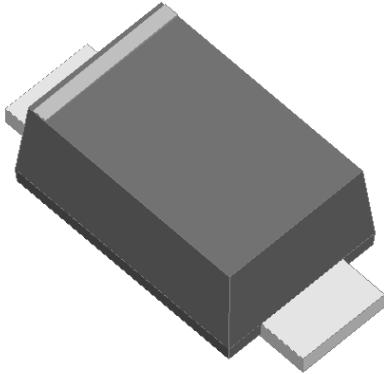


## Surface Mount General Purpose Rectifier

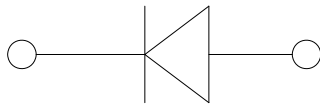


### Features

- 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, T <sub>L</sub> (Fig 1)	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						
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)

Fig1: I<sub>o</sub>-T<sub>L</sub> Curve

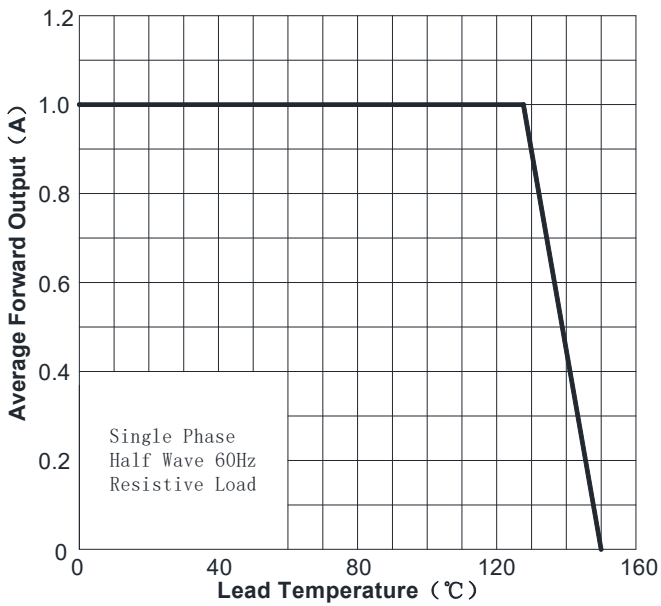


Fig2: Surge Forward Current Capability

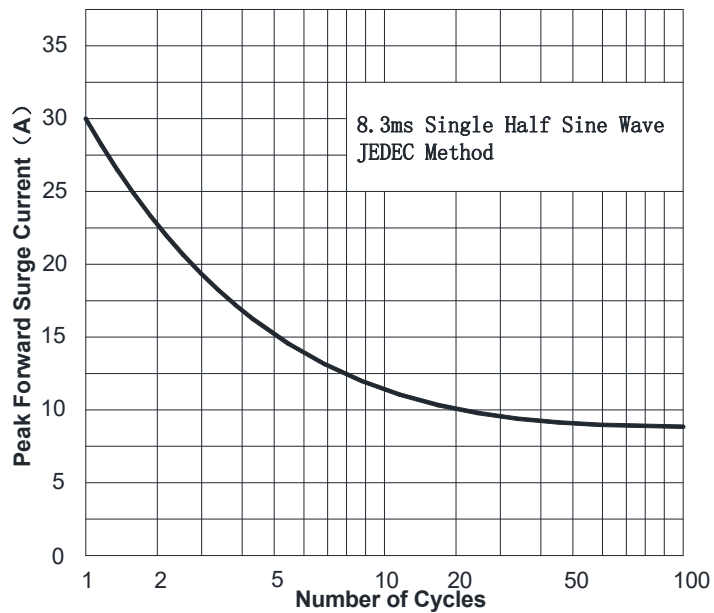


Fig3: Forward Voltage

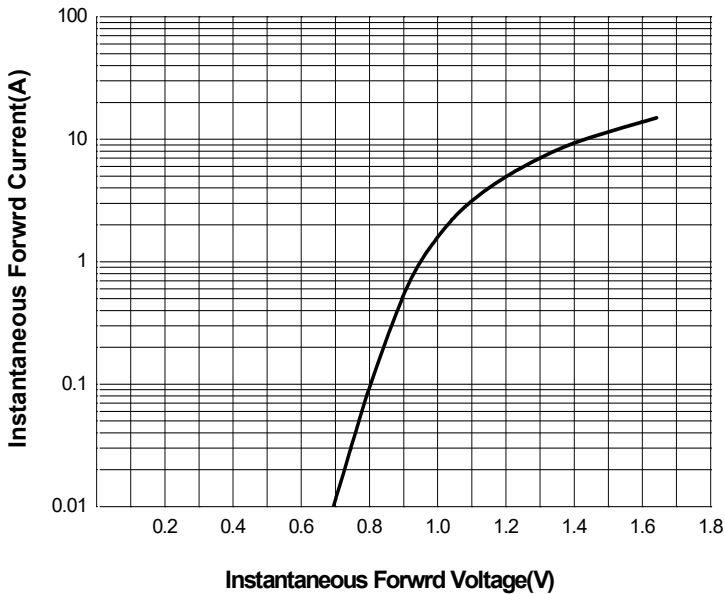
