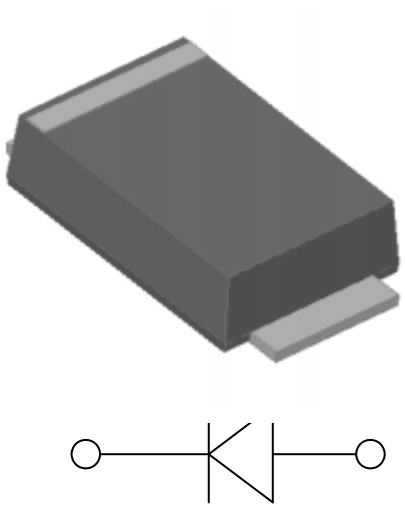
Surface Mount General Purpose Rectifier
G1A Through G1M



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, RoHS-compliant, halogen-free
- **Terminals**: Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** Cathode line denotes the cathode end

MAXIMUM RATINGS (Ta=25℃ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	G1A	G1B	G1D	G1G	G1J	G1K	G1M
Device marking code			G1A	G1B	G1D	G1G	G1J	G1K	G1M
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, Tj=25℃	I_{FSM}	A	30						
Forward Surge Current (Non-repetitive) @1ms, square wave, 1 cycle, Tj=25℃			60						
Current squared time @1ms≤t8.3≤ms Tj=25℃, Rating of per diode	I^2t	A^2s	3.735						
Typical junction capacitance @Measured at 1MHz and Applied Reverse Voltage of 4.0 V.D.C	Cj	pF	7						
Storage temperature	T_{stg}	℃	-55 ~ +150						
Junction temperature	Tj	℃	-55 ~ +150						

ELECTRICAL CHARACTERISTICS (Ta=25℃ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	G1A	G1B	G1D	G1G	G1J	G1K	G1M
Maximum instantaneous forward voltage drop per diode	V_F	V	I_{FM}=1.0A	1.1						
Maximum DC reverse current at rated DC blocking voltage per diode	I_R	μA	Tj=25℃	5						
			Tj=125℃	100						

■ THERMAL CHARACTERISTICS (Ta=25℃ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	G1A	G1B	G1D	G1G	G1J	G1K	G1M
Typical Thermal resistance	$R_{\theta J-A}$(1)	℃/W	70						
	$R_{\theta J-L}$(1)		20						
	$R_{\theta J-C}$(1)		18						

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: Io-TL Curve

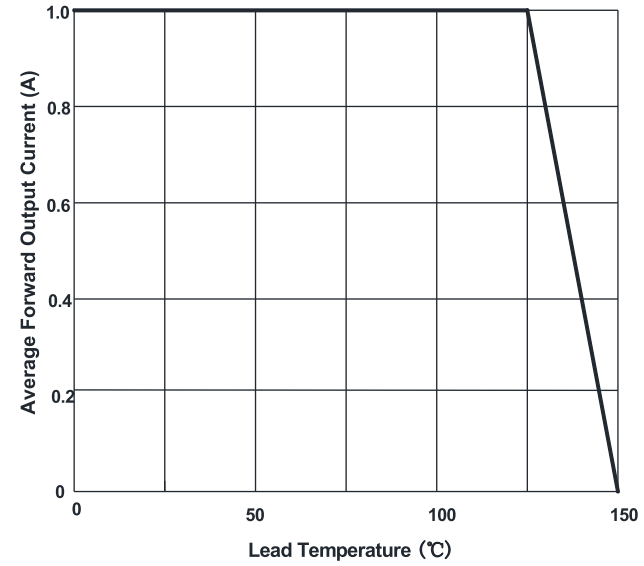
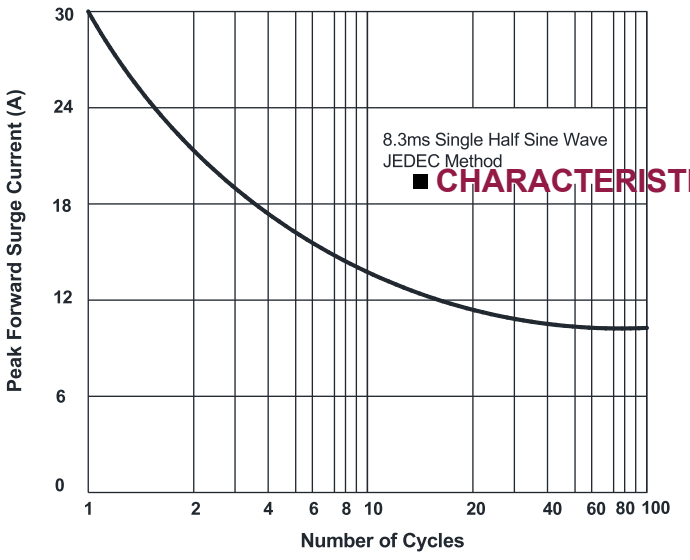


