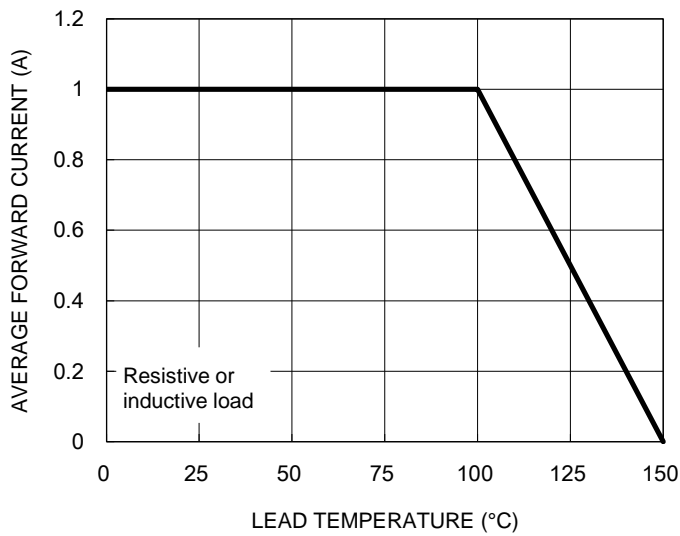


Fig.2 Typical Junction Capacitance

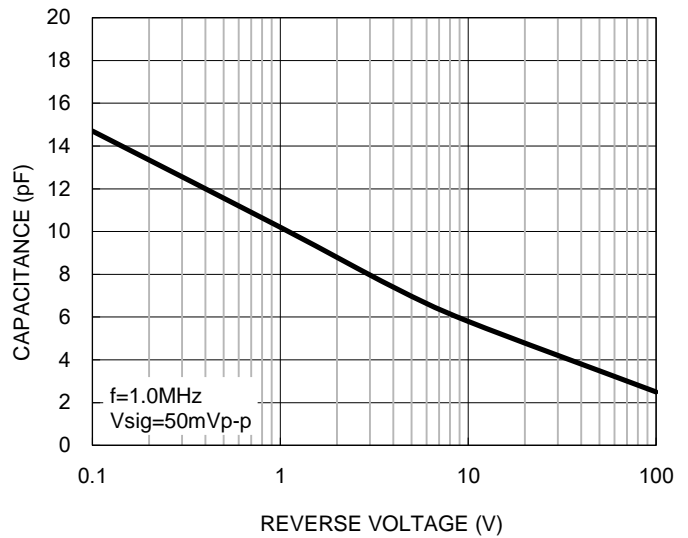


Fig.3 Typical Reverse Characteristics

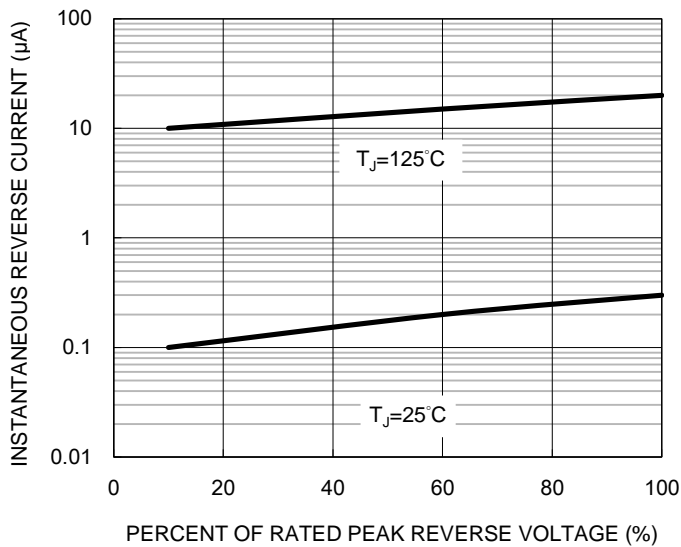


Fig.4 Typical Forward Characteristics

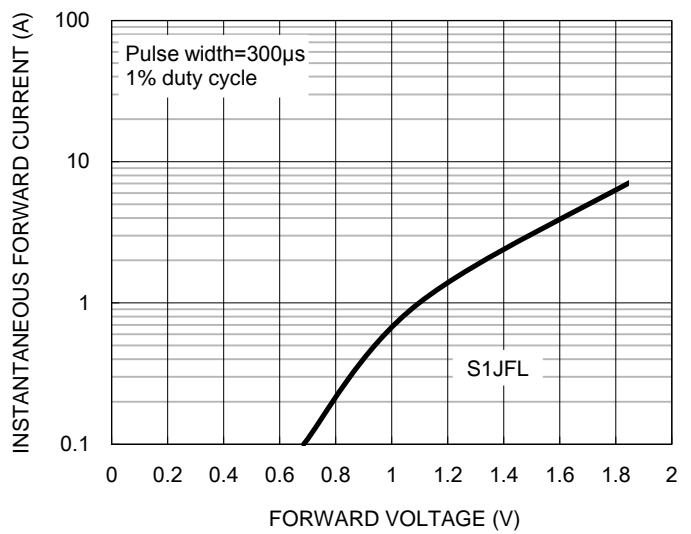


Fig.5 Maximum Non-repetitive Forward Surge Current

