

## Surface Mount General Purpose Rectifier

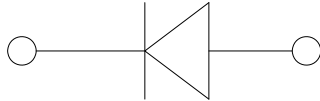


### Features

- 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:** DO-214AA (SMB)  
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	GS3ABQ	GS3BBQ	GS3DBQ	GS3GBQ	GS3JBQ	GS3KBQ	GS3MBQ
Device marking code			GS3AB	GS3BB	GS3DB	GS3GB	GS3JB	GS3KB	GS3MB
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, TL (FIG.1)	I <sub>o</sub>	A	3.0						
Surge(non-repetitive)forward current @60Hz half-sine wave,1 cycle, T <sub>a</sub> =25°C	I <sub>FSM</sub>	A	100						
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	GS3ABQ	GS3BBQ	GS3DBQ	GS3GBQ	GS3JBQ	GS3KBQ	GS3MBQ
Maximum instantaneous forward voltage drop per diode	V <sub>F</sub>	V	I <sub>FM</sub> =3.0A	1.15						
Typical junction capacitance	C <sub>J</sub>	pF	VR=4V,f=1 MHz	25						
Maximum DC reverse current at rated DC blocking voltage per diode @ V <sub>RM</sub> =V <sub>RRM</sub>	I <sub>RRM</sub>	μA	T <sub>a</sub> =25°C	5						
			T <sub>a</sub> =125°C	100						



# GS3ABQ THRU GS3MBQ

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

PARAMETER	SYMBOL	UNIT	GS3ABQ	GS3BBQ	GS3DBQ	GS3GBQ	GS3JBQ	GS3KBQ	GS3MBQ
Thermal resistance	R <sub>θJ-A</sub>	°C/W	75 <sup>(1)</sup>						
	R <sub>θJ-L</sub>		20 <sup>(1)</sup>						

Note:  
 (1) Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 0.2" x 0.2" (5.0 mm x 5.0 mm) copper pad areas

