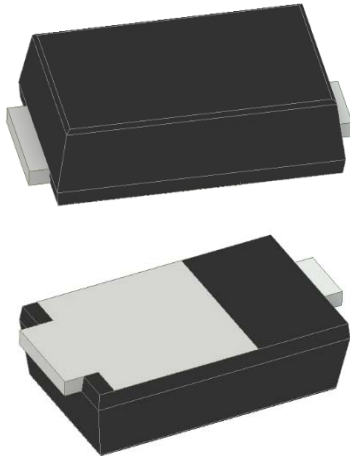


Surface Mount General Purpose Rectifier

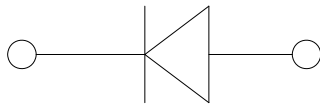


Features

- 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-123HE
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_a=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	G1AEQ	G1BEQ	G1DEQ	G1GEQ	G1JEQ	G1KEQ	G1MEQ
Device marking code			G1AE	G1BE	G1DE	G1GE	G1JE	G1KE	G1ME
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 average forward rectified current at T _L (Fig.1)	I _{F(AV)}	A	1.0						
Surge(non-repetitive)forward current @ 60Hz half-sine wave,1 cycle, T _J =25°C	I _{FSM}	A	30						
Storage temperature	T _{STG}	°C	-55 ~+175					-55 ~+150	
Junction temperature	T _J	°C	-55 ~+175					-55 ~+150	

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

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	G1AEQ	G1BEQ	G1DEQ	G1GEQ	G1JEQ	G1KEQ	G1MEQ	
Maximum instantaneous forward voltage drop per diode	V _F	V	I _{FM} =1.0A	1.1							
Typical junction capacitance	C _J	pF	V _R =4V,1 MHz	10						7	
Maximum DC reverse current at rated DC blocking voltage per diode	I _{RRM}	μA	Ta=25°C	5							
			Ta=125°C	50							



G1AEQ THRU G1MEQ

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

PARAMETER	SYMBOL	UNIT	TYP
Typical Thermal Resistance	R _{θJA}	°C/W	100 ¹⁾
	R _{θJL}		25 ¹⁾

Note:
(1) Thermal resistance between junction and ambient and between junction and lead mounted on P.C.B with 5mm*5mm copper pad areas.

■ Characteristics(Typical)

