# **Surface Mount General Purpose Rectifier**





## Features

- Low profile package
- Ideal for automated placement
- Glass passivated chip junction
- High forward surge capability
- $\bullet$  Meets MSL level 1, per J-STD-020, LF maximum peak of 260  $^\circ\text{C}$

## **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 (Ta=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	GS2A	GS2B	GS2D	GS2G	GS2J	GS2K	GS2M	
Device marking code			GS2A	GS2B	GS2D	GS2G	GS2J	GS2K	GS2M	
Maximum 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	
Maximum DC Blocking Voltage	V <sub>DC</sub>	V	50	100	200	400	600	800	1000	
Average rectified output current @60Hz sine wave, resistance load, TL (Fig.1)	IO	А	2.0							
Forward Surge Current (Non-repetitive) @60Hz Half-sine wave,1 cycle, Tj=25°C		•	50							
Forward Surge Current (Non-repetitive) @1ms, square wave, 1 cycle, Tj=25℃	IFSM	A				100				
Current squared time @1ms≤t≤8.3ms Tj=25℃	l²t	A²s	10.735							
Storage temperature	T <sub>stg</sub>	°C	-55 ~ +150							
Junction temperature	Tj	°C	-55 ~ +150							

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

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	GS2A	GS2B	GS2D	GS2G	GS2J	GS2K	GS2M
Maximum instantaneous forward voltage	VF	V	IFM=2.0A	1.1						
Maximum DC reverse current at	IR		Tj =25℃	5.0						
rated DC blocking voltage	чĸ	μA	Tj =125℃	100						
Typical junction capacitance	Cj	pF	Measured at 1MHz and Applied Reverse Voltage of 4.0 V.D.C	12						

## **Thermal Characteristics** (Ta=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	GS2A	GS2B	GS2D	GS2G	GS2J	GS2K	GS2M	
	R <sub>0</sub> J-A <sup>(1)</sup>		60							
Typical Thermal Resistance	Røj-L <sup>(1)</sup>	°C/W	20							
	R <sub>0</sub> J-C <sup>(1)</sup>		15							

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.2: Forward Surge Current Capability





## FIG.3: Typical Forward Voltage







Percent of Rated Peak Reverse Voltage (%)

## ■Ordering Information (Example)

PREFERED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
GS2A-GS2M	F1	Approximate 0.096	3000	1	48000	13" reel
GS2A-GS2M	F2	Approximate 0.096	750	6000	24000	7" reel
GS2A-GS2M	F3	Approximate 0.096	500	4000	16000	7" reel

## Outline Dimensions



DO-214AA(SMB)					
Dim	Min	Max			
А	1.85	2.15			
В	3.30	3.94			
С	4.05	4.75			
D	1.99	2.61			
Е	5.21	5.59			
F	0.90	1.41			
G	0.05	0.20			
Н	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			



# **GS2A THRU GS2M**

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