

8A, 400V - 1000V Surface Mount Glass Passivated Rectifier

FEATURES

- Low forward voltage drop
- Ideal for automated placement
- High surge current capability
- Compliant to RoHS Directive 2011/65/EU and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21

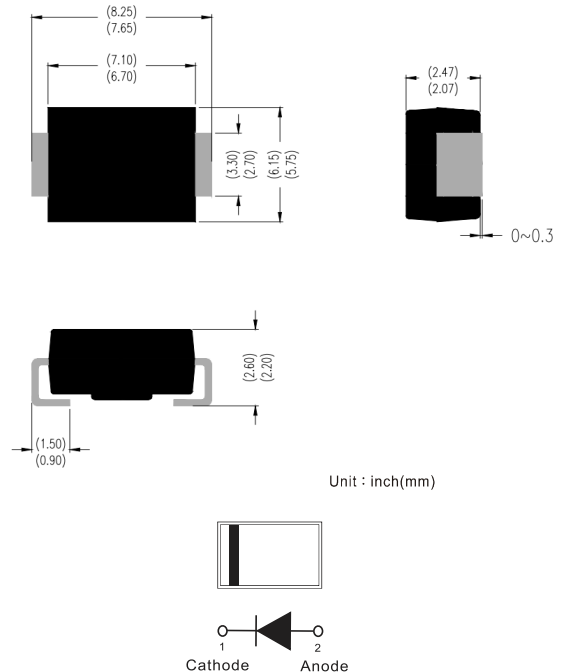
APPLICATIONS

- Switching mode power supply (SMPS)
- Adapters
- Lighting application
- Converter

MECHANICAL DATA

- Case: DO-214AB (SMC)
- Molding compound meets UL 94V-0 flammability rating
- Moisture sensitivity level: level 1, per J-STD-020
- Terminal: Matte tin plated leads, solderable per J-STD-002
- Meet JESD 201 class 2 whisker test
- Polarity: As marked
- Weight: 0.27 g (approximately)

DO-214AB (SMC)



ABSOLUTE MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$ unless otherwise noted)

PARAMETER	SYMBOL	GS8GC	GS8JC	GS8KC	GS8MC	UNIT
Repetitive peak reverse voltage	V_{RRM}	400	600	800	1000	V
Reverse voltage, total rms value	$V_{R(RMS)}$	280	420	560	700	V
Maximum DC blocking voltage	V_{DC}	400	600	800	1000	V
Forward current	$I_{F(AV)}$	8				A
Surge peak forward current, 8.3 ms single half sine-wave superimposed on rated load per diode	$T_J = 25^\circ\text{C}$	200				A
	$T_J = 125^\circ\text{C}$					170
Surge peak forward current, 1.0 ms single half sine-wave superimposed on rated load per diode	$T_J = 25^\circ\text{C}$	600				A
	$T_J = 125^\circ\text{C}$					338
Junction temperature	T_J	- 55 to +150				$^\circ\text{C}$
Storage temperature	T_{STG}	- 55 to +150				$^\circ\text{C}$

THERMAL PERFORMANCE

PARAMETER	SYMBOL	TYP	UNIT
Junction-to-lead thermal resistance per diode	$R_{\theta JL}$	12.5	$^{\circ}C/W$
Junction-to-ambient thermal resistance per diode	$R_{\theta JA}$	44.0	$^{\circ}C/W$

ELECTRICAL SPECIFICATIONS ($T_A = 25^{\circ}C$ unless otherwise noted)

