3A, 50V - 1000V Surface Mount Rectifier

FEATURES

- Glass passivated chip junction
- Ideal for automated placement
- AEC-Q101 qualified
- Low forward voltage drop
- 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

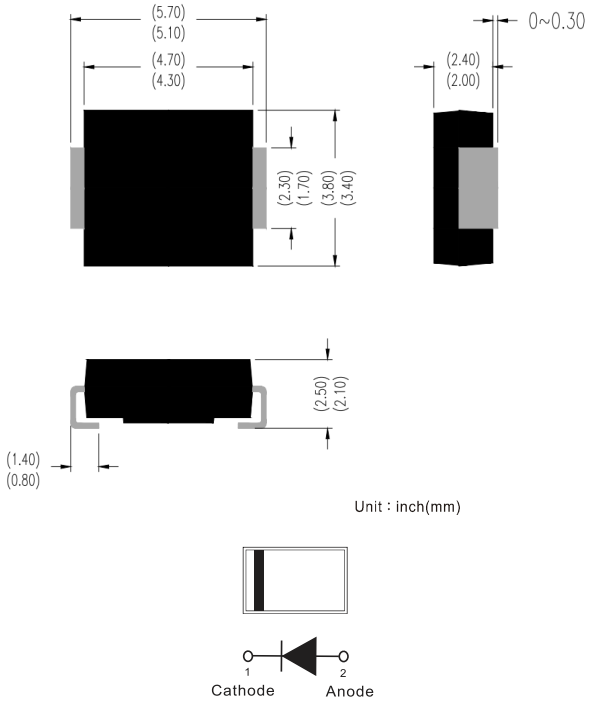
APPLICATIONS

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

MECHANICAL DATA

- Case: DO-214AA (SMB)
- 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: 0.09 g (approximately)

DO-214AA (SMB)



ABSOLUTE MAXIMUM RATINGS (T_A = 25°C unless otherwise noted)

PARAMETER	SYMBOL	GS3AB-Q	GS3BB-Q	GS3DB-Q	GS3GB-Q	GS3JB-Q	GS3KB-Q	GS3MB-Q	UNIT
Repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Reverse voltage, total rms value	$V_{R(RMS)}$	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	1000	V
Forward current	$I_{F(AV)}$	3							A
Surge peak forward current, 8.3 ms single half sine-wave superimposed on rated load per diode	I_{FSM}	80							A
Junction temperature	T_J	- 55 to +150							°C
Storage temperature	T_{STG}	- 55 to +150							°C

THERMAL PERFORMANCE			
PARAMETER	**SYMBOL**	**LIMIT**	**UNIT**
Junction-to-lead thermal resistance	$R_{\Theta JL}$	10	°C/W

ELECTRICAL SPECIFICATIONS (T_A = 25°C unless otherwise noted)					
PARAMETER	**CONDITIONS**	**SYMBOL**	**TYP**	**MAX**	**UNIT**
Forward voltage per diode (1)	I_F = 3A,T_J = 25°C	V_F	-	0.98	V
Reverse current @ rated V_R per diode (2)	T_J = 25°C	I_R	-	10	μA
	T_J = 125°C		-	250	μA
Junction capacitance	1 MHz, V_R=4.0V	C_J	40	-	pF
Reverse recovery time	I_F=0.5A , I_R=1.0A I_{RR}=0.25A	t_{rr}	1500	-	ns

Notes:

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

CHARACTERISTICS CURVES

(T_A = 25°C unless otherwise noted)

Fig.1 Forward Current Derating Curve

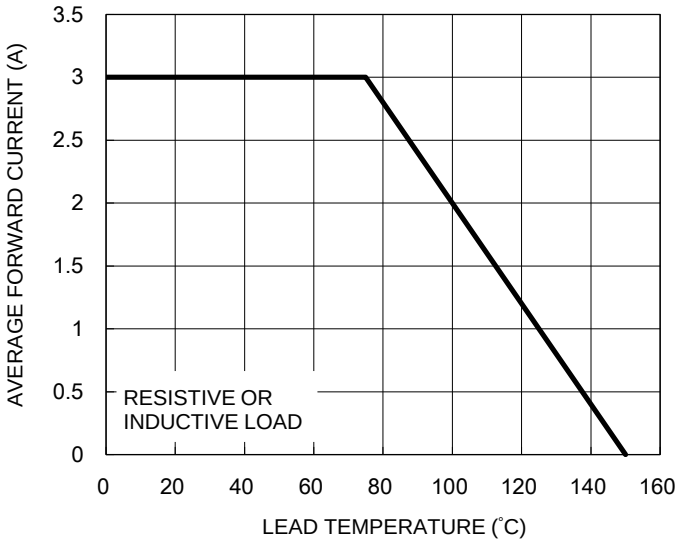
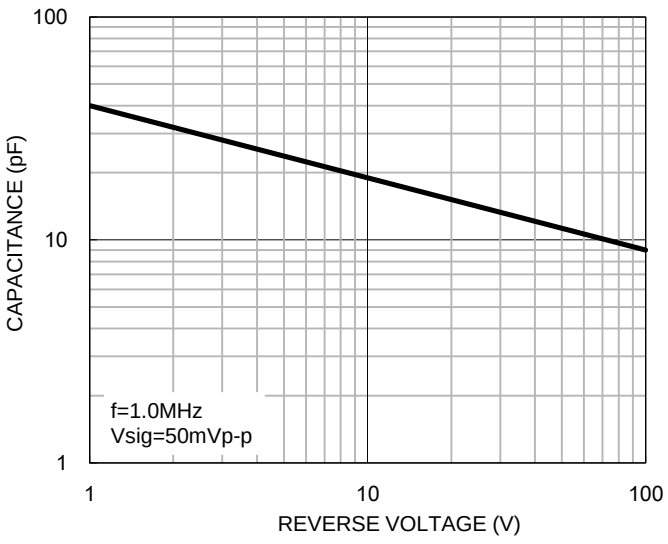