Fig.1:Forward Current Derating Curve

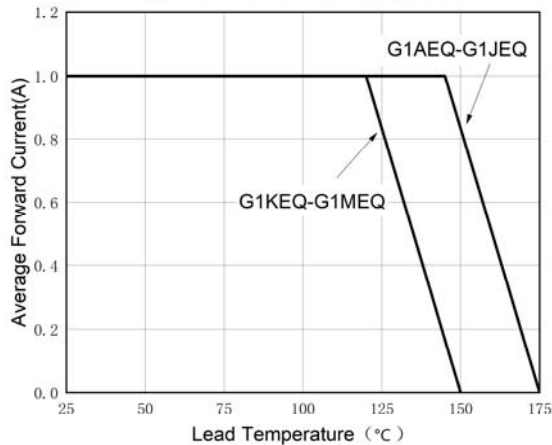


Fig.2: Forward Surge Current Capability

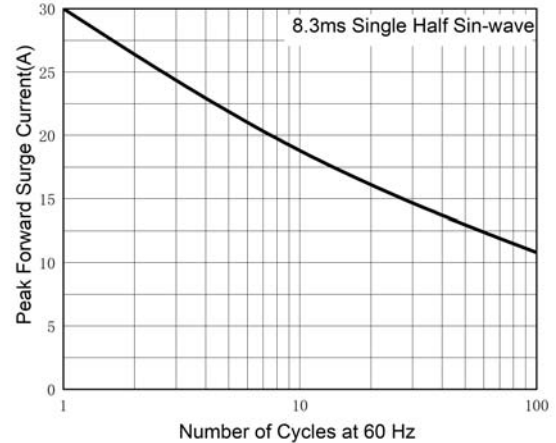


Fig.3:Typical Forward Characteristics

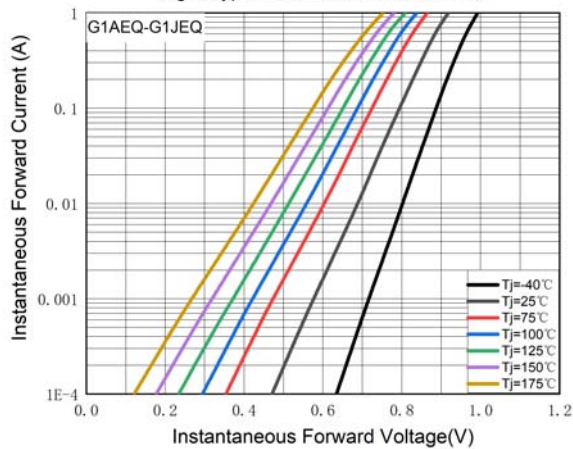


Fig.4:Typical Forward Characteristics

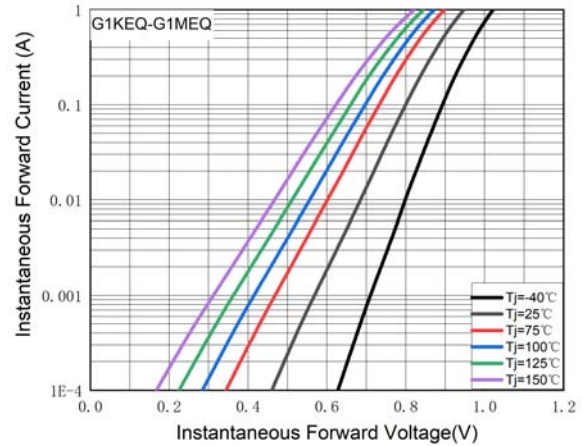


Fig.5:Typical Reverse Leakage Characteristics

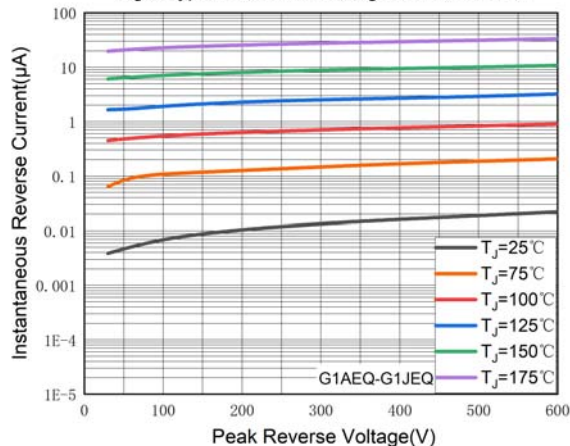
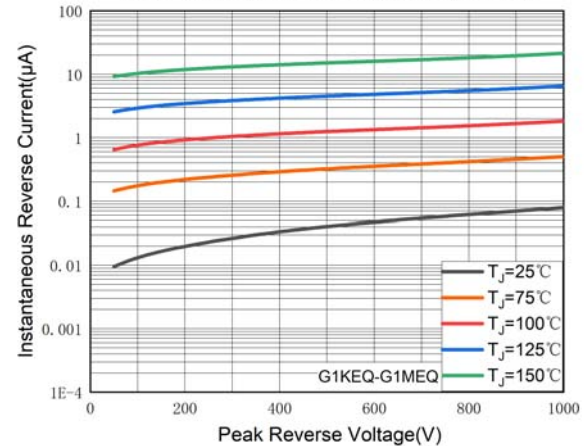


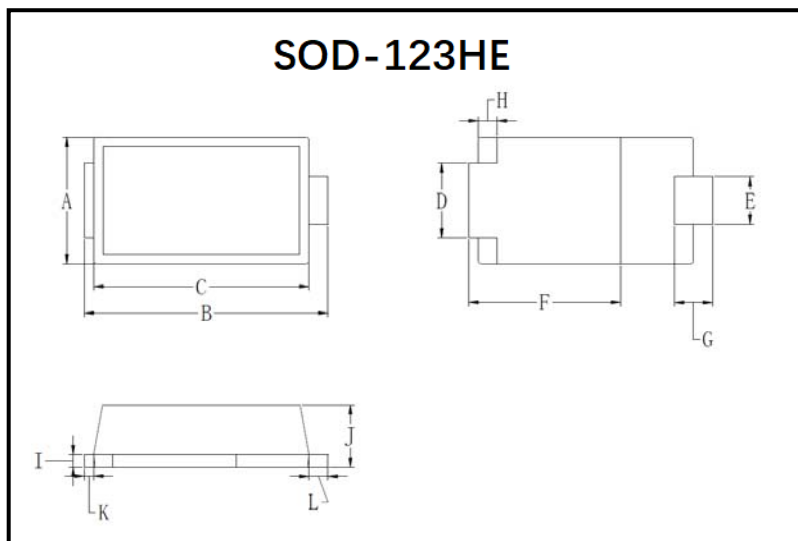
Fig.6:Typical Reverse Leakage Characteristics





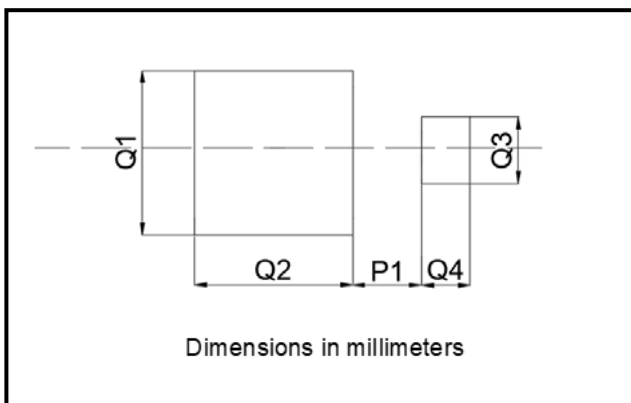
G1AEQ THRU G1MEQ

■ Outline Dimensions



SOD-123HE		
Dim	Min	Max
A	1.88	2.18
B	3.70	4.00
C	3.19	3.61
D	1.05	1.35
E	0.61	0.91
F	2.20	2.90
G	0.40	0.80
H	0.30 TYP	
I	0.10	0.30
J	0.85	1.15
K	0.00	0.30
L	0.15	0.45

■ Suggested pad layout

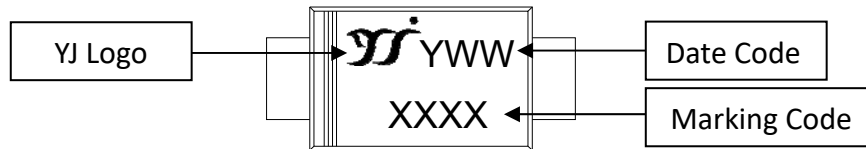


SOD-123HE	
Dim	Millimeters
P1	0.64
Q1	2.54
Q2	2.67
Q3	1.27
Q4	0.76



G1AEQ THRU G1MEQ

■ 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 G1MEQ marking code is G1ME.
4. Body color: Black
5. YWW is date code, "Y" is year. "WW" is week.

For instance:

The 17th week of 2025, date code is 517
The 17th week of 2026, date code is 617

■ Packing Information

PREFERED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
G1AEQ ~ G1MEQ	F1	Approximate 0.025	3000	120000	7" reel



G1AEQ THRU G1MEQ

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