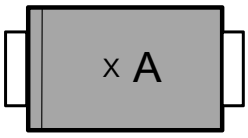
VOLTAGE RANGE
50 to 1000 Volts
CURRENT
1.0 Ampere

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
*



LOGO GK xxx CODE

x A

VR Voltage

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating 25℃ ambient temperature uniess otherwies specified.
Single phase half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

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	$I_{F(AV)}$	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

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

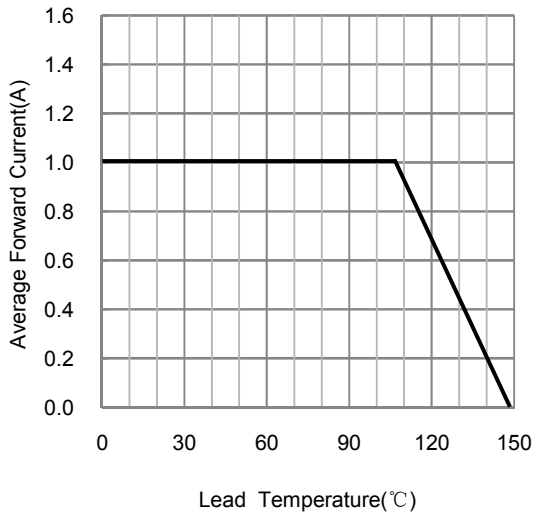


FIG.2-TYPICAL FORWARD CHARACTERISTICS

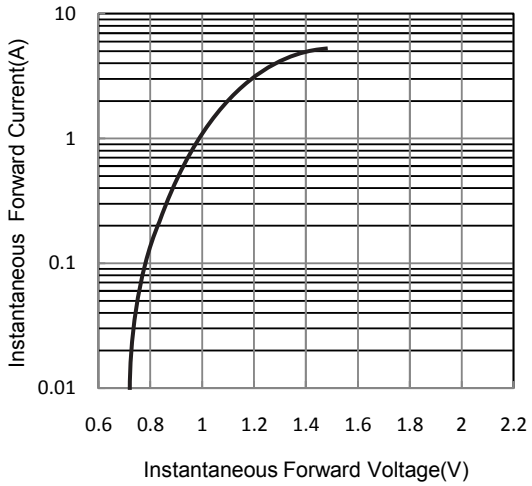


FIG.3 - TYPICAL REVERSE CHARACTERISTICS

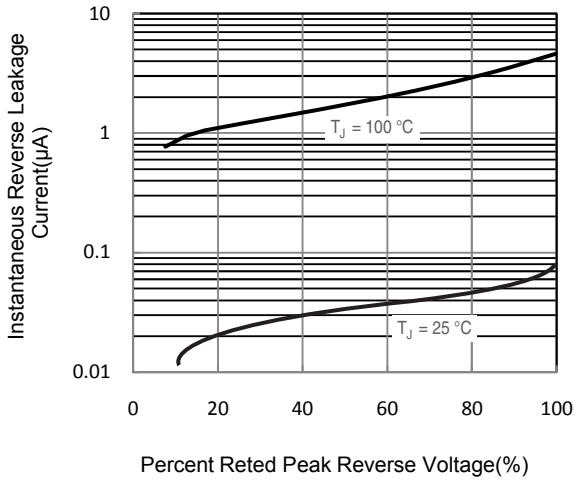
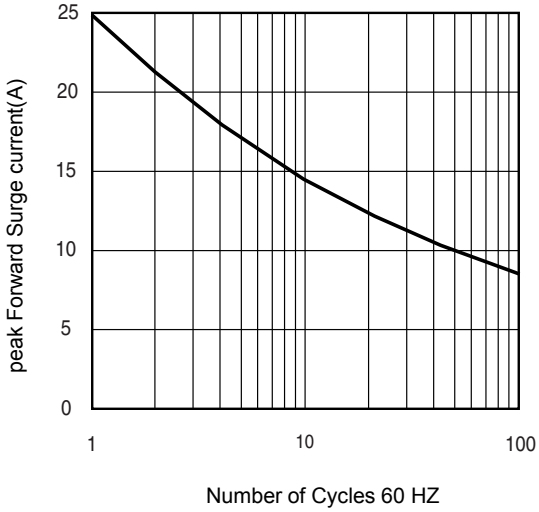


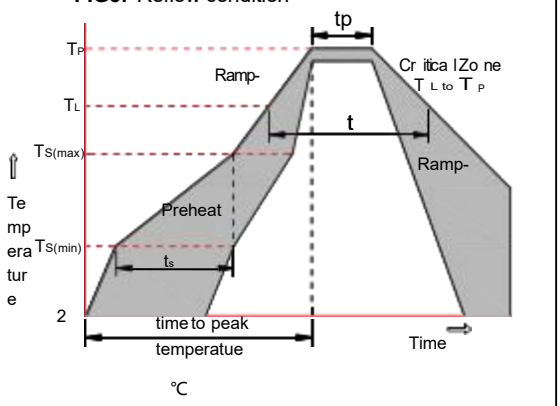
FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT



