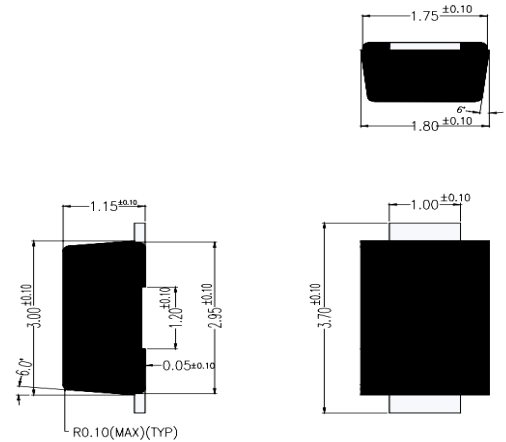


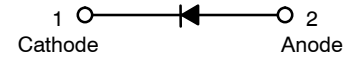
## ■ Features

- 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



unit:inch(mm)



## ■ 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<sub>a</sub>=25°C Unless otherwise noted)

PARAMETER	SYMBOL	1N4002W	1N4007W	UNIT
Repetitive peak reverse voltage	V <sub>RRM</sub>	100	1000	V
Reverse voltage, total rms value	V <sub>RMS</sub>	70	700	V
Maximum DC blocking voltage	V <sub>DC</sub>	100	1000	
Forward current	I <sub>F(AV)</sub>	1		A
Surge peak forward current, 8.3 ms single half sine-wave superimposed on rated load per diode	I <sub>FSM</sub>	30		A
Junction temperature	T <sub>J</sub>	- 55 to +150		°C
Storage temperature	T <sub>STG</sub>	- 55 to +150		°C

## ■ THERMAL PERFORMANCE

PARAMETER	SYMBOL	TYP	UNIT
Junction to Lead Thermal Resistance	R <sub>θJL</sub>	25	°C/W
Junction to Ambient Thermal Resistance	R <sub>θJA</sub>	85	°C/W

## ■ ELECTRICAL SPECIFICATIONS (T<sub>a</sub>=25°C Unless otherwise noted)

PARAMETER	CONDITIONS	SYMBOL	TYP	MAX	UNIT
Forward voltage <sup>(1)</sup>	I <sub>F</sub> = 1A, T <sub>J</sub> = 25°C	V <sub>F</sub>	-	1.1	V
Reverse current @ rated V <sub>R</sub> per diode <sup>(2)</sup>	T <sub>J</sub> = 25°C	I <sub>R</sub>	-	1	μA
	T <sub>J</sub> = 125°C		-	50	μA
Junction capacitance	1 MHz, V <sub>R</sub> =4V	C <sub>J</sub>	7	-	pF

### Notes:

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

■ RATINGS AND CHARACTERISTICS CURVES ( $T_A=25^\circ\text{C}$  unless otherwise noted)

