

FEATURES

- 200 Watts Pulse capability
- Excellent clamping capability
- Low incremental surge resistance
- Fast response time
- High temperature soldering guaranteed: 260°C/10 seconds at terminals
- Component in accordance to RoHS 2011/65/EU

MECHANICAL DATA

- Case: SOD-123FL molded plastic body
- Terminals: Solder Plated
- Polarity: By cathode band denotes uni-directional device, none cathode band denotes bi-directional device.



- "GK" represents the brand name
- "XXX" represents the periodic code
- "YY" represents the product type marking

VOLTAGE RANGE

3.3 Volts
200 Watts Peak Power

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%.

RATINGS	SYMBOL	VALUE	UNITS
Peak Power Dissipation at $T_A=25^\circ\text{C}$, $T_P=1\text{ms}$ (NOTE 1)	P_{PK}	Minimum 200	Watts
Peak Forward Surge Current at 8.3ms Single Half Sine-Wave superimposed on rated load (JEDEC method) (NOTE 3)	I_{FSM}	30	Amps
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +150	$^\circ\text{C}$

NOTES:

1. Non-repetitive current pulse per Fig. 3 and derated above $T_A=25^\circ\text{C}$ per Fig. 2.
2. Mounted on Copper Pad area of 5.0mm^2 (.013mm Thick) to each terminal.
3. 8.3ms single half sine-wave, duty cycle = 4 pulses per minute maximum.

DEVICES FOR BIDIRECTIONAL APPLICATIONS

- 1. For bi-directional use C suffix for Types .
- 2. Electrical characteristics apply in both directions.

RATING AND CHARACTERISTIC CURVES

FIG.1-PEAK PULSE POWER DERATING CURVE

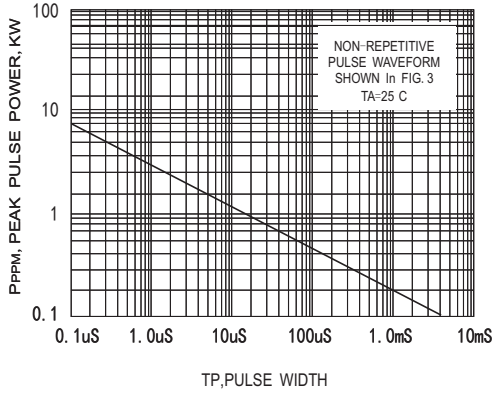


FIG.2-PULSE DERATING CURVE

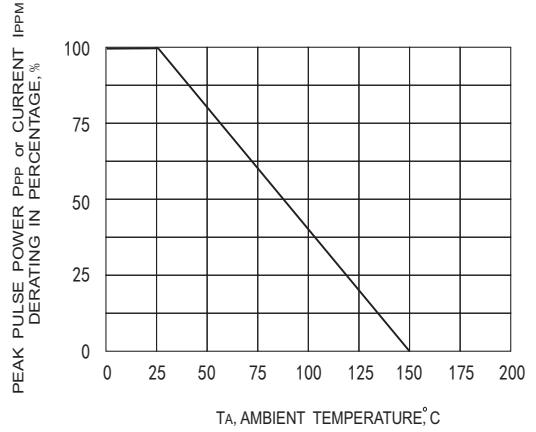


FIG.3-PULSE WAVE FORM

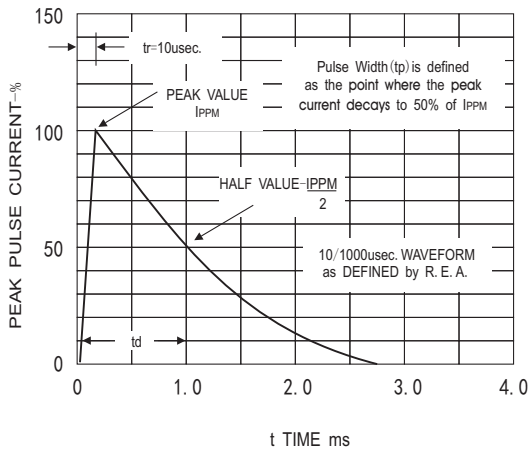
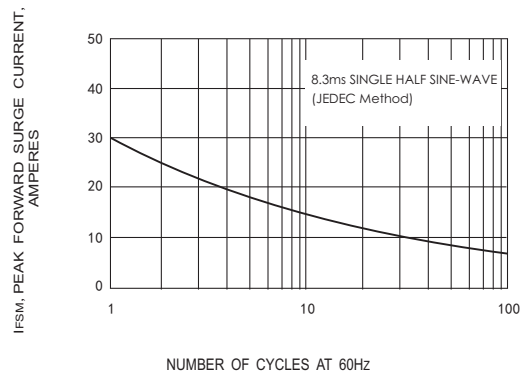


FIG.4-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT



PART NUMBER ADD C FOR BI-DIRECTIONAL	V_{RWM}	Breakdown Voltage		Test Current	Reverse Leakage	Max. Clamp Voltage	Peak Pulse Current	Marking
		$V_{BR} @ I_T$		I_T	$I_R @ V_{RWM}$	$V_C @ I_{PP}$	I_{PP}	
		Min	Max					
See Note 1	V	V	V	mA	μA	V	A	
SMF3.3 A	3.3	4.3	5.30	10	800	7.3	27.4	3.3 A

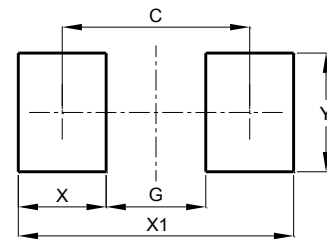
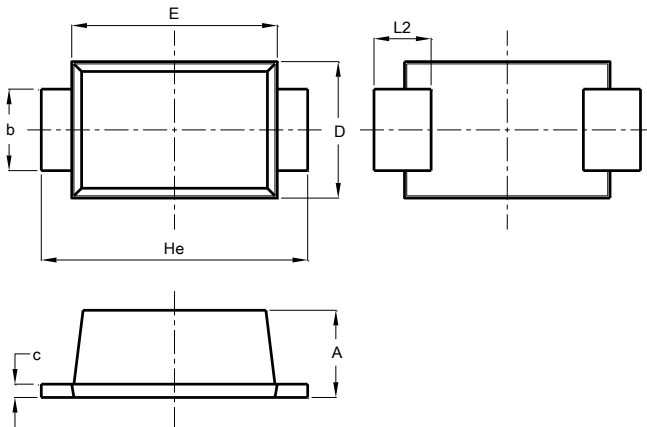
Soldering parameters

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		
		7" Reel		D2	178.0±5.0
				D3	55.0Min.
D4	10.0±2.5				
W1	11.5±2.5				
Quantity: 3000PCS					