

Surface Mount General Purpose Rectifier

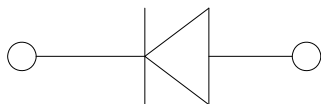


Features

- Low profile package
- Ideal for automated placement
- Glass passivated chip junction
- Switching for general purpose
- High forward surge capability
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260 °C

Typical Applications

For use in general purpose switching rectification of power supply, inverters, converters, and freewheeling diodes for consumer and telecommunication.



Mechanical Data

- **Package:** SOD-123FL
Molding compound meets UL 94 V-0 flammability rating, -compliant, halogen-free
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** Cathode line denotes the cathode end

■Maximum Ratings (T_a=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	G1AS	G1BS	G1DS	G1GS	G1JS	G1KS	G1MS
Device marking code			G1AS	G1BS	G1DS	G1GS	G1JS	G1KS	G1MS
Maximum Repetitive Peak Reverse Voltage	V _{RRM}	V	50	100	200	400	600	800	1000
Maximum RMS Voltage	V _{RMS}	V	35	70	140	280	420	560	700
Maximum DC blocking Voltage	V _{DC}	V	50	100	200	400	600	800	1000
Average rectified output current @60Hz sine wave, Resistance load, TL (FIG.1)	I _O	A	1.0						
Forward Surge Current (Non-repetitive) @60Hz Half-sine wave, 1 cycle, T _j =25°C	I _{FSM}	A	25						
Forward Surge Current (Non-repetitive) @1ms, square wave, 1 cycle, T _j =25°C			50						
Current squared time @1ms≤t≤8.3ms T _j =25°C	I ² t	A ² s	3.735						
Storage temperature	T _{stg}	°C	-55 ~ +150						
Junction temperature	T _j	°C	-55 ~ +150						

■Electrical Characteristics (T_a=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	G1AS	G1BS	G1DS	G1GS	G1JS	G1KS	G1MS
Maximum instantaneous forward voltage	V _F	V	I _{FM} =1.0A	1.1						
Maximum DC reverse current at rated DC blocking voltage	I _R	μA	T _j =25°C	5						
			T _j =125°C	100						
Typical junction capacitance	C _j	pF	Measured at 1MHz and Applied Reverse Voltage of 4.0 V.D.C	6						

G1AS THRU G1MS

■ Thermal Characteristics (T_a=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	G1AS	G1BS	G1DS	G1GS	G1JS	G1KS	G1MS
Typical Thermal resistance	R _{θJ-A} ⁽¹⁾	°C/W	75						
	R _{θJ-L} ⁽¹⁾		25						
	R _{θJ-C} ⁽¹⁾		20						

Note:

(1) Thermal resistance between junction and ambient and between junction and lead mounted on P.C.B with 3mm*3mm copper pad areas.

■ Characteristics(Typical)

