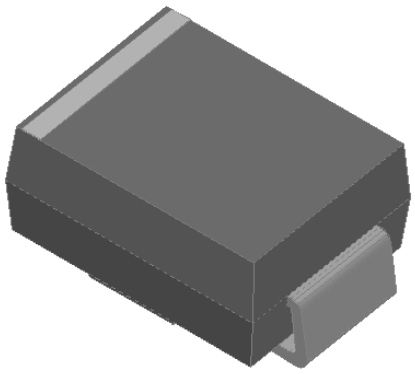
GS3ABQ THRU GS3MBQ

RoHS COMPLIANT

Surface Mount General Purpose Rectifier

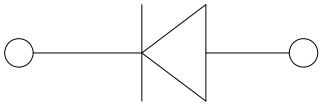


Features

- 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 (Ta=25℃ 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_{RRM}	V	50	100	200	400	600	800	1000
Maximum RMS voltage	V_{RMS}	V	35	70	140	280	420	560	700
Average rectified output current @60Hz sine wave, resistance load, TL (FIG.1)	I_O	A	3.0						
Surge(non-repetitive)forward current @60Hz half-sine wave,1 cycle, Ta=25℃	I_{FSM}	A	100						
Storage temperature	T_{stg}	℃	-55~+150						
Junction temperature	T_J	℃	-55~+150						

■Electrical Characteristics (Ta=25℃ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	GS3ABQ	GS3BBQ	GS3DBQ	GS3GBQ	GS3JBQ	GS3KBQ	GS3MBQ
Maximum instantaneous forward voltage drop per diode	V_F	V	I_{FM}=3.0A	1.15						
Typical junction capacitance	C_J	pF	VR=4V,f=1 MHz	25						
Maximum DC reverse current at rated DC blocking voltage per diode @ $V_{RM}=V_{RRM}$	I_{RRM}	μA	Ta =25℃	5						
			Ta =125℃	100						

■Thermal Characteristics （T_a=25℃ Unless otherwise specified）

PARAMETER	SYMBOL	UNIT	GS3ABQ	GS3BBQ	GS3DBQ	GS3GBQ	GS3JBQ	GS3KBQ	GS3MBQ
Thermal resistance	$R_{\theta J-A}$	℃/W	75[1)]						
	$R_{\theta J-L}$		20[1)]						