Fig.2 Typical Junction Capacitance



CHARACTERISTICS CURVES

(T_A = 25°C unless otherwise noted)

Fig.3 Typical Reverse Characteristics

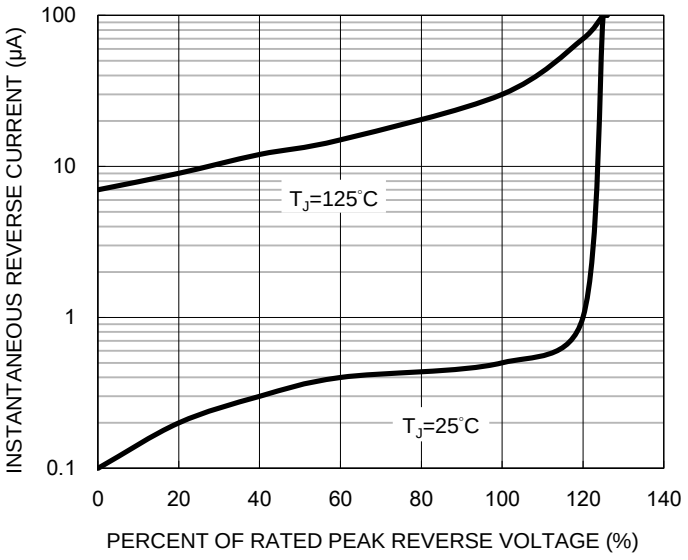


Fig.4 Typical Forward Characteristics

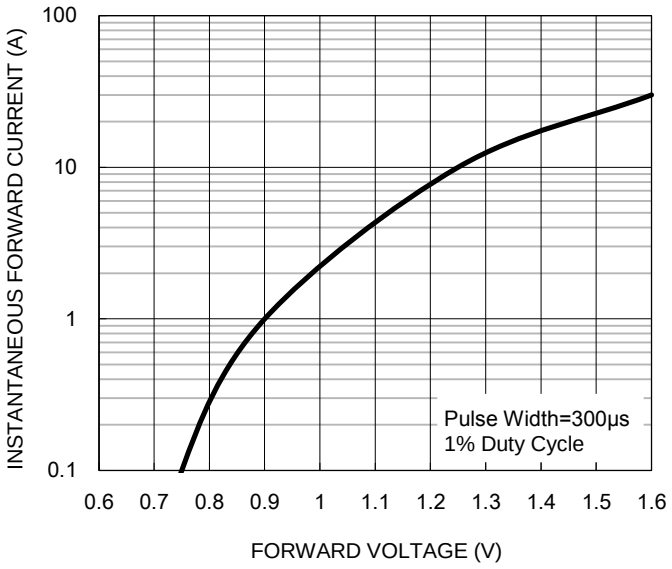


Fig.5 Maximum Non-repetitive Forward Surge Current

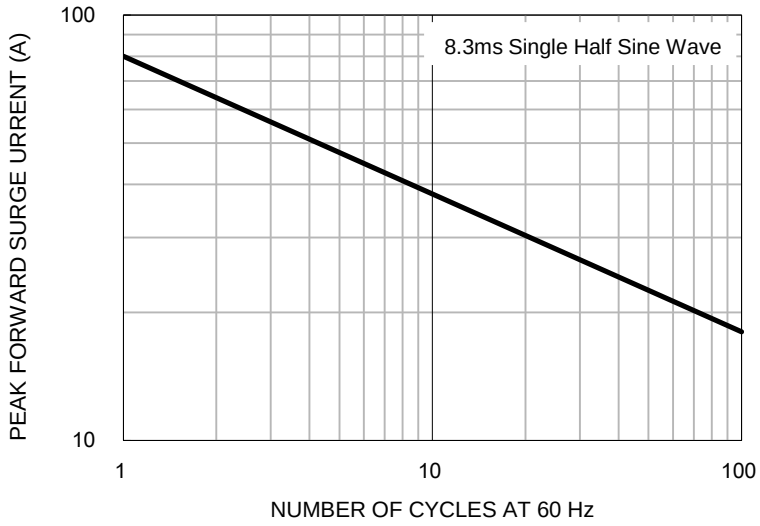


Fig.6 Reverse Recovery Time Characteristic And Test Circuit Diagram