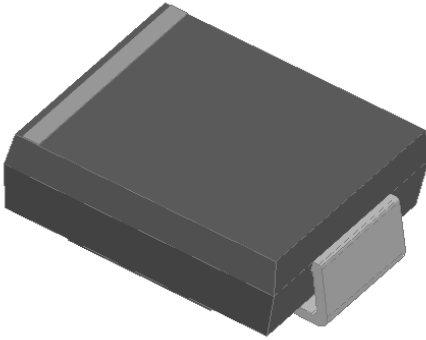


Surface Mount General Purpose Rectifier

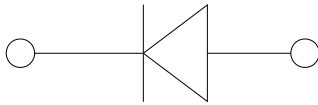


Features

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

■Maximum Ratings (Ta=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	GS3AQ	GS3BQ	GS3DQ	GS3GQ	GS3JQ	GS3KQ	GS3MQ
Device marking code			GS3A	GS3B	GS3D	GS3G	GS3J	GS3K	GS3M
Repetitive Peak Reverse Voltage	V_{RRM}	V	50	100	200	400	600	800	1000
Average Rectified Output Current @60Hz sine wave, Resistance load, TL(FIG.1)	I_o	A	3.0						
Forward Surge Current (Non-repetitive) @60Hz Half-sine wave, 1 cycle, Ta=25°C	I_{FSM}	A	100						
Storage Temperature	T_{stg}	°C	-55 ~+150						
Junction Temperature	T_J	°C	-55 ~+150						

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

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	GS3AQ	GS3BQ	GS3DQ	GS3GQ	GS3JQ	GS3KQ	GS3MQ
Maximum instantaneous forward voltage drop per diode	V_F	V	$I_{FM}=3.0A$	1.1						
Maximum DC reverse current at rated DC blocking voltage per diode	I_R	μA	Ta=25°C	5						
			Ta=100°C	50						
Typical junction capacitance	C_j	pF	Measured at 1MHZ and Applied Reverse Voltage of 4.0 V.D.C.	25						



GS3AQ THRU GS3MQ

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

PARAMETER		SYMBOL	UNIT	GS3AQ	GS3BQ	GS3DQ	GS3GQ	GS3JQ	GS3KQ	GS3MQ
Thermal Resistance	Junction to ambient	R _{θJ-A}	°C/W	48 ⁽¹⁾						
	Junction to lead	R _{θJ-L}		13 ⁽¹⁾						

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

■ Ordering Information (Example)

PREFERRED P/N	PACKAGE CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
GS3AQ~GS3MQ	F1	Approximate 0.253	3000	6000	42000	13" reel

■ Characteristics(Typical)

