

High Efficient Surface Mount Rectifiers
Reverse Voltage 50 to 1000 Volts Forward Current 1.0 Ampere

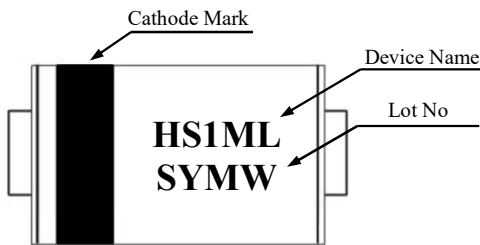
Features

- For surface mounted application
- Glass passivated chip junction
- Super fast reverse recovery time for high efficiency
- Fast switching for high efficiency
- High current capability
- High temperature soldering: 260°C/10 seconds at terminals

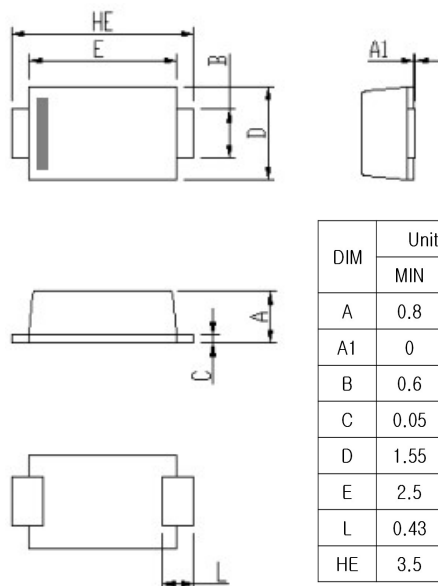
Mechanical Data


- Case : Molded plastic
- Terminals : Pure tin plated, lead free.
- Polarity : Indicated by cathode band
- Weight : 0.015 gram

Marking



SOD-123FL





DIM	Unit :mm		Unit:inch	
	MIN	MAX	MIN	MAX
A	0.8	1.2	0.031	0.047
A1	0	0.1	0.000	0.004
B	0.6	1.05	0.024	0.041
C	0.05	0.25	0.002	0.010
D	1.55	2	0.061	0.079
E	2.5	3.1	0.098	0.122
L	0.43	1.1	0.017	0.043
HE	3.5	3.9	0.138	0.154

Maximum Ratings & Electrical Characteristics

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

Parameter	Symbol	HS1AL	HS1BL	HS1DL	HS1GL	HS1JL	HS1KL	HS1ML	Unit	Remark
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 See Fig.1	$I_F(AV)$	1.0							A	
Peak Forward Surge Current 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC Method)	I_{FSM}	30							A	
Maximum Instantaneous Forward Voltage @ 1.0A	V_F	1.0		1.4		1.7		V		
Maximum DC Reverse Current at Rated DC Blocking Voltage	I_R	5.0							uA	Ta=25°C
		100							uA	Ta=100°C
Maximum Reverse Recovery Time	t_{rr}	50			75			ns	Note 1	
Typical Thermal Resistance	$R_{th(j-a)}$	85							°C /W	Note 2
Operation Junction Temperature Range	T_J	-55 to +150							°C	
Storage Temperature Range	T_{STG}	-55 to +150							°C	

Note 1. Reverse Recovery Time Test Conditions : $I_F=0.5A$, $I_R=1.0A$, $I_{RR}=0.25A$

Note 2. Mounted on P.C.B with 2"×2" (5cm×5cm) Copper Pad Areas

Ratings and Characteristics Curves (Ta=25°C unless otherwise noted)

