GOODWORK

1N4001W THRU 1N4007W

1.0 AMP SURFACE MOUNT SILICON RECTIFIERS

FEATURES

* Ideal for surface mount applications
* Easy pick and place
* Built-in strain relief
* High surge current capability

MECHANICAL DATA

* Case: Molded plastic
* Epoxy: UL 94V-0 rate flame retardant
* Terminals: Solder plated, solderable per MIL-STD-202F, method 208 guranteed
* Polarity: Color band denotes cathode end
* Mounting position: Any

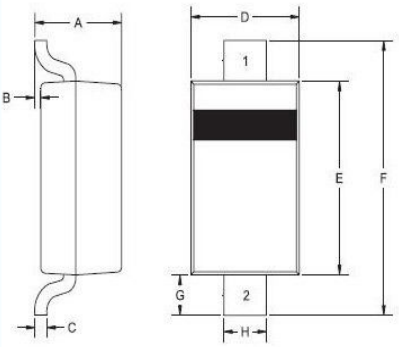
VOLTAGE RANGE

50 to 1000 Volts

CURRENT

1.0 Ampere

SOD123



DIMENSIONS				
	INCHES		MILLIMETERS	
SYMBOL	MIN	MAX	MIN	MAX
A	0.037	0.053	0.95	1.35
B	0.000	0.005	0.00	0.12
C	-	0.008	-	0.20
D	0.055	0.071	1.40	1.80
E	0.098	0.110	2.50	2.80
F	0.142	0.154	3.60	3.90
G	0.016	-	0.40	-
H	0.020	0.028	0.50	0.70

Maximum Ratings & Thermal Characteristics

(T_A = 25 °C unless otherwise noted)

Items	Symbol	1N4001W 1A	1N4002W 2A	1N4003W 3A	1N4004W 4A	1N4005W 5A	1N4006W 6A	1N4007W 7A	UNIT
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	1000	V
Maximum average forward rectified current at T_L =90 ℃	$I_{F(AV)}$	1							A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	I_{FSM}	25							A
Thermal resistance from junction to lead(1)	$R_{\theta JL}$	35							℃/ W
Operating junction range	T_J	–55 to +150							℃
storage temperature range	T_{STG}	–55 to +150							℃

Note 1: Mounted on PCB with 0.2 x 0.2" (5.0 x 5.0mm) copper pad areas.

Electrical Characteristics (T_A = 25 °C unless otherwise noted)

Items	Test conditions		Symbol	Min	Type	Max	UNIT
Instantaneous forward voltage	I_F=0.5A		V_F	-	0.92	-	V
	I_F=1A (2)				0.98	1.1	
Reverse current	V_R=V_{DC}	T_A=25℃	I_R	-	-	5	μA
		T_A=125℃				50	

Note 2: Pulse test:300μs pulse width,1% duty cycle.

RATING AND CHARACTERISTIC CURVES (1N4001W THRU 1N4007W)

Fig.1 Forward Current Derating Curve

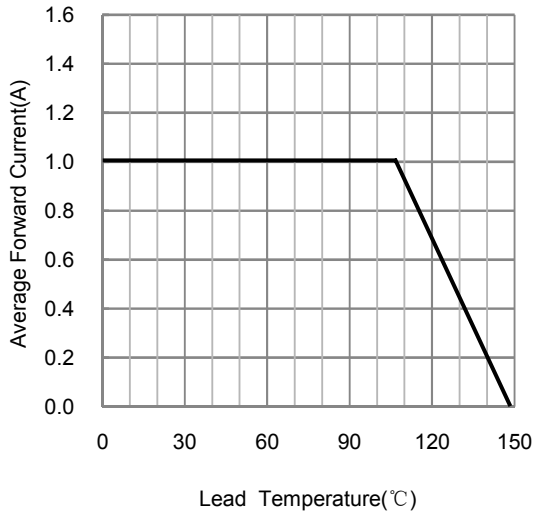


Fig.2 Maximum Non-Repetitive Peak Forward Surge Current

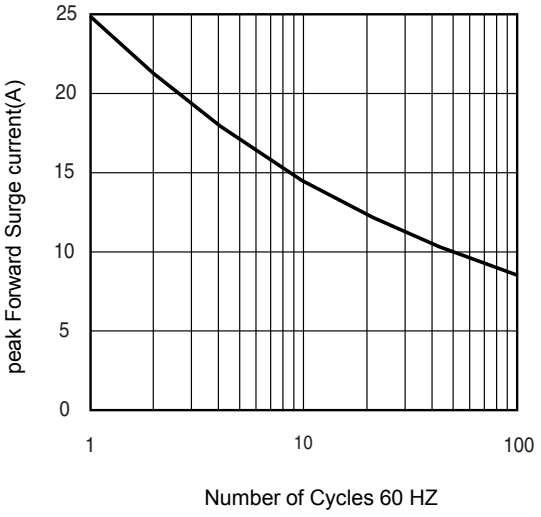


Fig.3 Typical Instantaneous Forward Characteristics

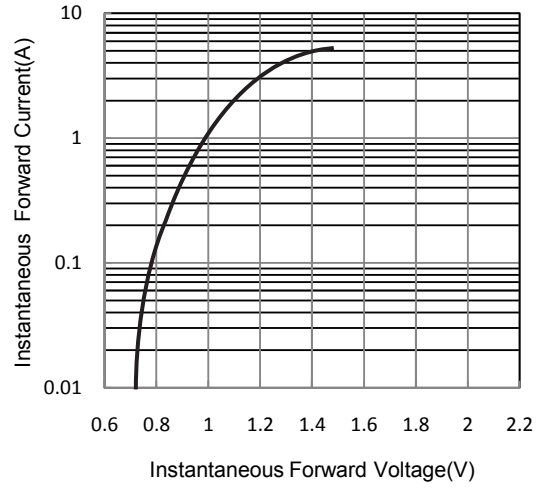


Fig.4 Typicl Reverse Leakage Characteristics