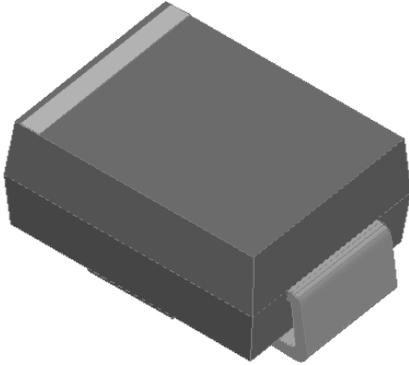


Surface Mount General Purpose Rectifier

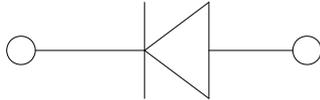


Features

- 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_a=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	GS2AQ	GS2BQ	GS2DQ	GS2GQ	GS2JQ	GS2KQ	GS2MQ	
Device marking code			GS2A	GS2B	GS2D	GS2G	GS2J	GS2K	GS2M	
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 DC blocking voltage	V _{DC}	V	50	100	200	400	600	800	1000	
Average rectified output current @60Hz sine wave, resistance load, T _L (FIG1)	I _O	A	2.0							
Surge(non-repetitive)forward current @60Hz half-sine wave, 1 cycle, T _a =25°C	I _{FSM}	A	50							
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	GS2AQ	GS2BQ	GS2DQ	GS2GQ	GS2JQ	GS2KQ	GS2MQ
Maximum instantaneous forward voltage drop per diode	V _F	V	I _{FM} =2.0A	1.15						
Typical junction capacitance	C _J	pF	VR=4V, f=1 MHz	18						
Maximum DC reverse current at rated DC blocking voltage per diode @ V _{RM} =V _{RRM}	I _{RRM}	μA	T _a =25°C	5						
			T _a =125°C	100						



GS2AQ THRU GS2MQ

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

PARAMETER	SYMBOL	UNIT	GS2AQ	GS2BQ	GS2DQ	GS2GQ	GS2JQ	GS2KQ	GS2MQ
Thermal resistance	R _{θJ-A}	°C/W	75 ¹⁾						
	R _{θJ-L}		20 ¹⁾						

Note:
 (1) Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 0.27" x 0.27" (7.0 mm x 7.0 mm) copper pad areas

■ Characteristics (Typical)