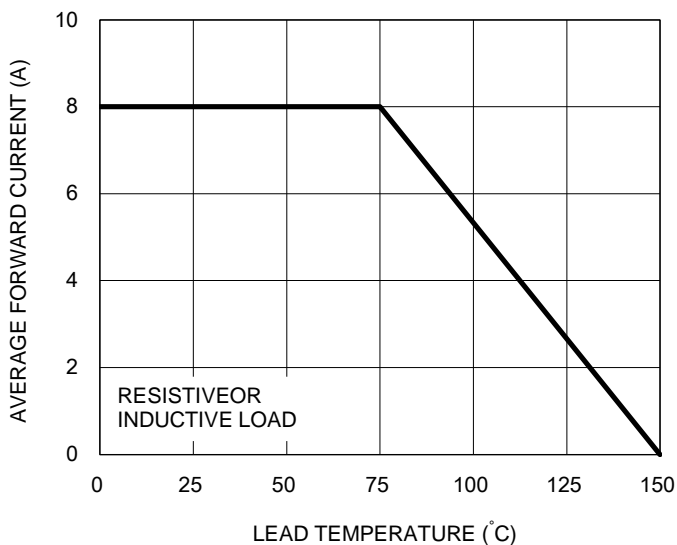
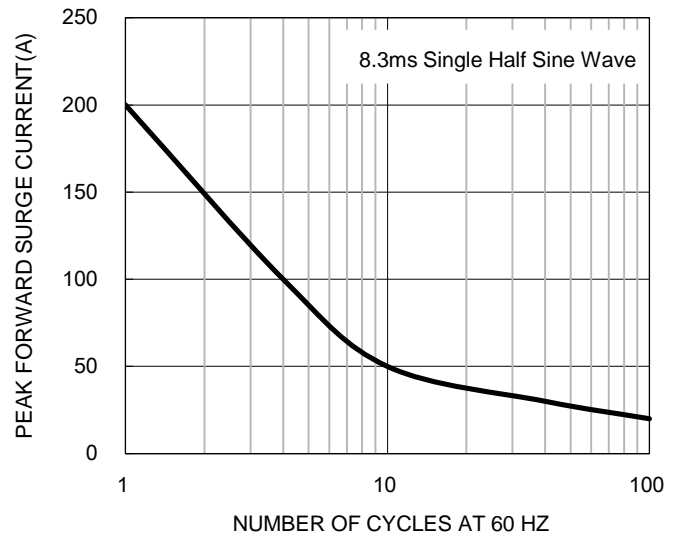
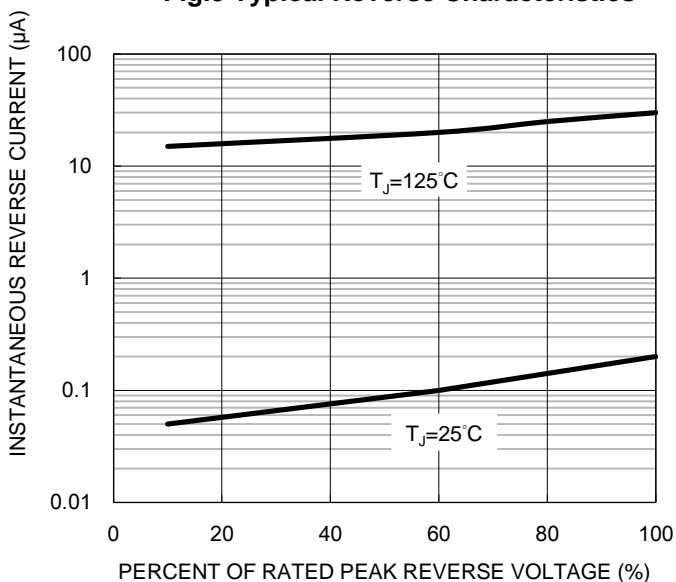
PARAMETER	CONDITIONS	SYMBOL	TYP.	MAX.	UNIT
Forward voltage per diode ⁽¹⁾	$I_F = 8A, T_J = 25^{\circ}C$	V_F	-	0.985	V
Reverse current @ rated V_R per diode ⁽²⁾	$T_J = 25^{\circ}C$	I_R	-	10	μA
	$T_J = 125^{\circ}C$		-	250	μA
Junction capacitance	1 MHz, $V_R = 4.0V$	C_J	48	-	pF

Notes:

1. Pulse test with $PW = 0.3$ ms
2. Pulse test with $PW = 30$ ms

CHARACTERISTICS CURVES

($T_A = 25^{\circ}C$ unless otherwise noted)

Fig.1 Forward Current Derating Curve

Fig.2 Maximum Non-repetitive Forward Surge Current

Fig.3 Typical Reverse Characteristics

Fig.4 Typical Forward Characteristics