FIG.2: Forward Surge Current Capability



■ CHARACTERISTICS (T

FIG.3: Typical Forward Voltage

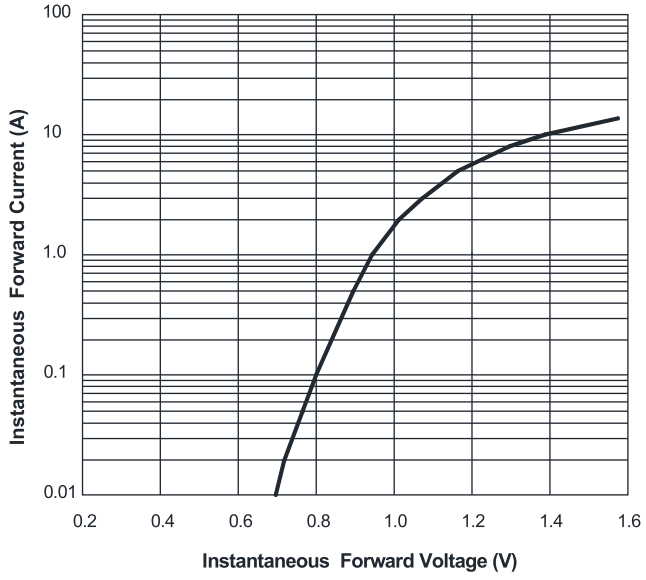
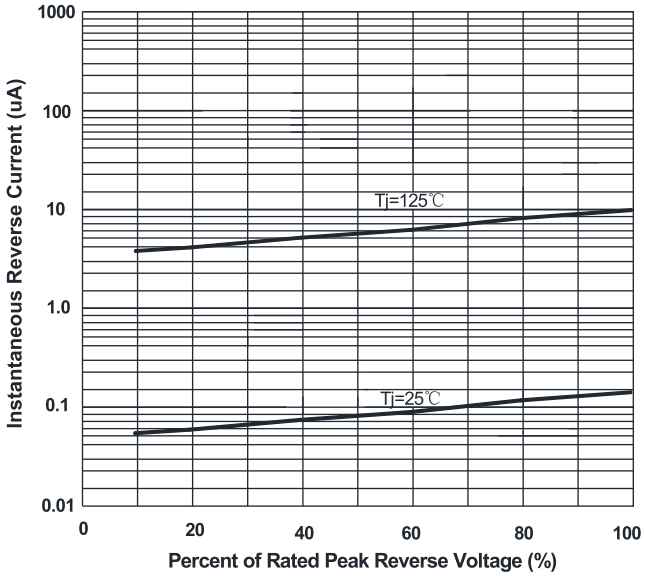


FIG.4: Typical Reverse Characteristics



■ PACKAGING INFORMATION

PREFERED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
G1A THRU G1M	F1	Approximate 0.0169	3000	30000	120000	7” reel
G1A THRU G1M	F2	Approximate 0.0169	2500	25000	100000	7” reel
G1A THRU G1M	F3	Approximate 0.0169	10000	30000	210000	13” reel
G1A THRU G1M	F4	Approximate 0.0169	3000	54000	108000	7” reel
G1A THRU G1M	F5	Approximate 0.0169	10000	20000	160000	13” reel
G1A THRU G1M	F6	Approximate 0.0169	3000	12000	60000	7” reel

■ OUTLINE DIMENSIONS

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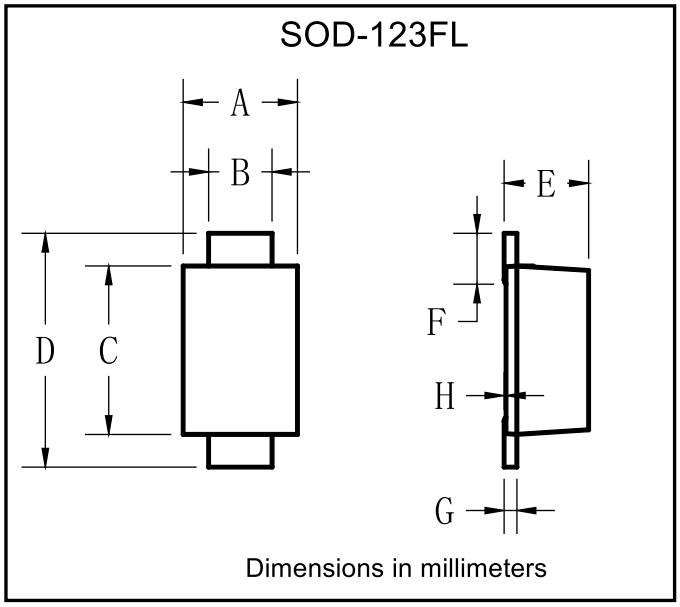
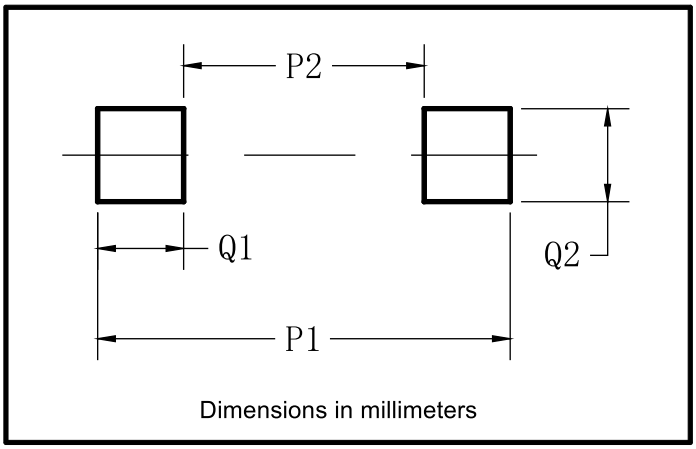


SOD-123FL		
Dim	Min	Max
A	1.60	1.90
B	0.90	1.10
C	2.55	2.85
D	3.60	3.90
E	1.00	1.20
F	0.40	0.90
G	0.10	0.25
H	0.02	0.05

■ SUGGESTED PAD LAYOUT



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