YONGYUTAI ELECTRONICS

1N4001W

General Purpose Diode

Datasheet

Features

- The plastic package carries UL Flammability Classification 94V-0
- For surface mounted applications
- Low reverse leakage
- Built-in strain relief, ideal for automated placement
- High forward surge current capability
- High temperature soldering guaranteed:260℃/10 seconds at terminals

Mechanical Characteristics

- Case: SOD-123F   package molded plastic body over passivated chip
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Mounting Position: Any

Absolute Maximum Ratings and Electrical Parameters (TA=25°C unless otherwise specified)

PARAMETER		SYMBOL	1N4001W	UNIT
Maximum repetitive peak reverse voltage		V_{RRM}	50	V
Maximum RMS voltage		V_{RMS}	35	V
Maximum DC blocking voltage		V_{DC}	50	V
Maximum average forward rectified current		I_{AV}	1	A
Peak forward surge current [NOTE1]		I_{FSM}	30	A
Maximum instantaneous forward voltage at 1A		V_F	1.1	V
Maximum DC reverse current at rated DC blocking voltage	T_A=25 ℃	I_R	5	uA
	T_A=100 ℃	I_{RT}	50	uA
Typical junction capacitance [NOTE 2]		C_J	15	pF
Typical Thermal Resistance Junction to Ambient [NOTE3]		$R_{\theta JA}$	90	℃/W
Typical Thermal Resistance Junction to Lead [NOTE3]		$R_{\theta JL}$	30	℃/W
Operating Temperature Range		T_J	-55 to 150	℃
Storage Temperature Range		T_{STG}	-55 to 150	℃

Note1: 8.3ms single half sine-wave superimposed on rated load

Note2: Measured at 1MHz and applied reverse voltage of 4.0V DC.

Note3: PCB. mounted with 3×3mm copper pad areas

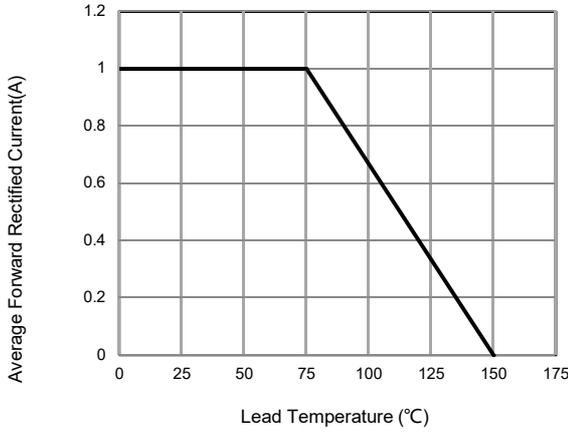## Rating And Characteristic Curves (TA=25℃ unless otherwise noted)
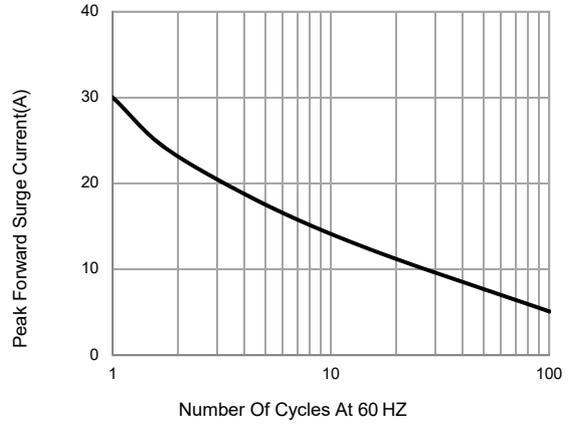
Fig. 1 - Forward Current Derating Curve