FIG.1: I_o-T_L Curve

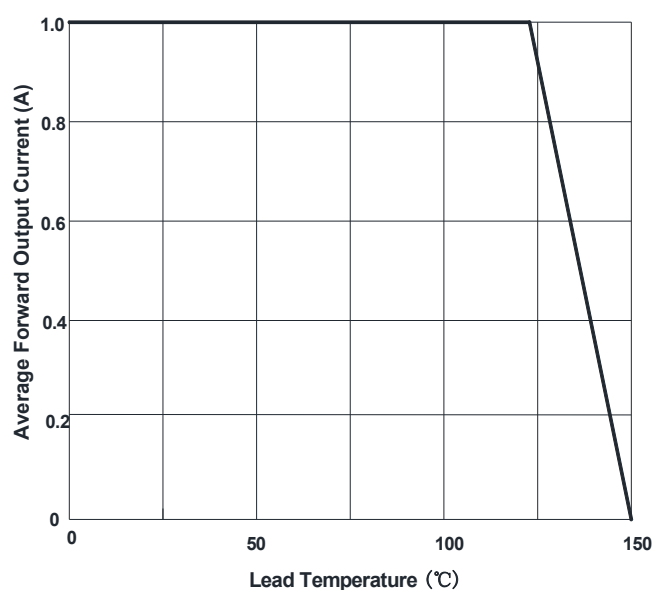


FIG.2: Forward Surge Current Capability

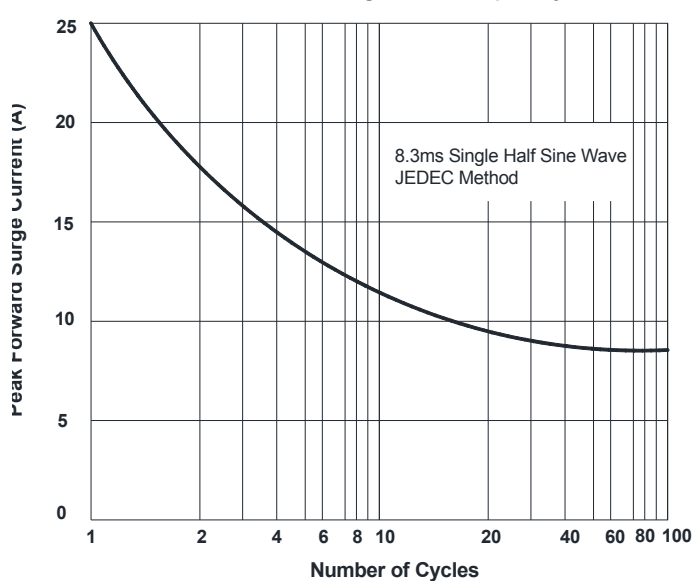


FIG.3: Typical Forward Voltage

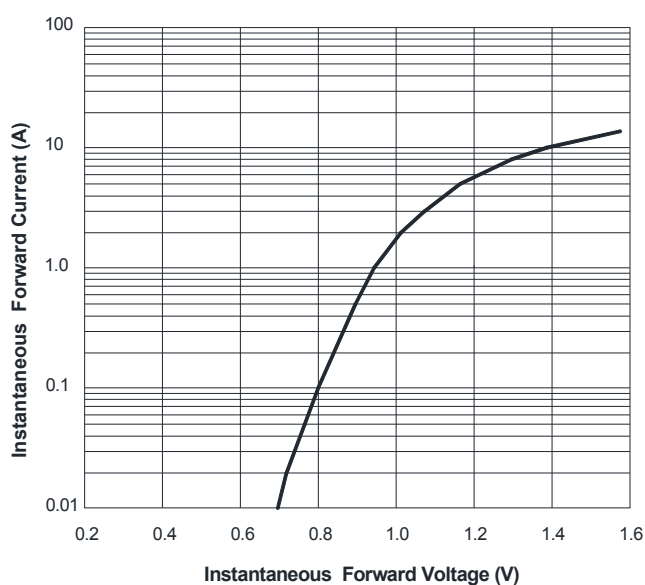
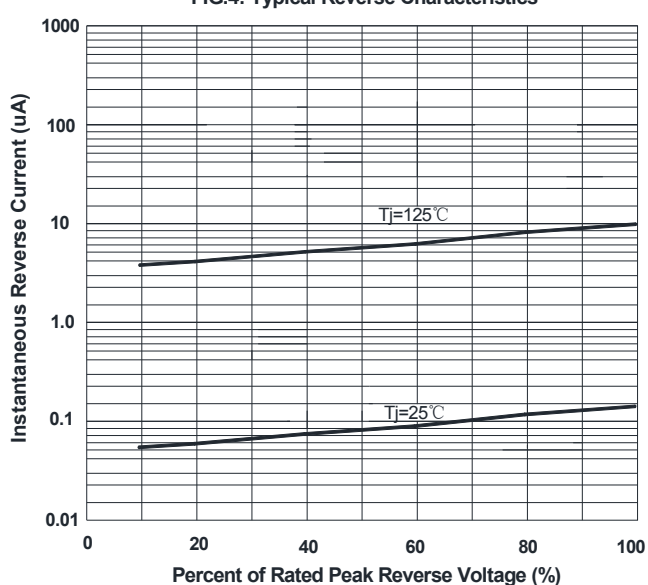