Fig.1 Forward Current Derating Curve

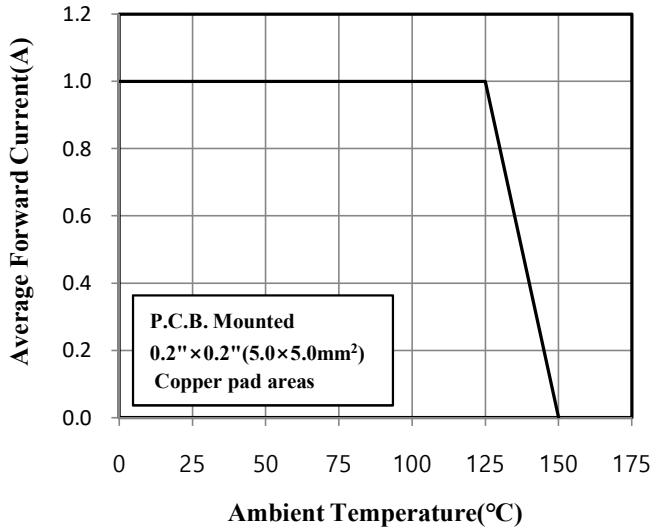


Fig.2 Maximum Non-Repetitive Peak Forward Surge Current

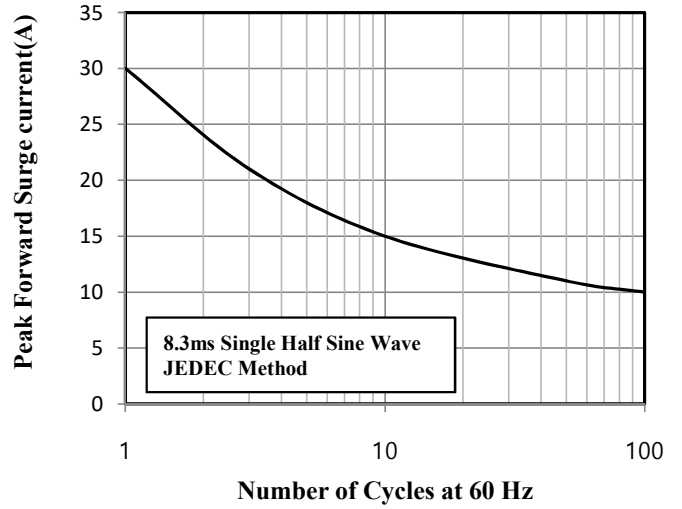


Fig.3 Typical Instantaneous Forward Characteristics

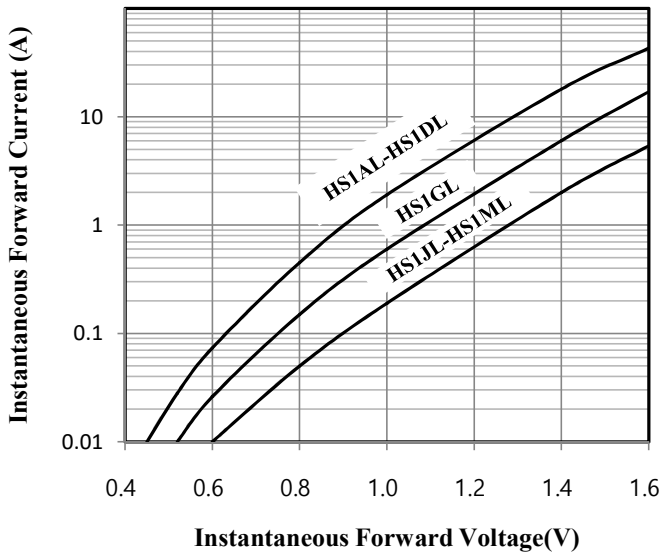


Fig.4 Typical Junction Capacitance

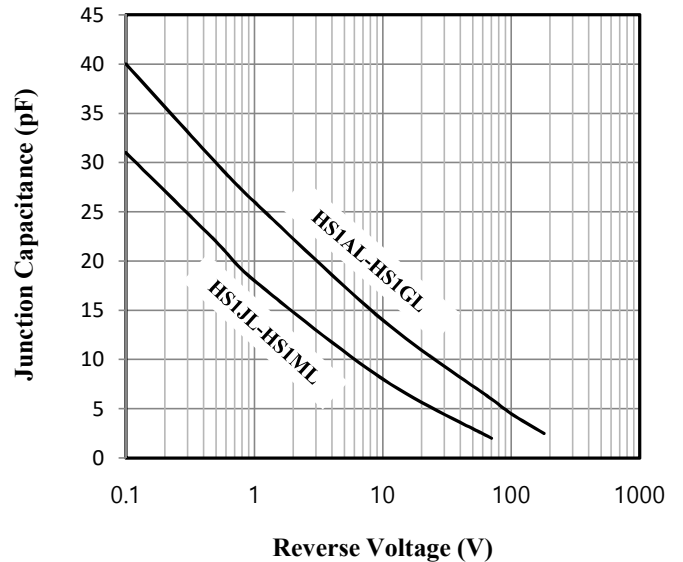


Fig.5 Typical Reverse Characteristics

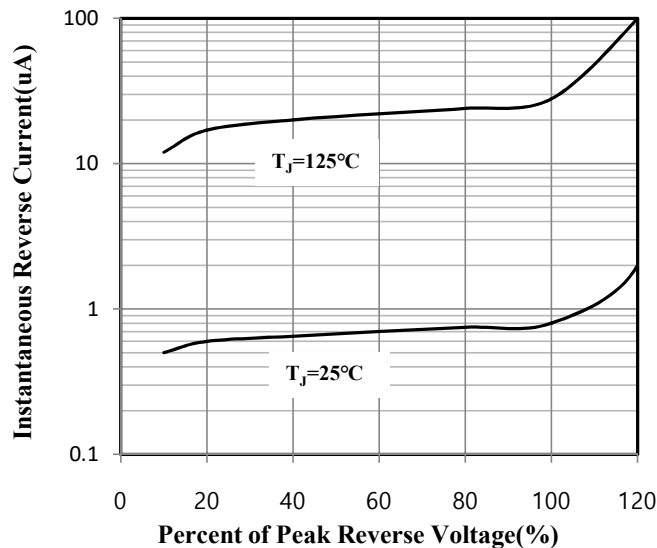


Fig. 6 Reverse Recovery Time Characteristic and Test Circuit Diagram

