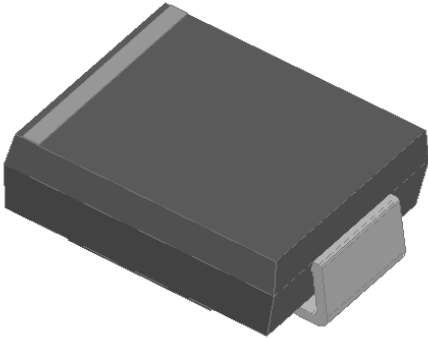


## Surface Mount General Purpose Rectifier



### Features

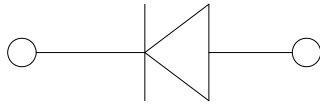
- High efficiency
- High current capability
- High reliability
- High surge current capability
- Low power loss
- Solder dip 260 °C max. 10 s, per JESD 22-B106
- Part no. with suffix "Q" means AEC-Q101 qualified

### Typical Applications

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

### Mechanical Data

- **Package:** DO-214AB (SMC)  
Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant, halogen-free
- **Terminals:** Tin plated leads, solder able per J-STD-002 and JESD22-B102
- **Polarity:** Color band denotes cathode end



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

PARAMETER	SYMBOL	UNIT	GS8AQ	GS8BQ	GS8DQ	GS8GQ	GS8JQ	GS8KQ	GS8MQ
Device marking code			GS8A	GS8B	GS8D	GS8G	GS8J	GS8K	GS8M
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	8.0						
Forward Surge Current (Non-repetitive) @60Hz Half-sine wave, 1 cycle, T <sub>a</sub> =25°C	I <sub>FSM</sub>	A	200						
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	GS8AQ	GS8BQ	GS8DQ	GS8GQ	GS8JQ	GS8KQ	GS8MQ
Maximum instantaneous forward voltage drop per diode	V <sub>F</sub>	V	I <sub>FM</sub> =8.0A	1.1						
Maximum DC reverse current at rated DC blocking voltage per diode	I <sub>R</sub>	μA	T <sub>a</sub> =25°C	10						
			T <sub>a</sub> =125°C	250						
Typical junction capacitance	C <sub>J</sub>	pF	1MHz, V <sub>R</sub> =4V.	70					60	



# GS8AQ THRU GS8MQ

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

PARAMETER		SYMBOL	UNIT	GS8AQ	GS8BQ	GS8DQ	GS8GQ	GS8JQ	GS8KQ	GS8MQ
Thermal Resistance	Junction to ambient	R <sub>θJ-A</sub>	°C/W	75 <sup>①</sup>						
	Junction to lead	R <sub>θJ-L</sub>		12 <sup>①</sup>						

Note(1)

Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 0.6" x 0.6" (16 mm x 16 mm) copper pad areas