Soldering parameters

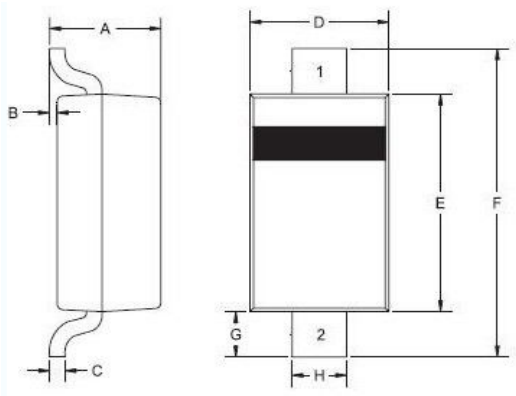
Reflow Condition		Pb-Free assembly (see as bellow)
Pre Heat	-Temperature Min ($T_{s(min)}$)	+150℃
	-Temperature Max($T_{s(max)}$)	+200℃
	-Time (Min to Max) (ts)	60-180 secs.
Average ramp up rate (Liquid us Temp (T_L) to peak)		3℃/sec. Max
$T_{s(max)}$ to T_L - Ramp-up Rate		3℃/sec. Max
Reflow	-Temperature(T_L)(Liquid us)	+217℃
	-Temperature(t_L)	60-150 secs.
Peak Temp (T_p)		+260(+0/-5)℃
Time within 5℃ of actual Peak Temp (t_p)		30 secs. Max
Ramp-down Rate		6℃/sec. Max
Time 25℃ to Peak Temp (T_P)		8 min. Max
Do not exceed		+260℃

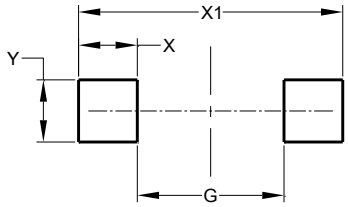
FIG5: Reflow condition



Package Dimensions & Suggested Pad Layout

SOD123



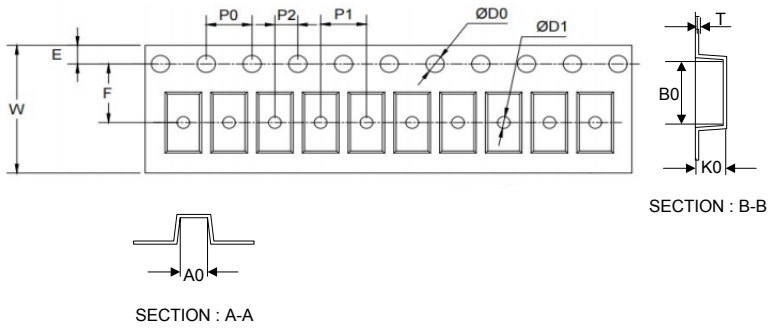


SOD123		
Dim	**Min**	**Max**
A	0.95	1.35
B	0.00	0.12
C	-	0.20
D	1.40	1.80
E	2.50	2.80
F	3.60	3.90
G	0.40	-
H	0.50	0.70
All Dimensions in mm		

Dimensions	Value (in mm)
G	2.20
X	1.20
X1	4.60
Y	1.20

Tape & rell specification

Tape

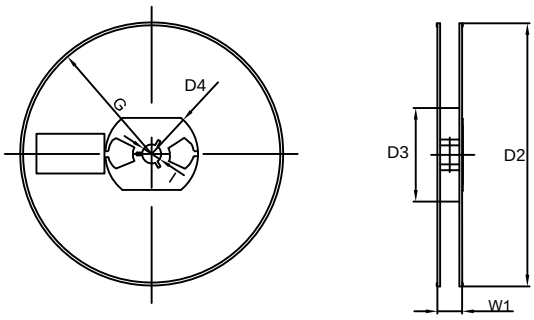


SECTION : A-A

SECTION : B-B

Symbol	Dimension (mm)
P0	4.00±0.20
P1	4.00±0.20
P2	2.00±0.20
D0	1.55±0.10
D1	1.00±0.20
E	1.75±0.20
F	3.60±0.20
W	8.00±0.40
A0	2.30±0.40
B0	4.00±0.40
K0	1.50±0.40
T	0.23±0.10

7” Reel



D2	177.0±3.0
D3	55Min.
D4	R24.0±3.0
G	R82.0±3.0
I	13.0±2.0
W1	11.0±3.0

Quantity: 3000PCS