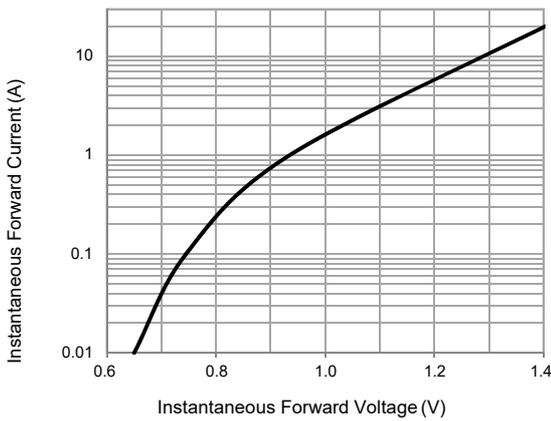Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

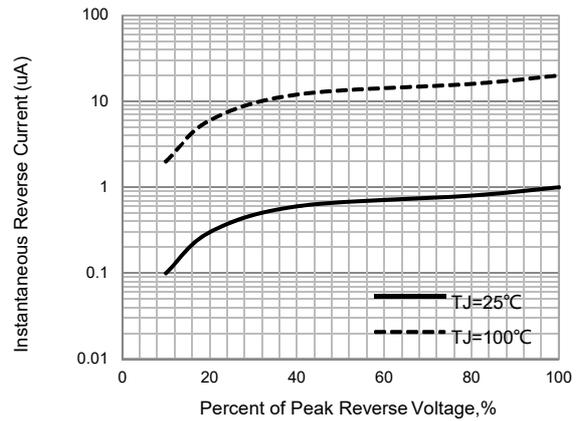Fig. 3 - Typical Instantaneous Forward Characteristics

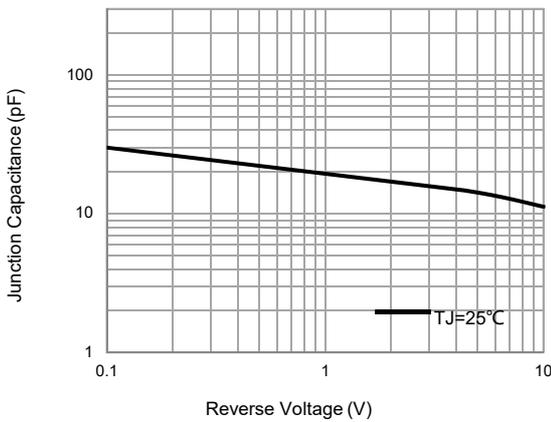Fig. 4 - Typical Reverse Characteristics
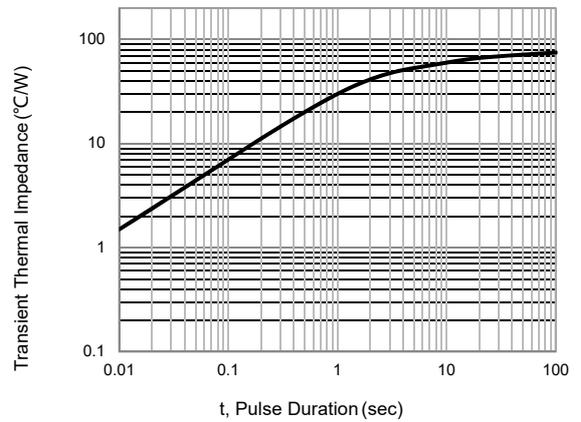
Fig. 5 - Typical Junction Capacitance

Fig. 6 - Typical Transient Thermal Impedance

PACKAGE OUTLINE

SOD-123F

0.154 (3.90)
0.134 (3.40)

0.047 (1.20)
0.028 (0.70)

0.087 (2.20)
0.067 (1.70)

0.118 (3.00)
0.102 (2.60)

0.035(0.90)
0.014 (0.35)

0.010(0.26)
0.002 (0.05)

0.052(1.30)
0.041 (1.05)

0.004(0.10)
Max.

Mounting Pad Layout

0.063(1.60)
NOM.

0.055(1.40)
NOM.

0.051(1.30)
NOM.