FIG.1: I_o-T_L Curve

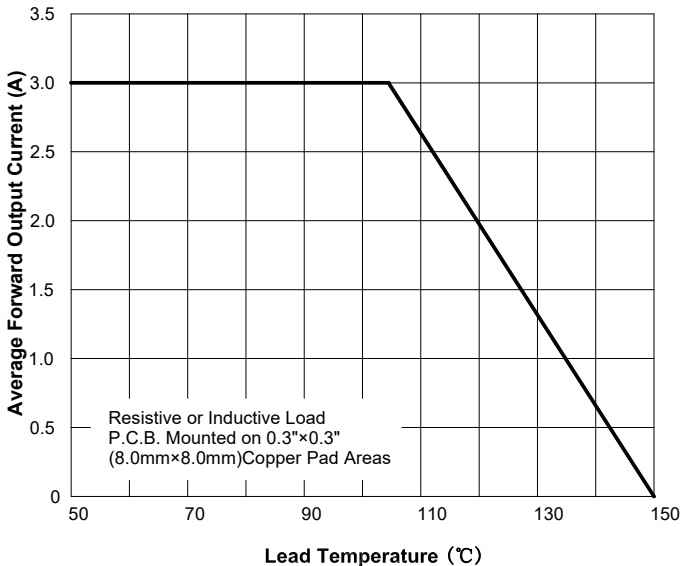


FIG.2: Forward Surge Current Capadility

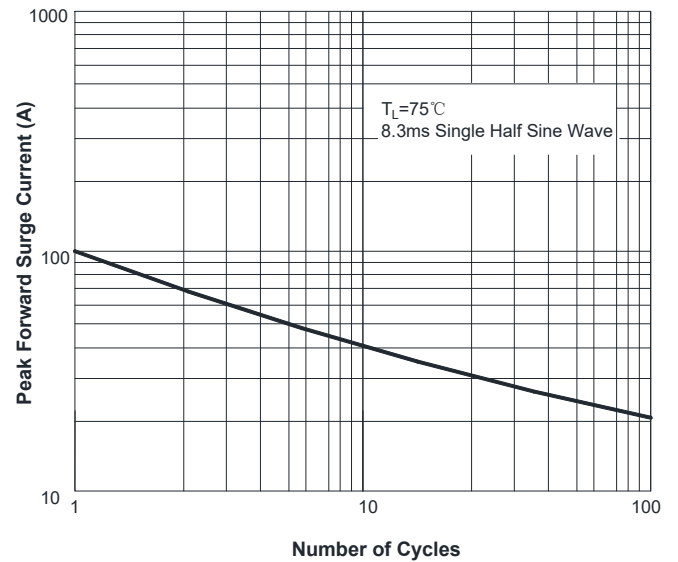


FIG.3: Forward Voltage

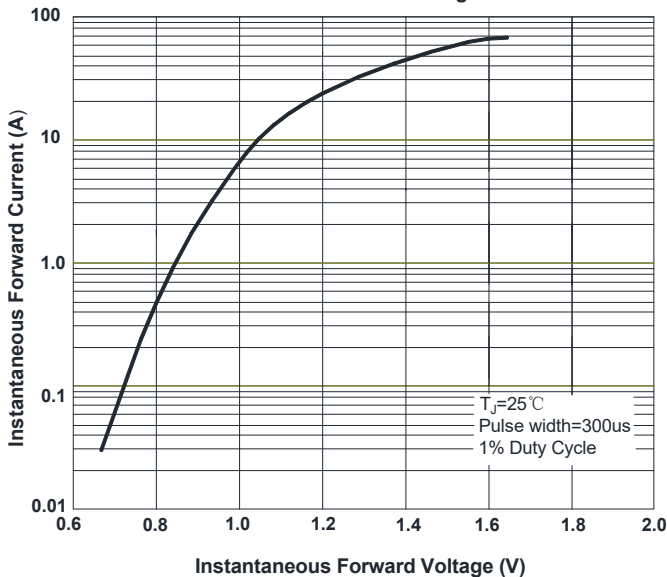
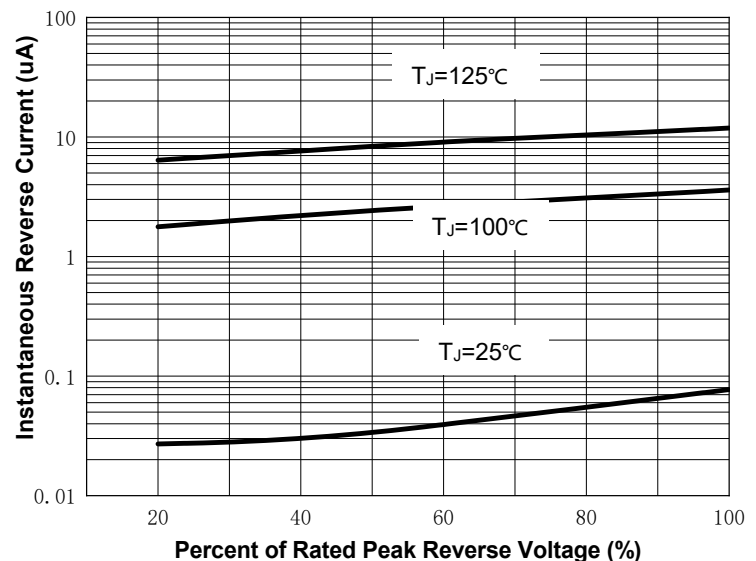


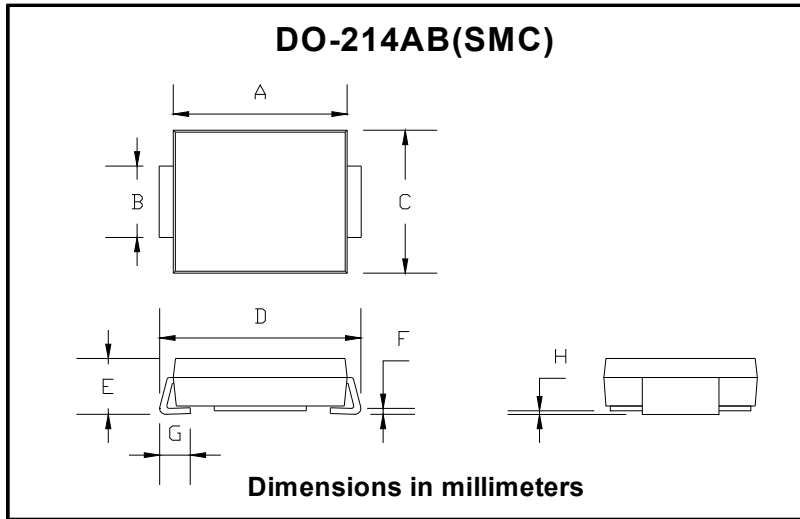
FIG.4: Typical Reverse Characteristics





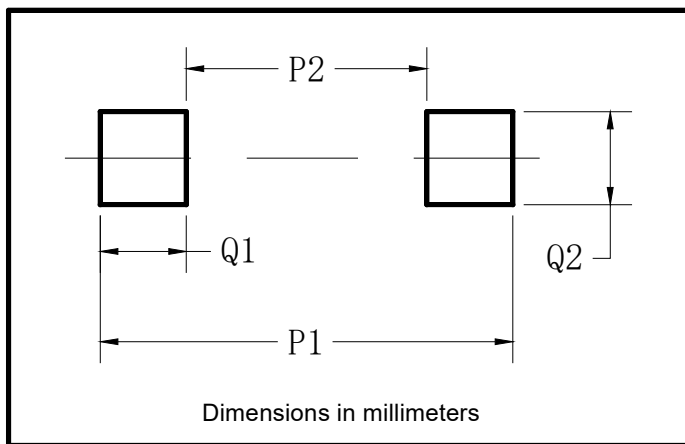
GS3AQ THRU GS3MQ

■ 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



GS3AQ THRU GS3MQ

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