## ■ Characteristics(Typical)

Fig.1: I<sub>O</sub>-T<sub>L</sub> Curve

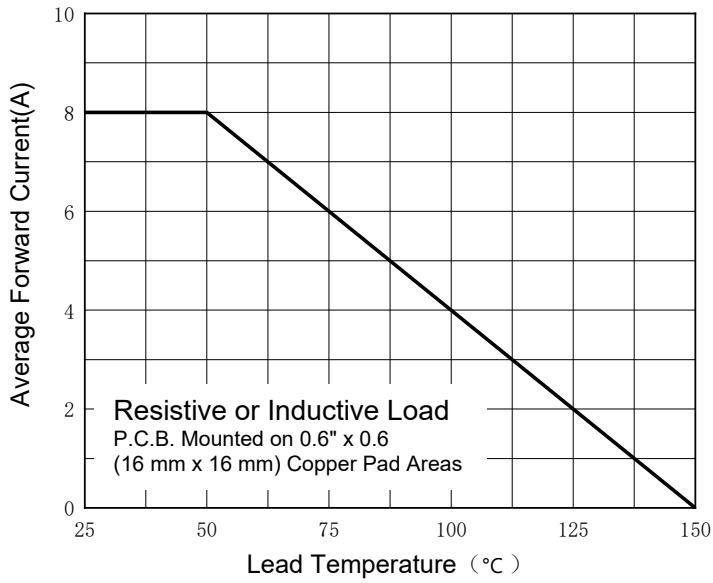


Fig.2: Surge Forward Current Capability

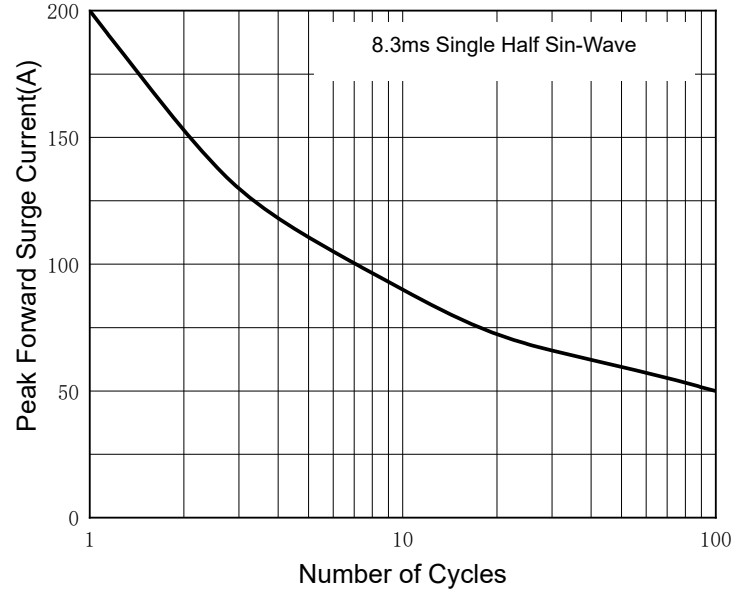


Fig.3: Typical Forward Characteristics

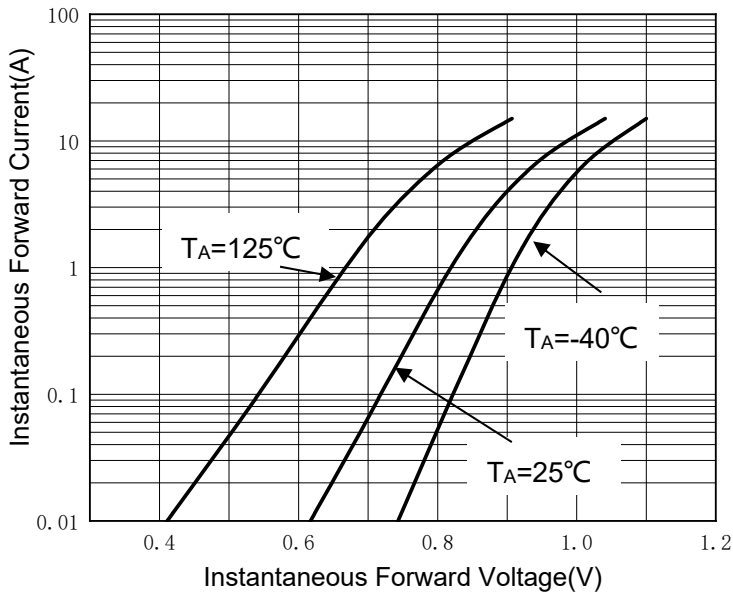
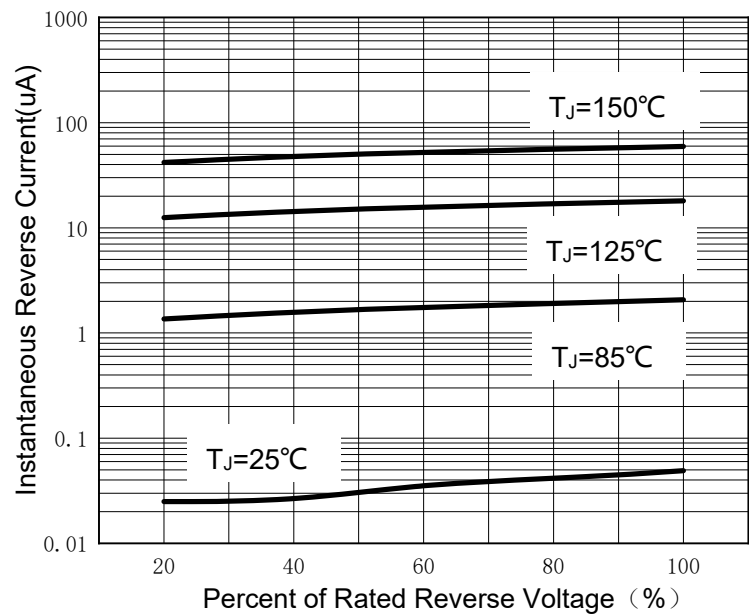


