

VOLTAGE RANGE

20 to 100 Volts

CURRENT

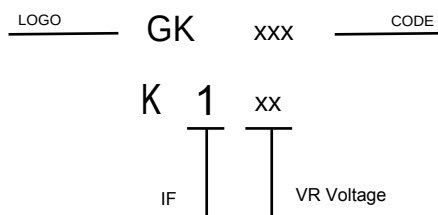
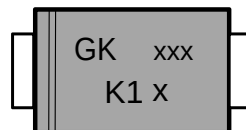
1.0 Ampere

FEATURES

- * Ideal for surface mount applications
- * Easy pick and place
- * Built-in strain relief
- * Low forward voltage drop

MECHANICAL DATA

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



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating 25°C ambient temperature unless otherwise specified.
Single phase half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

TYPE NUMBER	DS12W	DS13W	DS14W	DS15W	DS16W	DS18W	DS19W	DS110W	UNITS	
Maximum Recurrent Peak Reverse Voltage	20	30	40	50	60	80	90	100	V	
Maximum RMS Voltage	14	21	28	35	42	56	63	70	V	
Maximum DC Blocking Voltage	20	30	40	50	60	80	90	100	V	
Maximum Average Forward Rectified Current	1.0								A	
See Fig. 1										
Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	30								A	
Maximum Instantaneous Forward Voltage at 1.0A	0.55		0.70		0.85		V			
Maximum DC Reverse Current Ta=25°C	0.2				10					mA
at Rated DC Blocking Voltage Ta=100°C										
Typical Junction Capacitance (Note1)	110								pF	
Typical Thermal Resistance R JA (Note 2)	80								°C/W	
Operating Temperature Range Tj	-65 — +125					-65 — +150			°C	
Storage Temperature Range Tstg	-65 — +150								°C	

NOTES:

1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.
2. Thermal Resistance Junction to Ambient.