Figure.1: I_O-T_L Curve

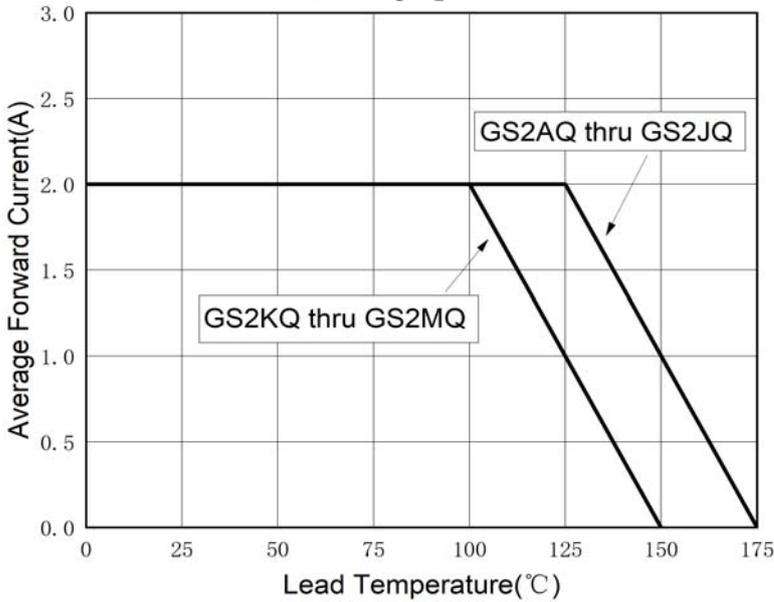


FIG2: Surge Forward Current Capability

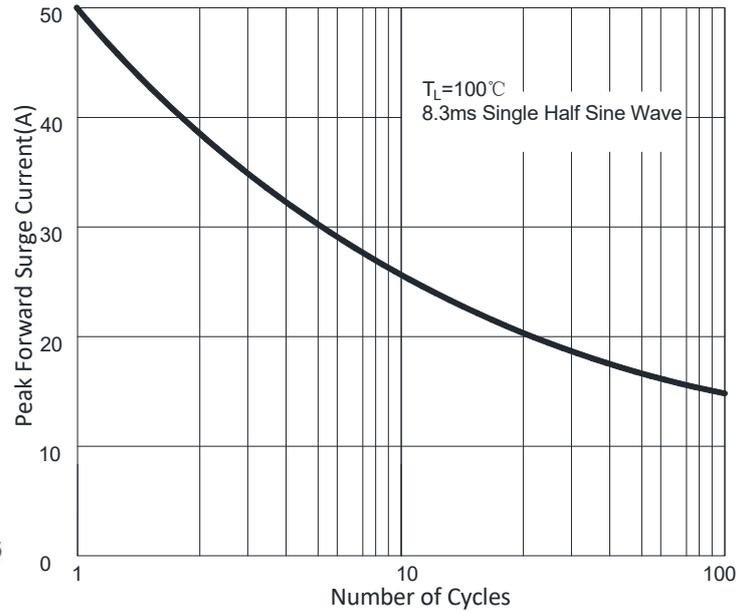


FIG3: Typical Instantaneous Forward Characteristics

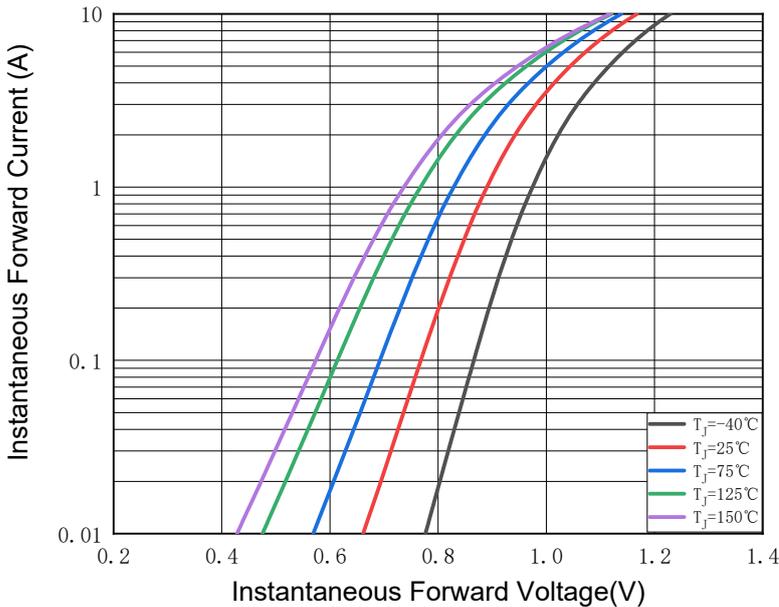
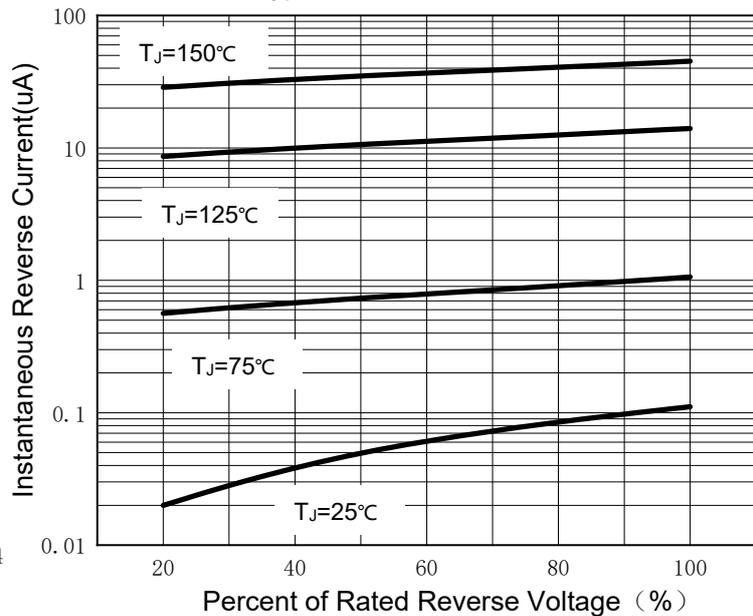