## ■ Characteristics (Typical)

FIG1: I<sub>o</sub>-T<sub>L</sub> Curve

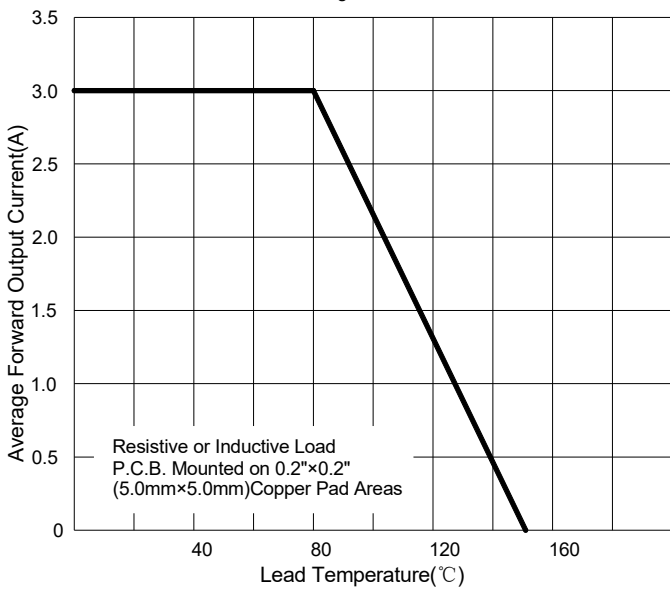


FIG2: Surge Forward Current Capability

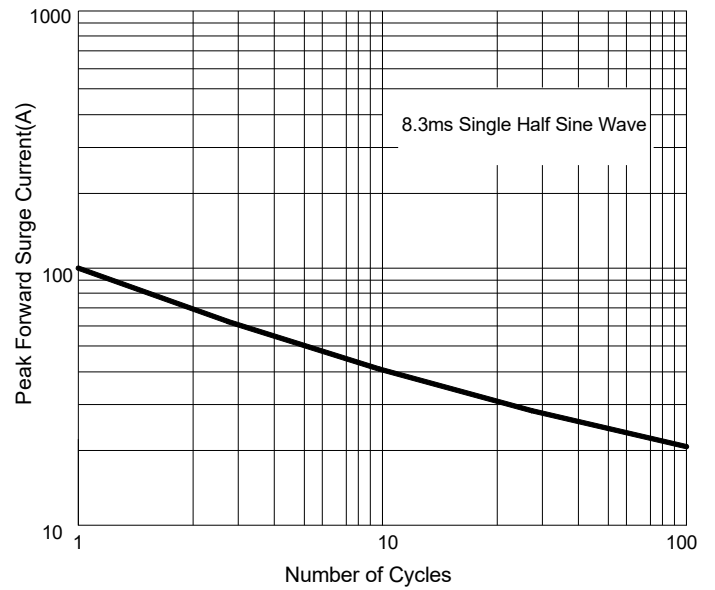


FIG.3: Typical Forward Characteristics

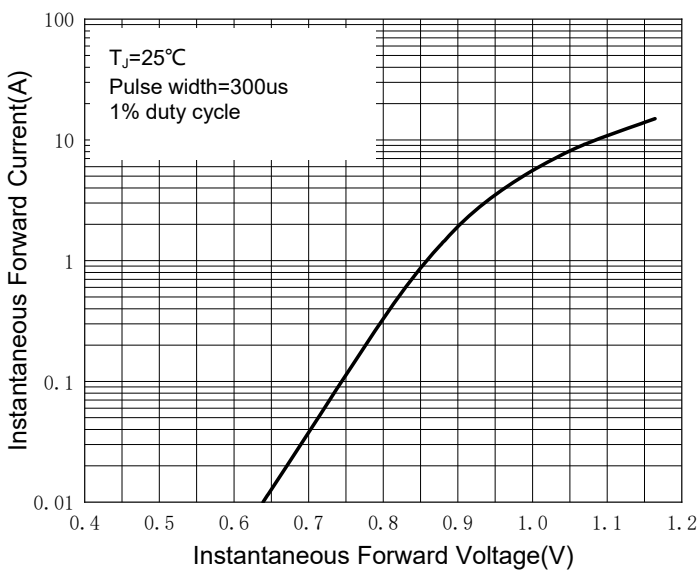
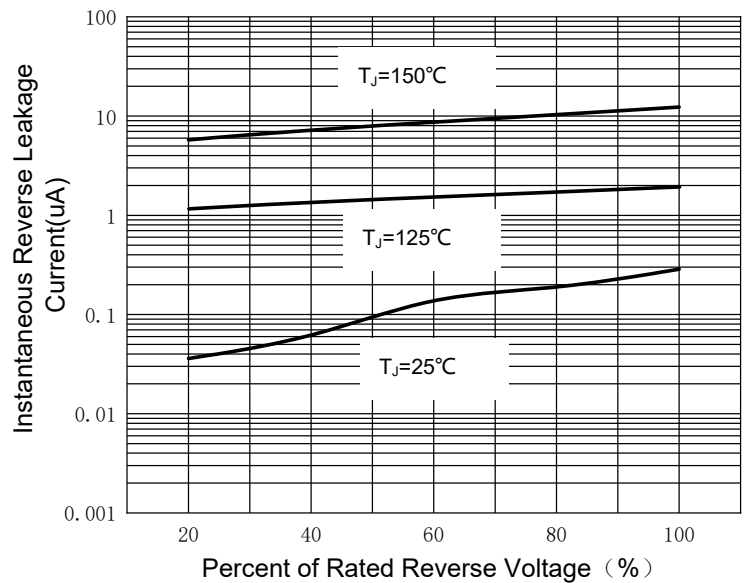


FIG.4: Typical Reverse Characteristics



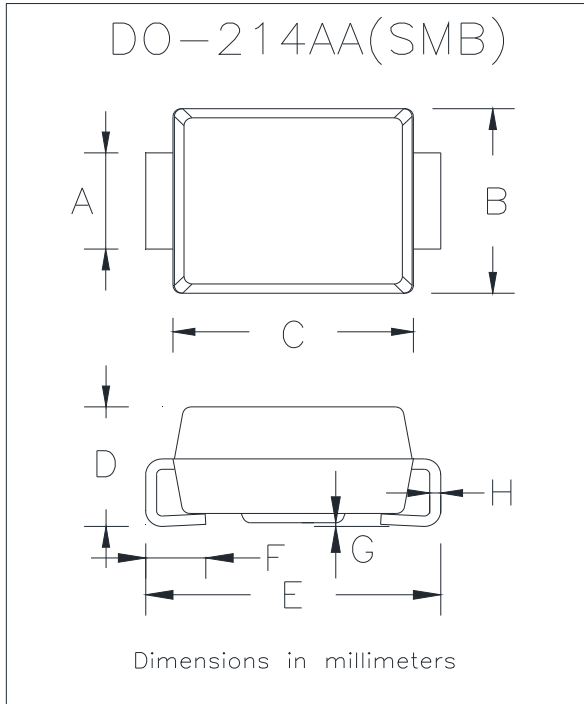


# GS3ABQ THRU GS3MBQ

## Ordering Information (Example)

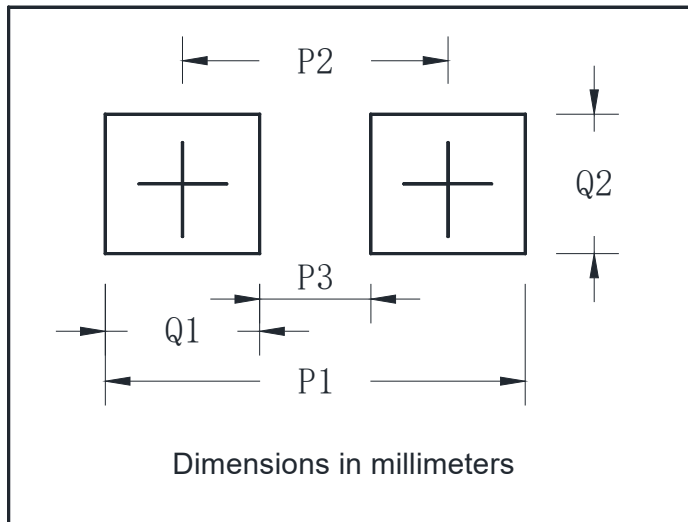
PREFERRED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
GS3ABQ-GS3MBQ	F1	Approximate 0.1003	3000	48000	13" reel

## Outline Dimensions



DO-214AA(SMB)		
Dim	Min	Max
A	1.85	2.15
B	3.30	3.94
C	4.05	4.75
D	1.99	2.61
E	5.21	5.59
F	0.90	1.41
G	0.05	0.20
H	0.15	0.31

## Suggested pad layout



DO-214AA(SMB)	
Dim	Millimeters
P1	6.8
P2	4.3
P3	1.8
Q1	2.5
Q2	2.3



## GS3ABQ THRU GS3MBQ

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