RATING AND CHARACTERISTIC CURVES

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

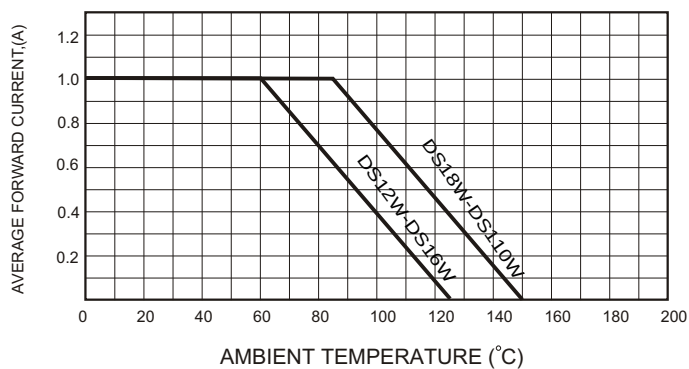


FIG.2-TYPICAL FORWARD CHARACTERISTICS

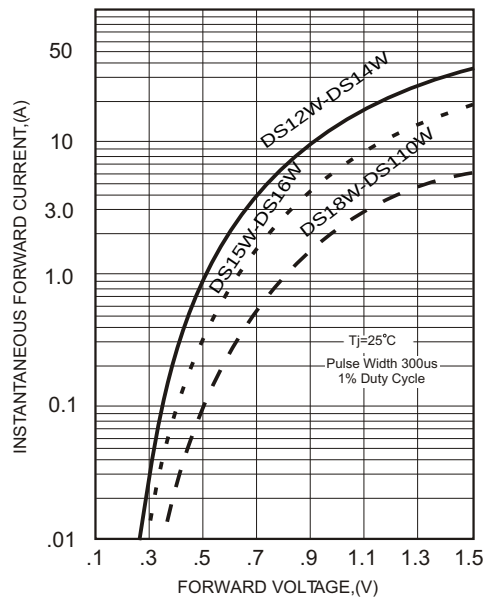


FIG.3 - TYPICAL REVERSE CHARACTERISTICS

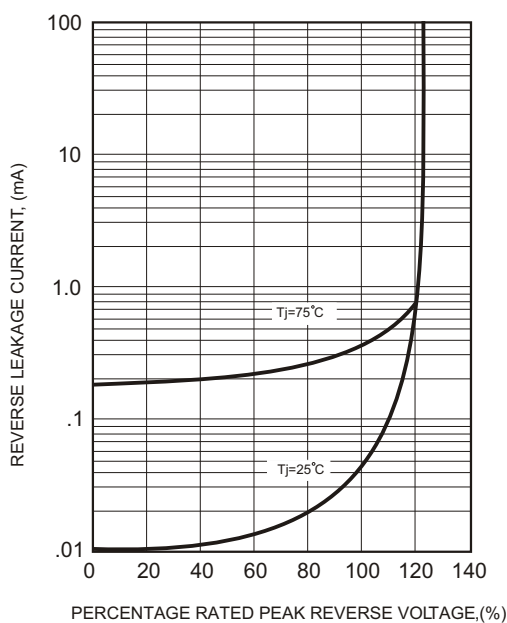


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

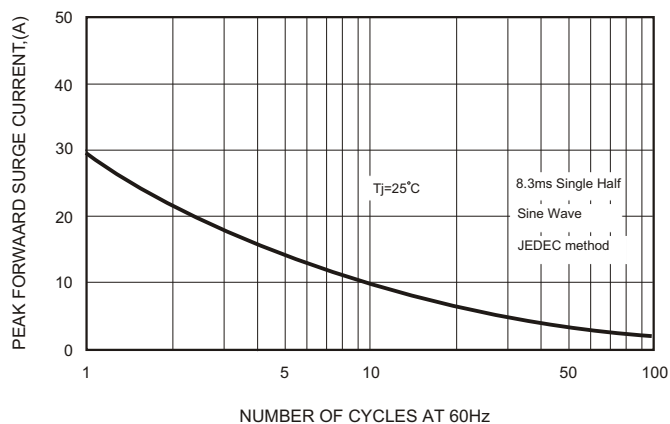
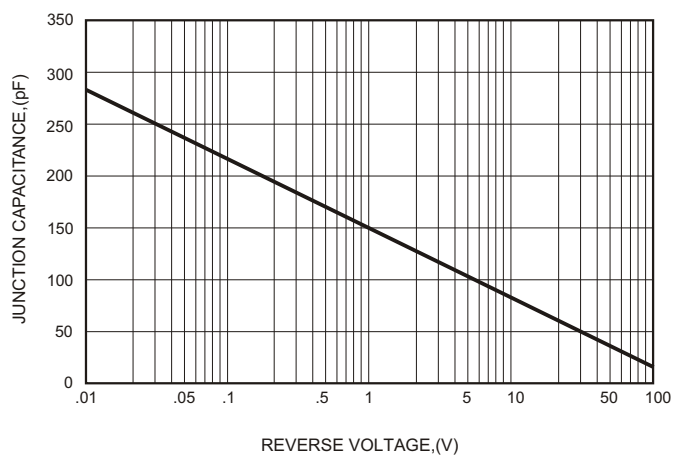
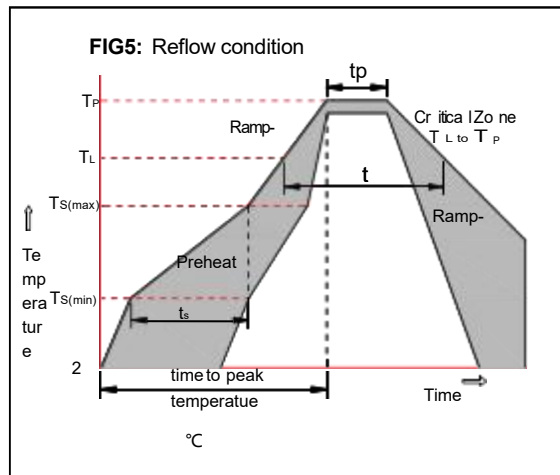