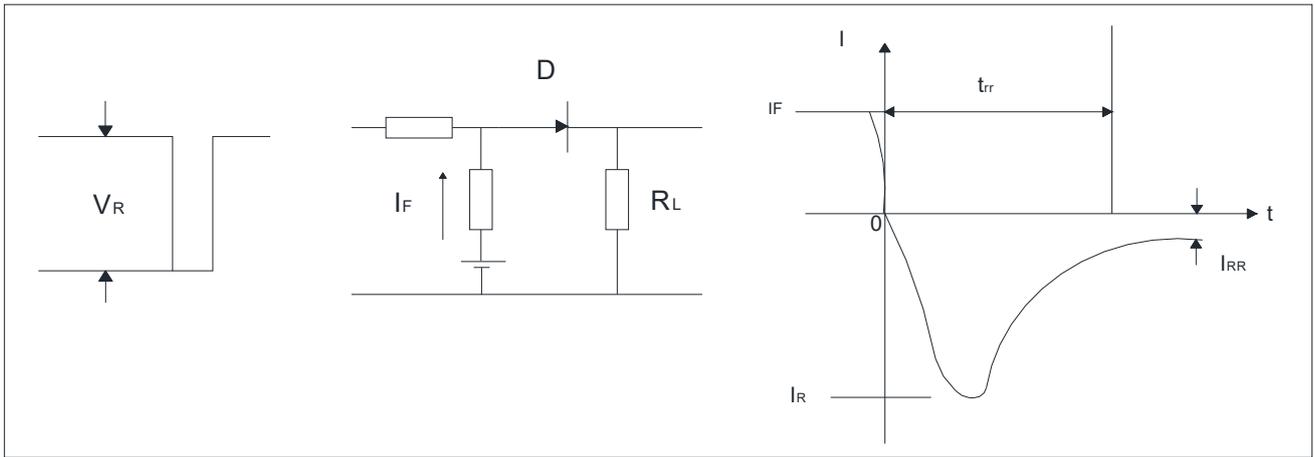
FIG4: Typical Reverse Characteristics





GS2AQ THRU GS2MQ

FIG.5: Diagram of circuit and Testing wave form of reverse recovery time



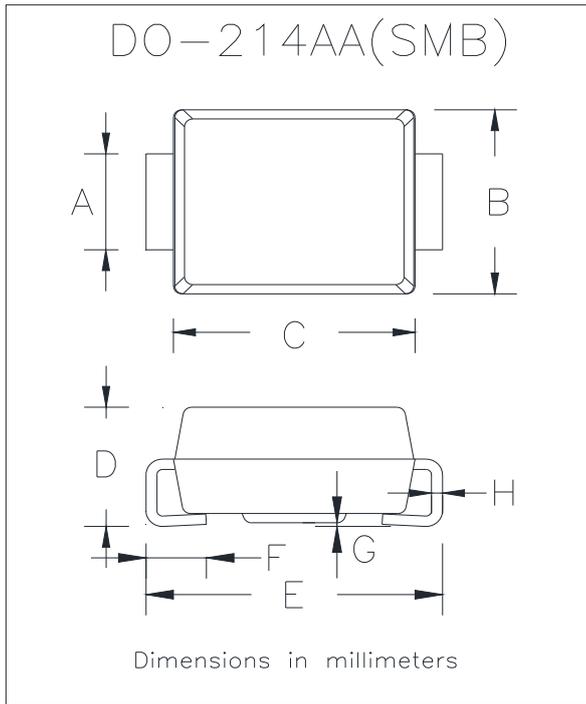
■ Ordering Information (Example)

PREFERED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
GS2AQ-GS2MQ	F1	Approximate 0.1003	3000	48000	13" reel



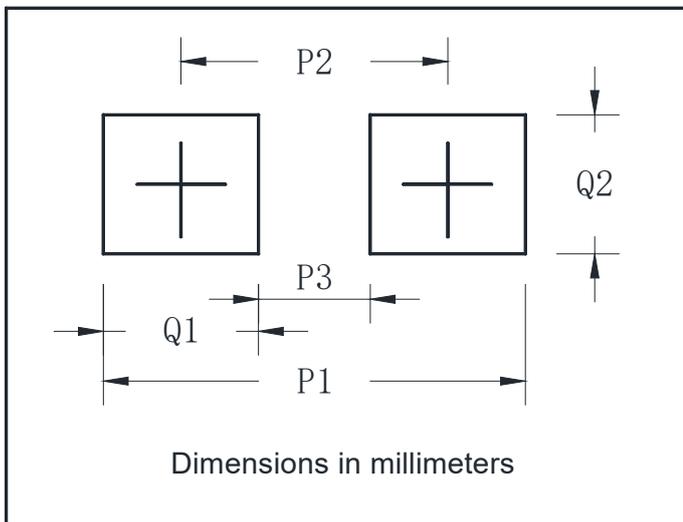
GS2AQ THRU GS2MQ

■ 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



GS2AQ THRU GS2MQ

Disclaimer

The information presented in this document is for reference only. Yangzhou Yangjie Electronic Technology Co., Ltd. reserves the right to make changes without notice for the specification of the products displayed herein to improve reliability, function or design or otherwise.

The product listed herein is designed to be used with automotive electronics, are not designed for use in medical, lifesaving, lifesustaining, or military, Yangjie or anyone on its behalf, assumes no responsibility or liability for any damages resulting from such improper use of sale.

This publication supersedes & replaces all information previously supplied. For additional information, please visit our website [http:// www.21yangjie.com](http://www.21yangjie.com) , or consult your nearest Yangjie's sales office for further assistance.