Fig.4: Typical Reverse Characteristics



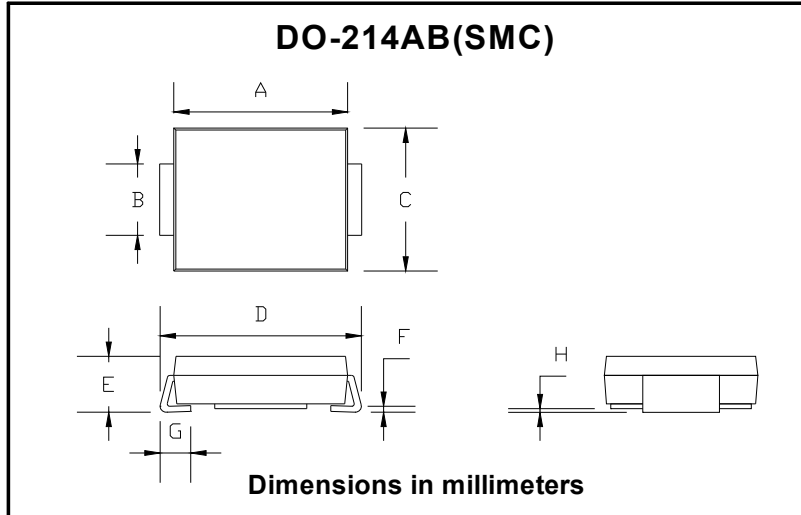


# GS8AQ THRU GS8MQ

## Ordering Information (Example)

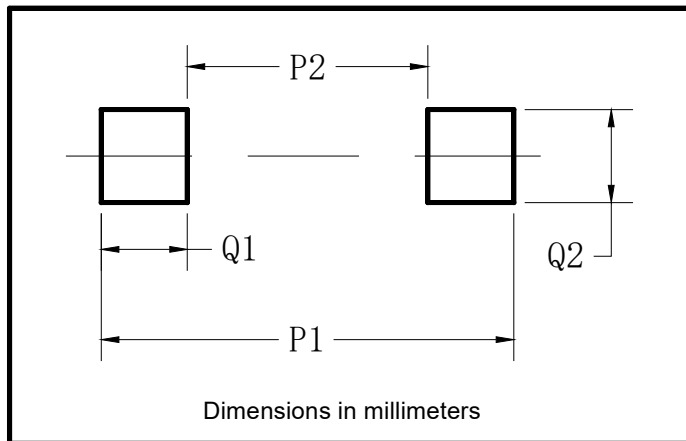
PREFERRED P/N	PACKAGE CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
GS8AQ~GS8MQ	F1	Approximate 0.253	3000	6000	42000	13" reel

## Outline Dimensions



DO-214AB (SMC)		
Dim	Min	Max
A	6.60	7.11
B	2.85	3.27
C	5.59	6.22
D	7.75	8.13
E	1.99	2.61
F	0.15	0.31
G	0.76	1.52
H	0.10	0.20

## Suggested pad layout



Dim	Typ
P1	9.9
P2	3.84
Q1	3.03
Q2	3.82



## GS8AQ THRU GS8MQ

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