FIG.4: Typical Reverse Characteristics

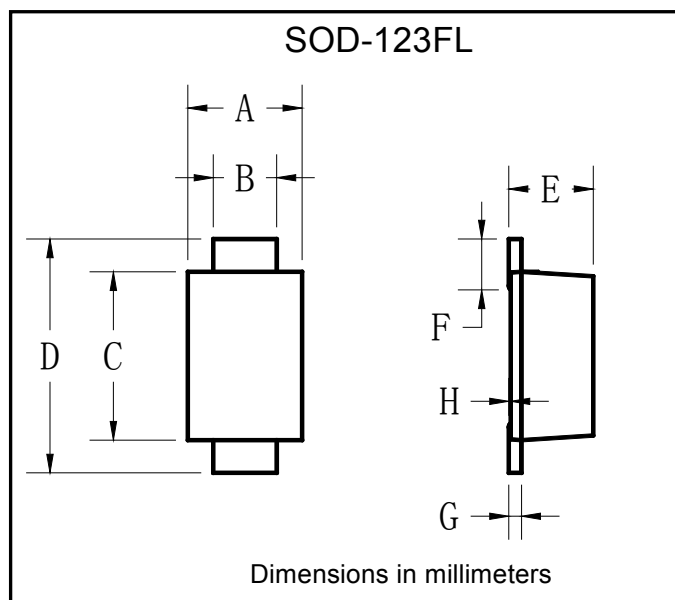


G1AS THRU G1MS

■ Ordering Information (Example)

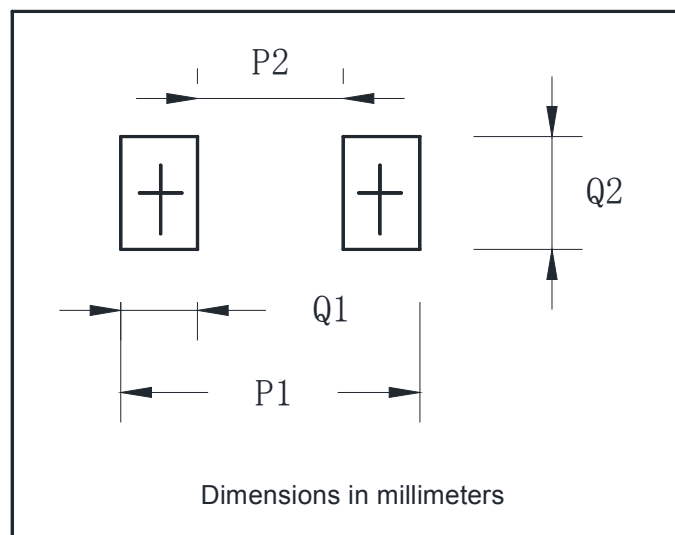
PREFERED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
G1AS THRU G1MS	F1	Approximate 0.0169	3000	30000	120000	7" reel
G1AS THRU G1MS	F2	Approximate 0.0169	2500	25000	100000	7" reel
G1AS THRU G1MS	F3	Approximate 0.0169	10000	/	210000	13" reel
G1AS THRU G1MS	F4	Approximate 0.0169	3000	54000	108000	7" reel
G1AS THRU G1MS	F5	Approximate 0.0169	10000	/	160000	13" reel
G1AS THRU G1MS	F6	Approximate 0.0169	3000	12000	60000	7" reel

■ Outline Dimensions



SOD-123FL		
Dim	Min	Max
A	1.60	1.90
B	0.90	1.10
C	2.55	2.85
D	3.60	3.90
E	1.00	1.20
F	0.40	0.90
G	0.10	0.25
H	0.02	0.05

■ Suggested pad layout



SOD-123FL	
Dim	Millimeters
P1	3.90
P2	1.90
Q1	1.00
Q2	1.50

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