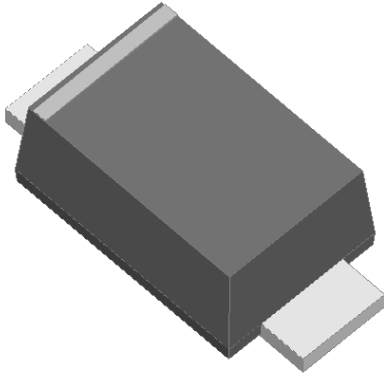


## Surface Mount General Purpose Rectifier

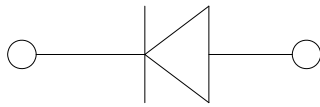


### Features

- Low profile package
- Ideal for automated placement
- Glass passivated chip junction
- High forward surge capability
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260 °C
- Part no. with suffix "Q" means AEC-Q101 qualified

### Typical Applications

For use in general purpose rectification of power supplies, inverters, converters, and freewheeling diodes for consumer, automotive 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 (T<sub>a</sub>=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	G1AQ	G1BQ	G1DQ	G1GQ	G1JQ	G1KQ	G1MQ
Device marking code			G1A	G1B	G1D	G1G	G1J	G1K	G1M
Repetitive peak reverse voltage	V <sub>RRM</sub>	V	50	100	200	400	600	800	1000
Maximum RMS voltage	V <sub>RMS</sub>	V	35	70	140	280	420	560	700
Average rectified output current @60Hz sine wave, Resistance load	I <sub>O</sub>	A	1.0						
Surge(non-repetitive)forward current @ 60Hz half-sine wave, 1 cycle, T <sub>J</sub> =25°C	I <sub>FSM</sub>	A	30						
Current Squared Time @1ms≤t<8.3ms T <sub>J</sub> =25°C	I <sup>2</sup> t	A <sup>2</sup> s	3.7						
Storage temperature	T <sub>STG</sub>	°C	-55 ~+150						
Junction temperature	T <sub>J</sub>	°C	-55 ~+150						

### ■ Electrical Characteristics (T<sub>a</sub>=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	G1AQ	G1BQ	G1DQ	G1GQ	G1JQ	G1KQ	G1MQ
Maximum instantaneous forward voltage drop per diode	V <sub>F</sub>	V	I <sub>FM</sub> =1.0A	1.1						
Typical junction capacitance	C <sub>J</sub>	pF	V <sub>R</sub> =4V, 1 MHz	10						
Maximum DC reverse current at rated DC blocking voltage per diode	I <sub>RRM</sub>	μA	T <sub>a</sub> =25°C	5						
			T <sub>a</sub> =125°C	100						



# G1AQ THRU G1MQ

## ■ Thermal Characteristics (T<sub>a</sub>=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	G1AQ	G1BQ	G1DQ	G1GQ	G1JQ	G1KQ	G1MQ
Thermal resistance	R <sub>θJ-A</sub>	°C/W	85 <sup>(1)</sup>						
	R <sub>θJ-L</sub>		35 <sup>(1)</sup>						

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:Forward Current Derating Curve

