

## 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

### Typical Applications

For use in general purpose rectification of power supplies, inverters, converters, and freewheeling diodes for consumer 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	GS1AB	GS1BB	GS1DB	GS1GB	GS1JB	GS1KB	GS1MB
Device marking code			GS1AB	GS1BB	GS1DB	GS1GB	GS1JB	GS1KB	GS1MB
Repetitive peak reverse voltage	VRRM	V	50	100	200	400	600	800	1000
Average rectified output current @60Hz sine wave, resistance load, TL (Fig.1)	I <sub>O</sub>	A	1.0						
Surge(non-repetitive)forward current @60Hz half-sine wave,1 cycle, T <sub>a</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	GS1AB	GS1BB	GS1DB	GS1GB	GS1JB	GS1KB	GS1MB
Maximum instantaneous forward voltage drop per diode	V <sub>F</sub>	V	I <sub>FM</sub> =1.0A	1.15						
Maximum DC reverse current at rated DC blocking voltage per diode @ VRM=VRRM	I <sub>RRM</sub>	μA	T <sub>a</sub> =25°C	5.0						
			T <sub>a</sub> =125°C	100						



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

PARAMETER	SYMBOL	UNIT	GS1AB	GS1BB	GS1DB	GS1GB	GS1JB	GS1KB	GS1MB
Typical Thermal resistance	R $\theta$ J-A <sup>(1)</sup>	°C/W	60 <sup>(1)</sup>						
	R $\theta$ J-L <sup>(1)</sup>		15 <sup>(1)</sup>						

Note:  
 (1) Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 0.3" x 0.3" (8.0 mm x 8.0 mm) copper pad areas