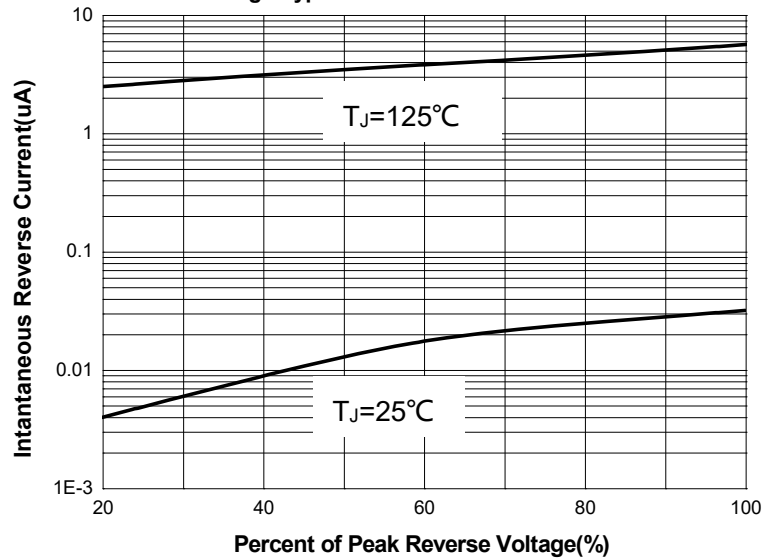
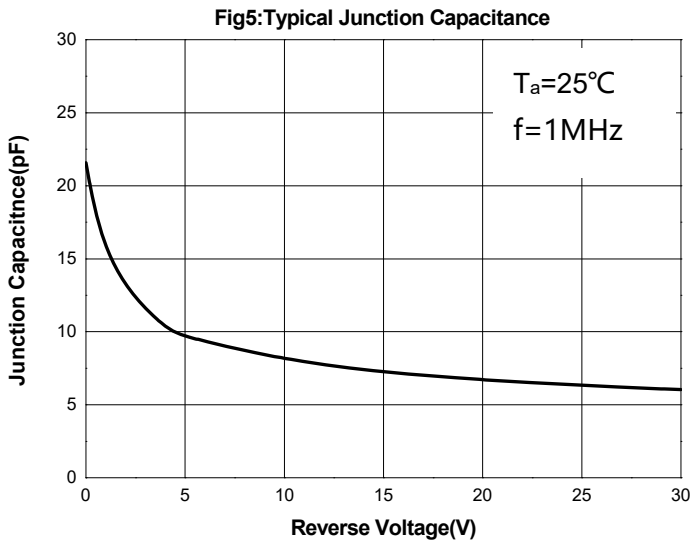


Fig4: Typical Reverse Characteristics





## G1AQ THRU G1MQ



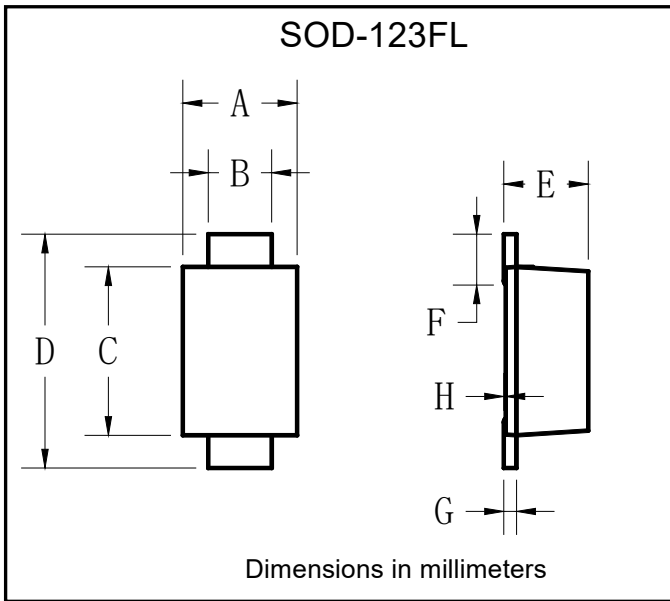
### ■ Ordering Information (Example)

PREFERED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
G1AQ THRU G1MQ	F1	Approximate 0.0177	3000	15000	120000	7" reel



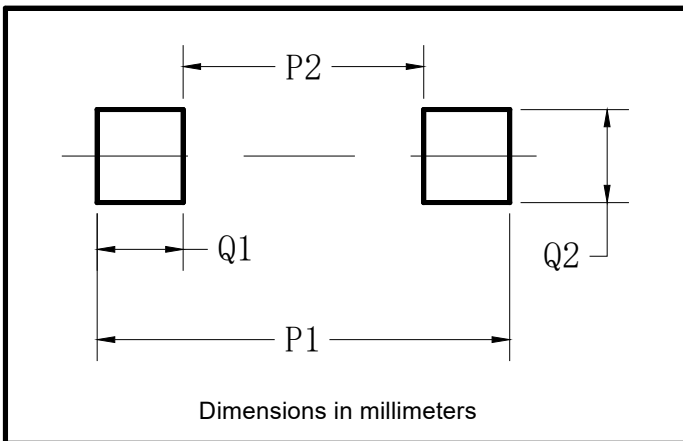
# G1AQ THRU G1MQ

## ■ 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

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### Disclaimer

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