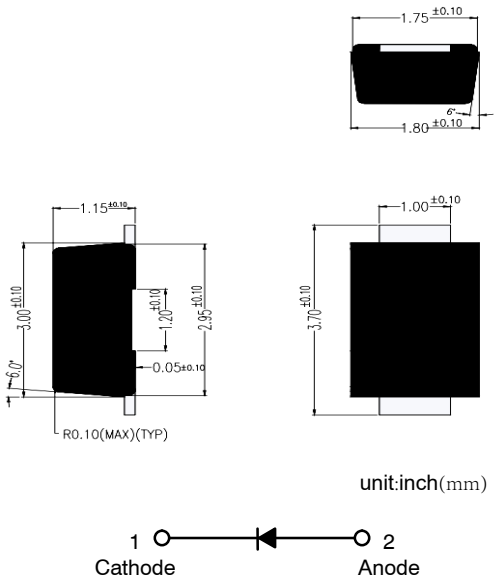
Features

- Glass passivated chip junction
- 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 definition

SOD-123FL



MECHANICAL DATA

- Package: SOD-123FL
- Terminals: Matte tin plated leads, solderable per J-STD-002
- Polarity: Indicated by cathode band
- Meet JESD 201 class 1A whisker test

ABSOLUTE MAXIMUM RATINGS (T a=25℃ Unless otherwise noted)

PARAMETER	SYMBOL	1N4002W	1N4007W	UNIT
Repetitive peak reverse voltage	V_{RRM}	100	1000	V
Reverse voltage, total rms value	V_{RMS}	70	700	V
Maximum DC blocking voltage	V_{DC}	100	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 PERFO RMANCE

PARAMETER	SYMBOL	TYP	UNIT
Junction to Lead Thermal Resistance	$R_{\Theta JL}$	25	°C/W
Junction to Ambient Thermal Resistance	$R_{\Theta JA}$	85	°C/W

ELECTRICAL SPECIFICATIONS (T a=25℃ 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

■ ATINGS AND CHARACTERISTICS CURVES (TA=25℃ unless otherwise noted)

Fig.1 Forward Current Derating Curve

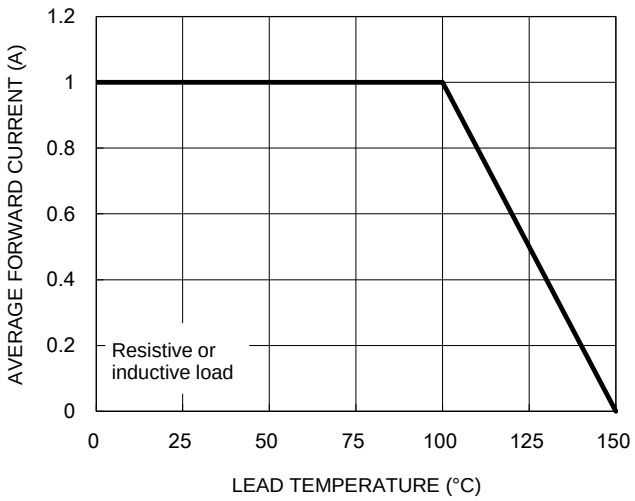


Fig.2 Typical Junction Capacitance

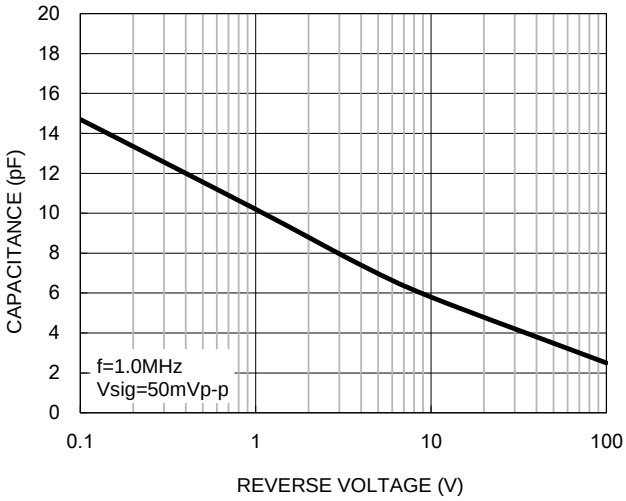


Fig.3 Typical Reverse Characteristics

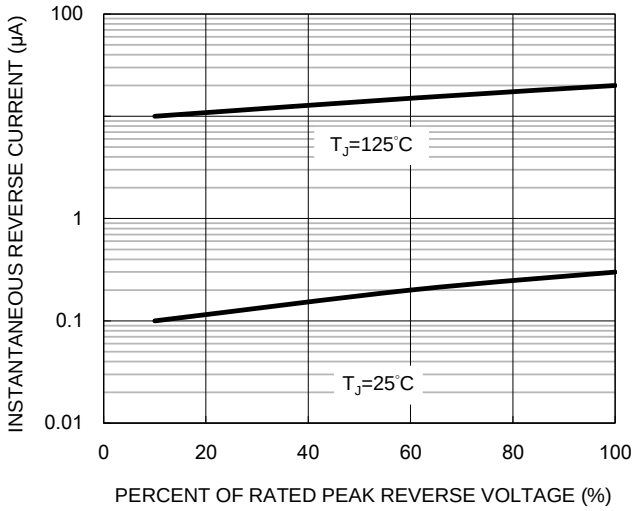


Fig.4 Typical Forward Characteristics

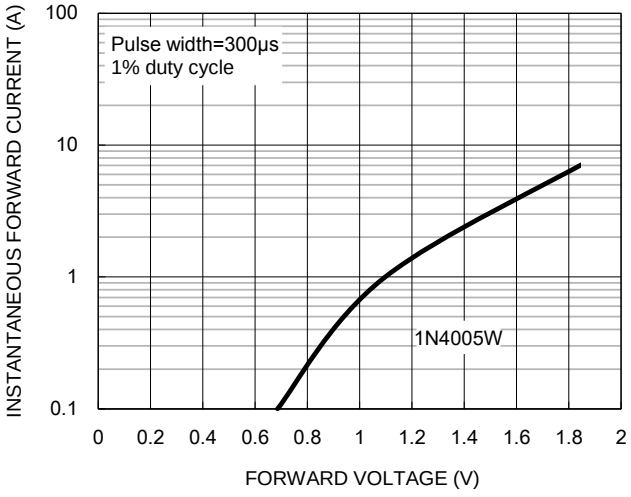


Fig.5 Maximum Non-repetitive Forward Surge Current