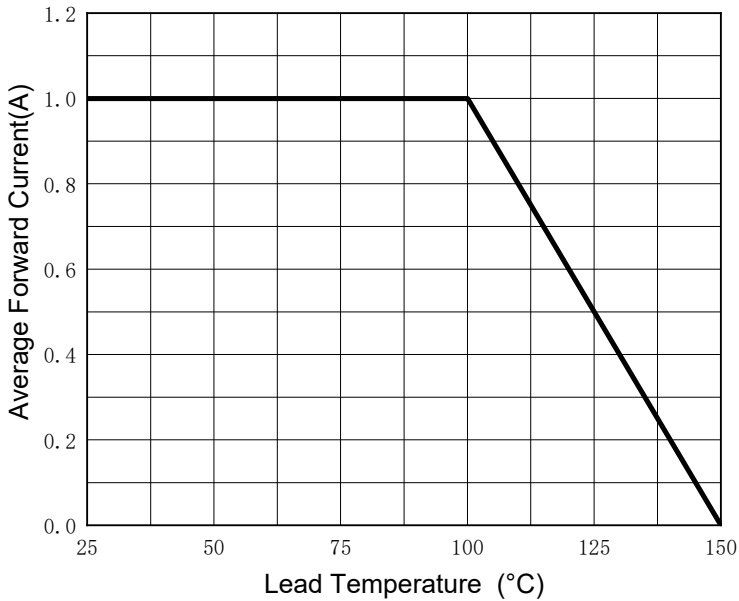


Fig.2:Forward Surge Current Capability

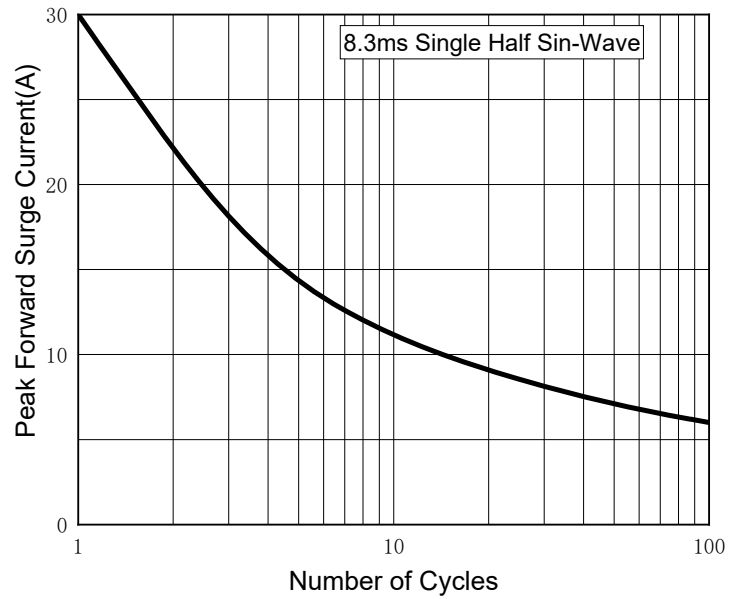


Fig.3:Typical Instantaneous Forward Characteristics

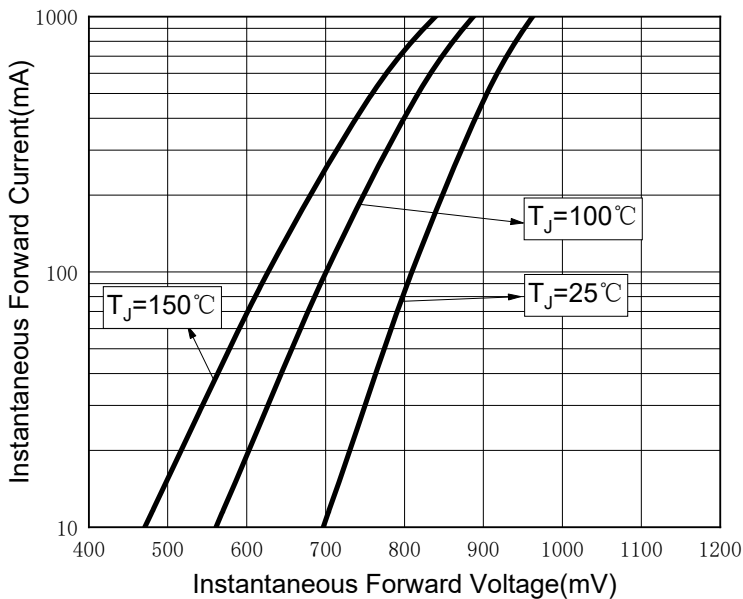


Fig.4:Typical Reverse Characteristics

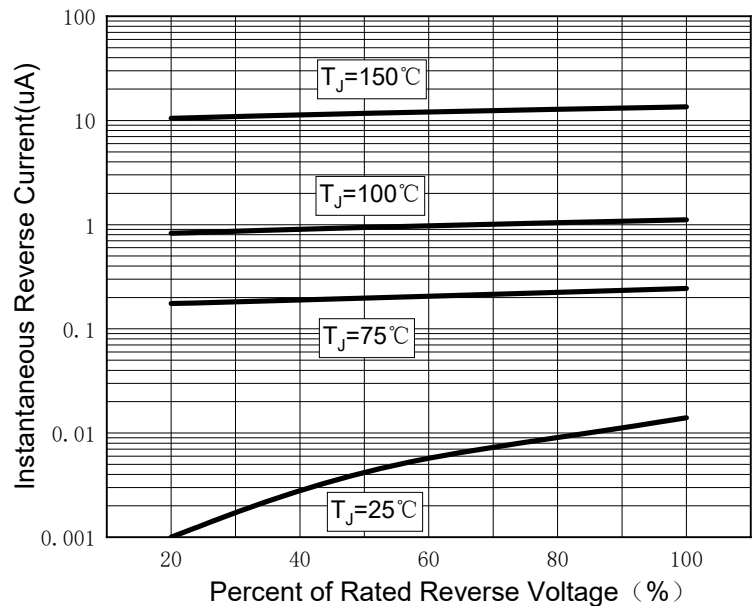
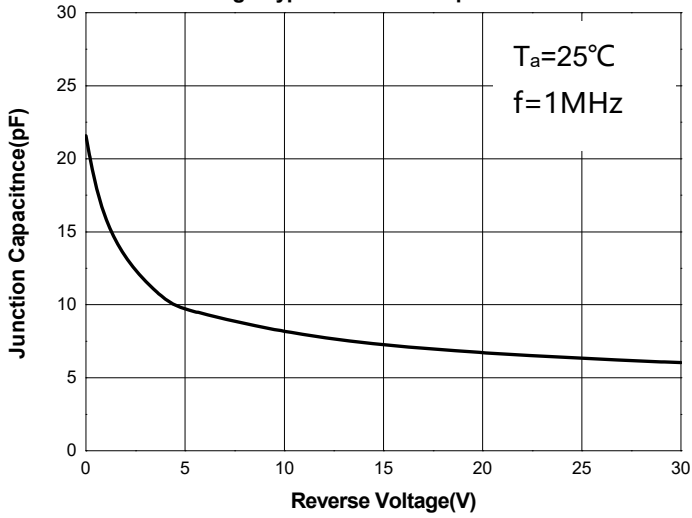
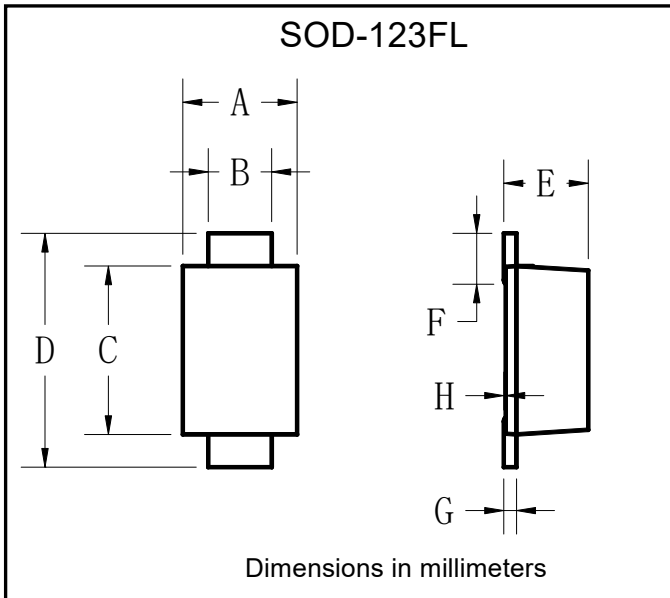


Fig5: Typical Junction Capacitance

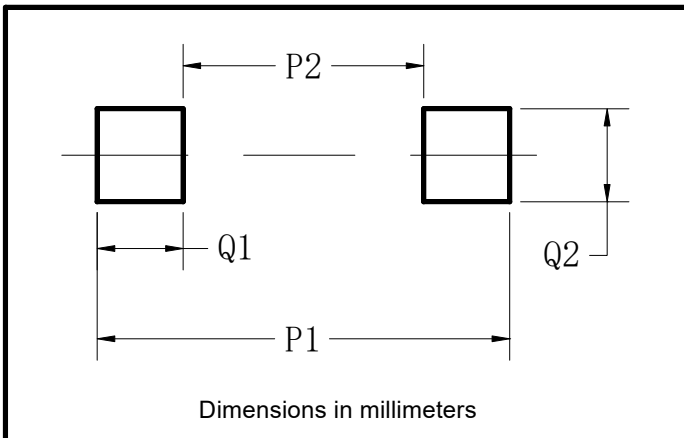


### ■ Outline Dimensions



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



# G1AQ THRU G1MQ

## ■ Marking Information



Note:

1. All marking is at middle of the product body
2. All marking is in laser printing
3. XXXX is marking code, like G1MQ marking code is G1M.
4. Body color: Black
5. YWW is date code, "Y" is year. "WW" is week.

For instance:  
 The 17<sup>th</sup> week of 2019, date code is 917  
 The 17<sup>th</sup> week of 2020, date code is 017

## ■ Packing Information

ITEM	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	QUANTITY (pcs)
REEL	/	/	/	3000
INNER BOX	187	130	187	30000
OUTER CARTON	390	275	207	120000



## G1AQ THRU G1MQ

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### Disclaimer

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