FIG.5-TYPICAL JUNCTION CAPACITANCE



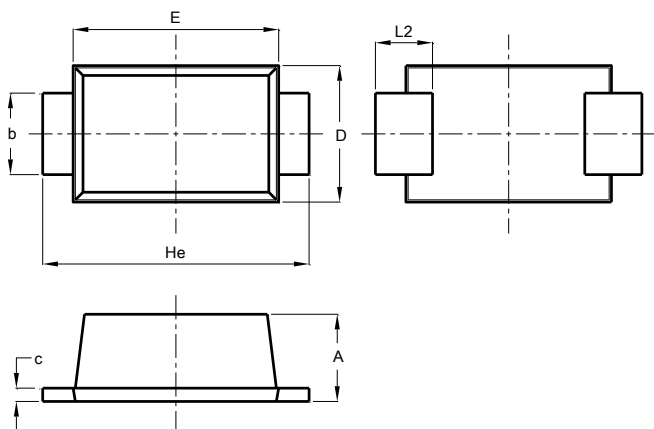
Soldering parameters

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

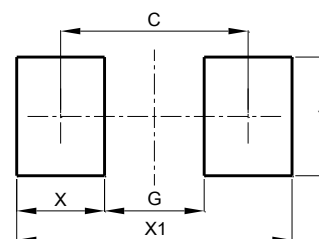


Package Dimensions & Suggested Pad Layout

SOD123FL

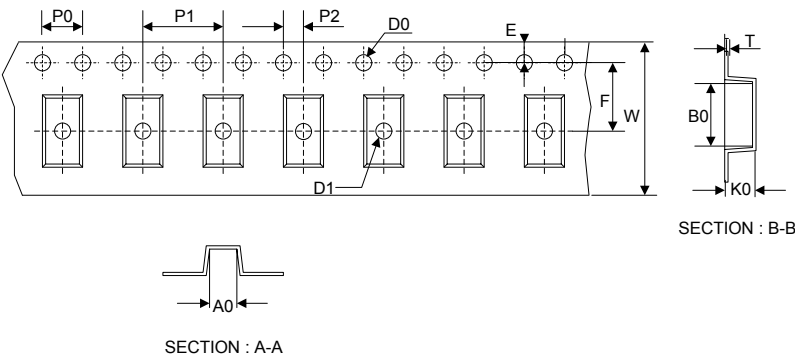
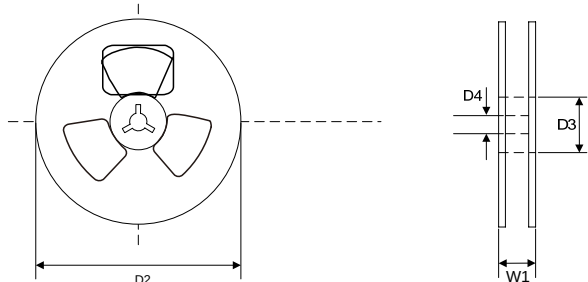


SOD123FL		
Dim	Min	Max
A	1.00	1.20
b	0.80	1.10
c	0.12	0.20
D	1.75	1.95
E	2.60	2.90
He	3.55	3.80
L2	0.50	0.85
All Dimensions in mm		



Dimensions	Value (in mm)
C	3.25
G	2.00
X	1.25
X1	4.50
Y	1.50

Tape & reel specification

Tape		Symbol	Dimension (mm)
		P0	4.00±0.20
		P1	4.00±0.20
		P2	2.00±0.20
		D0	1.55±0.15
		D1	1.00±0.20
		E	1.75±0.20
		F	3.50±0.25
		W	8.00±0.20
		A0	1.85±0.20
		B0	3.95±0.20
		K0	1.30±0.20
		T	0.21±0.10
		D2	178.0±5.0
		D3	55.0Min.
7" Reel		D4	10.0±2.5
		W1	11.5±2.5
		Quantity: 3000PCS	