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_O-T_L Curve

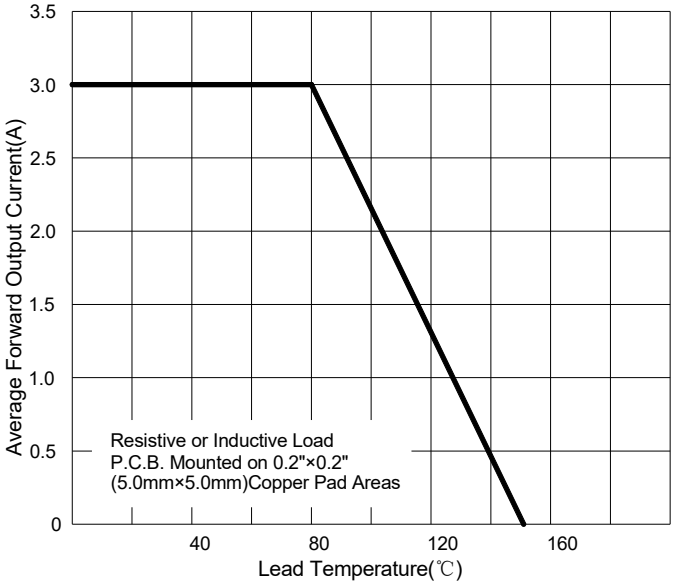


FIG2: Surge Forward Current Capability

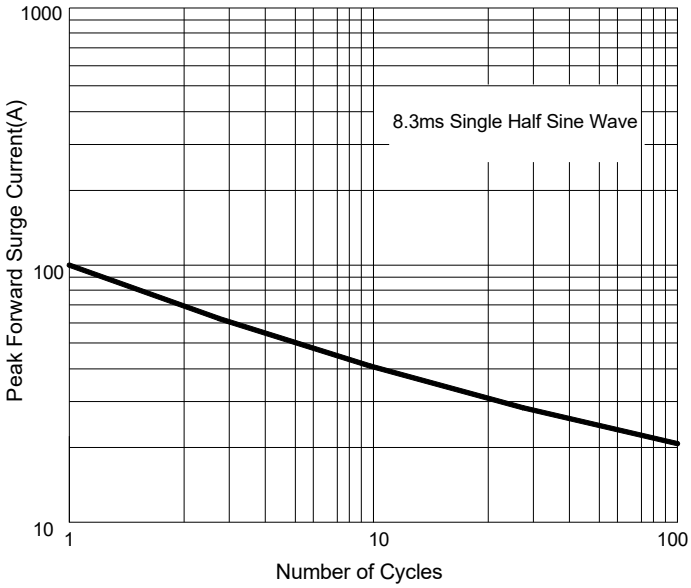


FIG.3:Typical Forward Characteristics

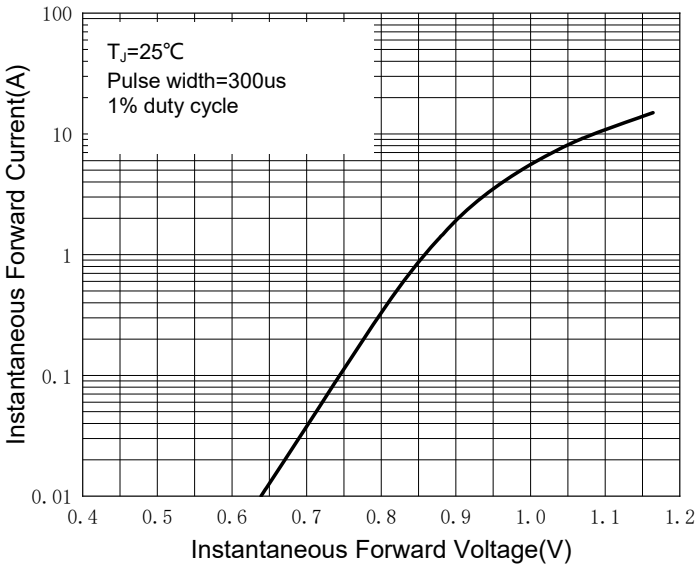
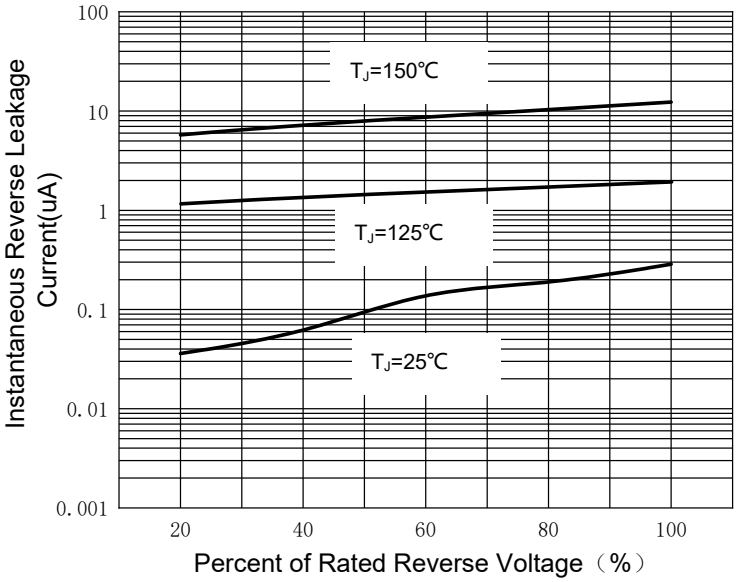


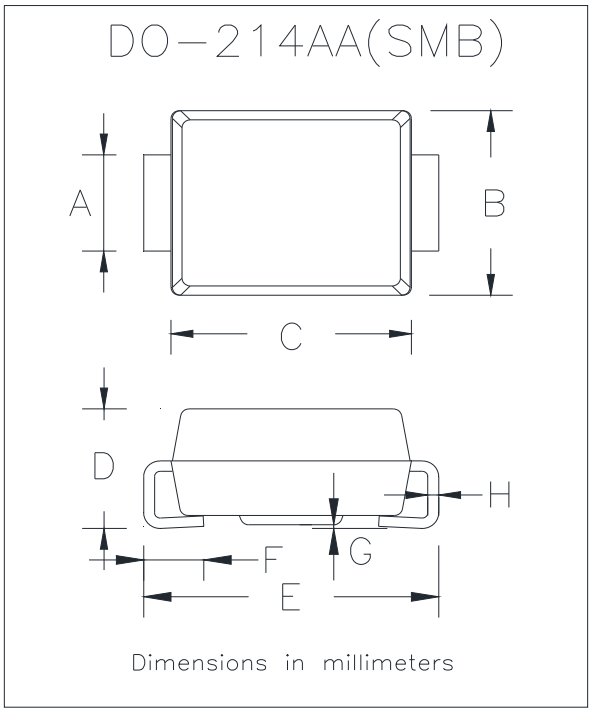
FIG.4:Typical Reverse Characteristics



■Ordering Information (Example)

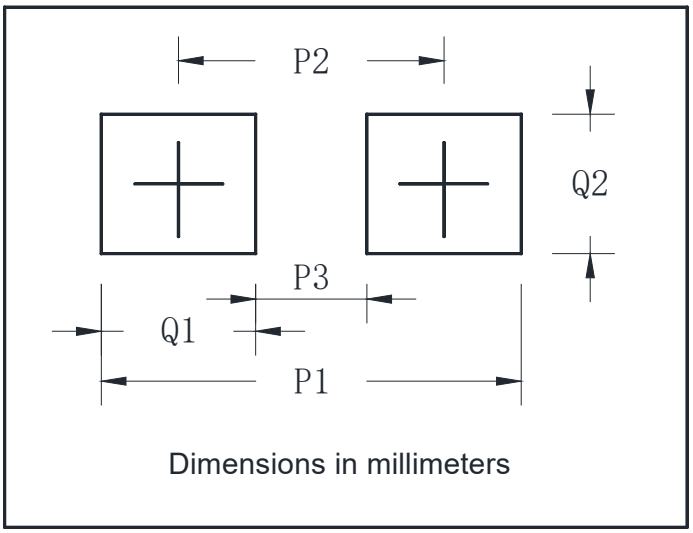
PREFERED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
GS3ABQ-GS3MBQ	F1	Approximate 0.1003	3000	48000	13” reel

■ 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	0.10	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

Disclaimer

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