## ■ Characteristics (Typical)

FIG.1: I<sub>o</sub>-TL Curve

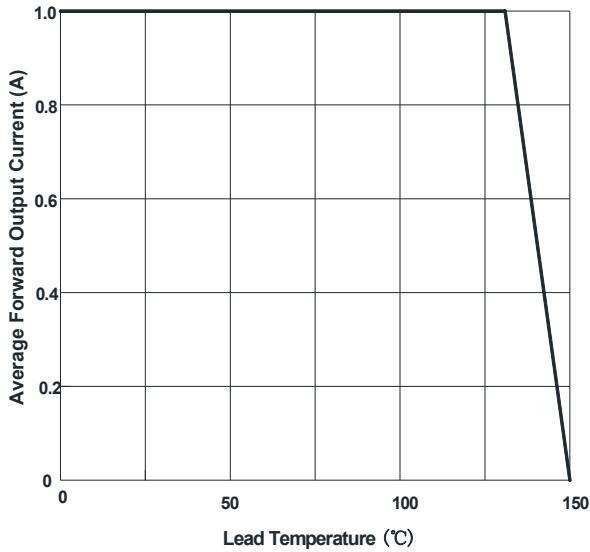


FIG.2: Forward Surge Current Capability

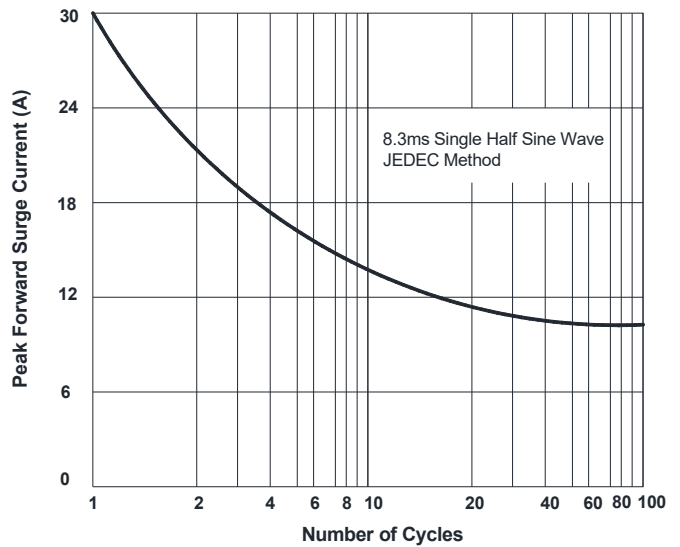


FIG.3: Typical Forward Voltage

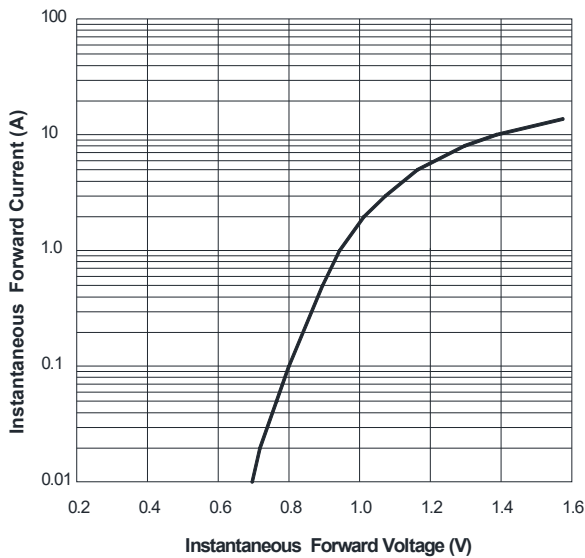
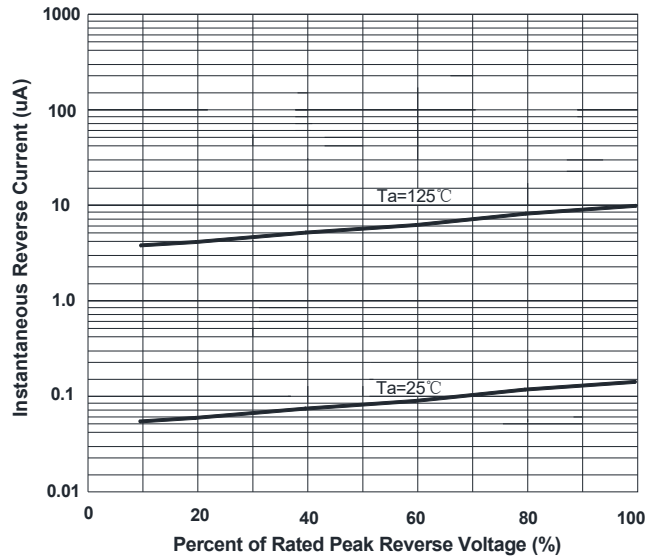


FIG.4: Typical Reverse Characteristics



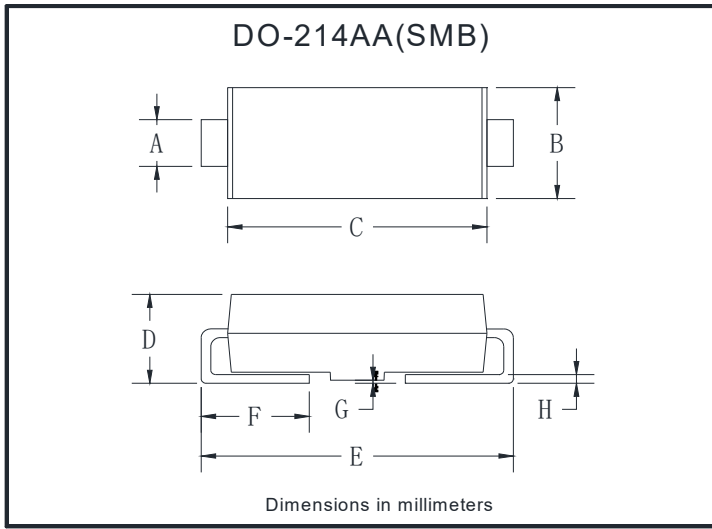


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## Ordering Information (Example)

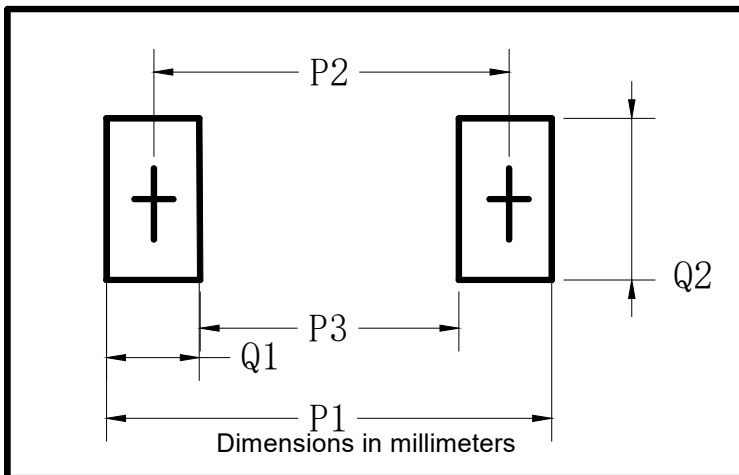
PREFERRED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
GS1AB-GS1MB	F1	Approximate 0.096	3000	6000	48000	13" reel
GS1AB-GS1MB	F2	Approximate 0.096	750	3000	24000	7" reel
GS1AB-GS1MB	F3	Approximate 0.096	500	2000	16000	7" reel

## Outline Dimensions



DO-214AA(SMB)		
Dim	Min	Max
A	1.85	2.15
B	3.30	3.94
C	4.25	4.75
D	1.99	2.61
E	5.21	5.59
F	0.90	1.41
G	0.10	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



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