Fig.1 Forward Current Derating Curve

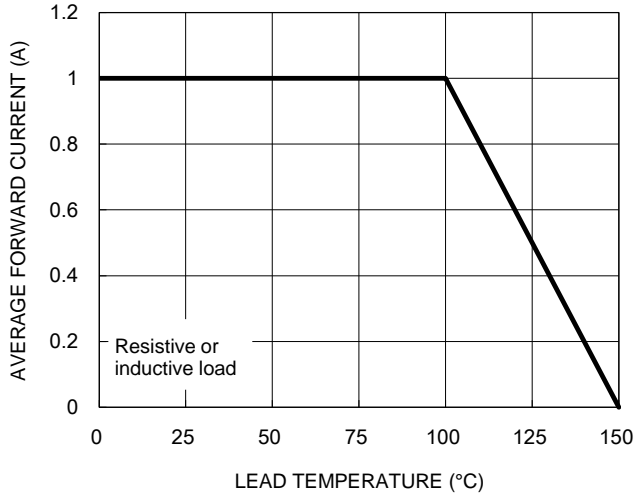


Fig.2 Typical Junction Capacitance

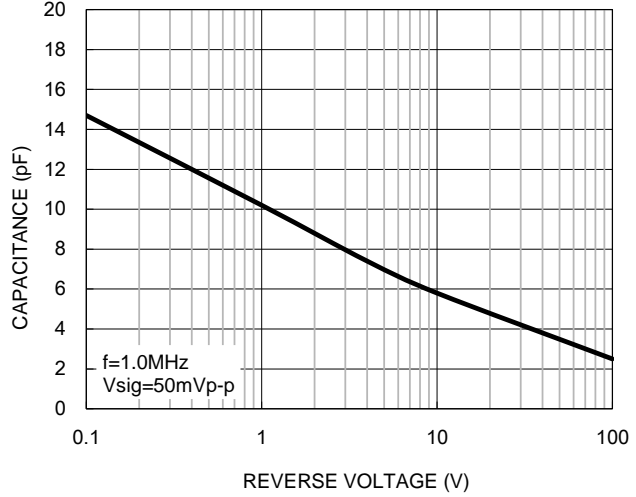


Fig.3 Typical Reverse Characteristics

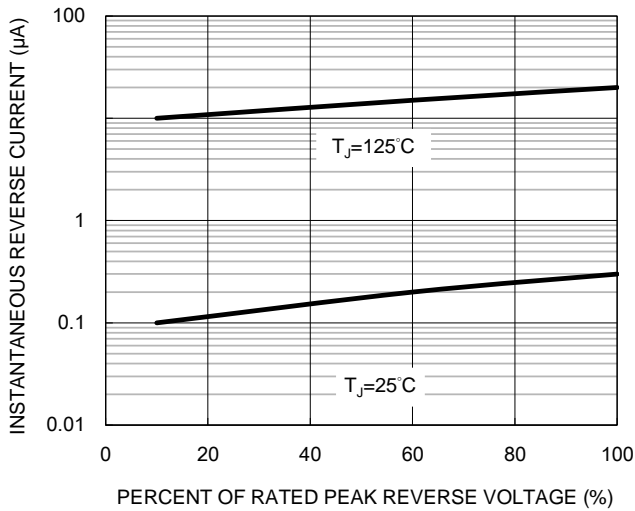


Fig.4 Typical Forward Characteristics

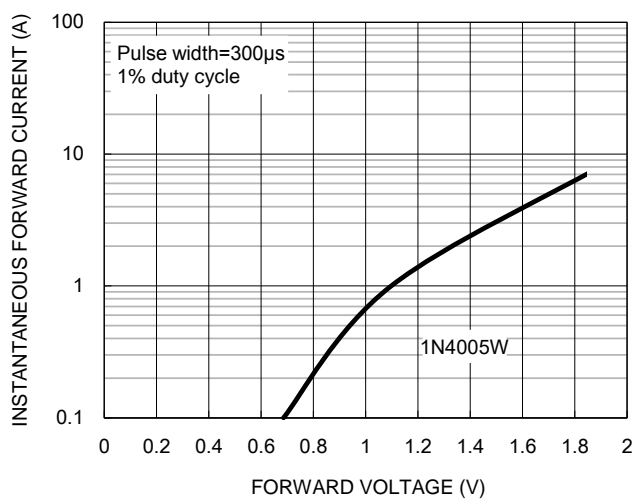
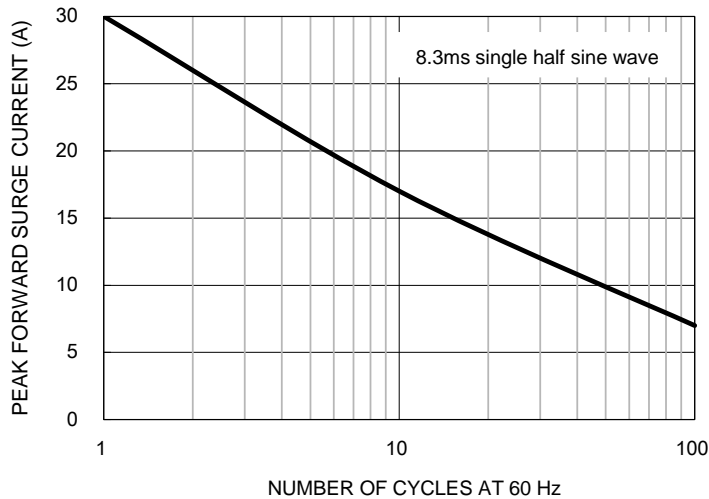


Fig.5 Maximum Non-repetitive Forward Surge Current



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