

3A, 50V - 1000V Surface Mount Fast Recovery Rectifier

FEATURES

- Glass passivated chip junction
- Ideal for automated placement
- Fast switching for high efficiency
- 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

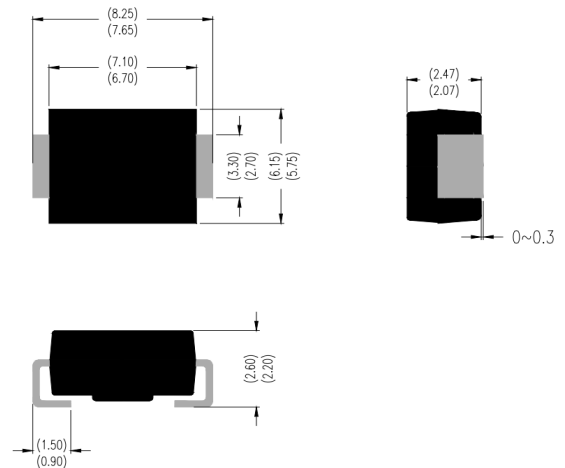
APPLICATIONS

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

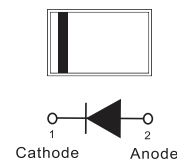
MECHANICAL DATA

- 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: 0.21 g (approximately)

DO-214AB (SMC)



Unit : inch(mm)



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

PARAMETER	SYMBOL	RS3A	RS3B	RS3D	RS3G	RS3J	RS3K	RS3M	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}	100							A
Junction temperature	T_J	- 55 to +150							$^\circ\text{C}$
Storage temperature	T_{STG}	- 55 to +150							$^\circ\text{C}$

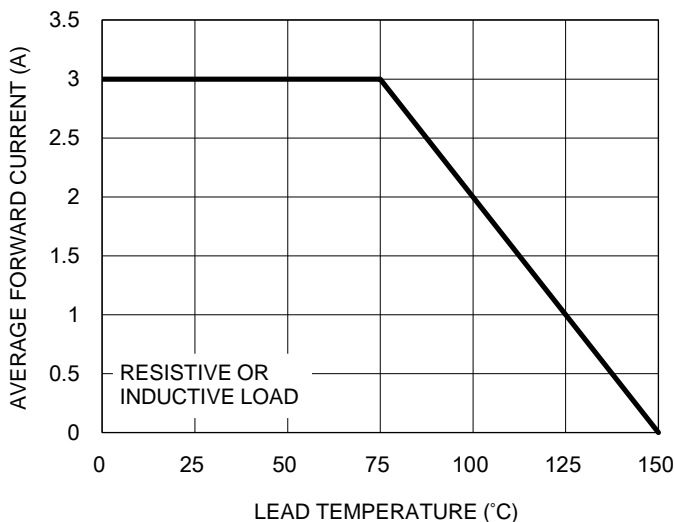
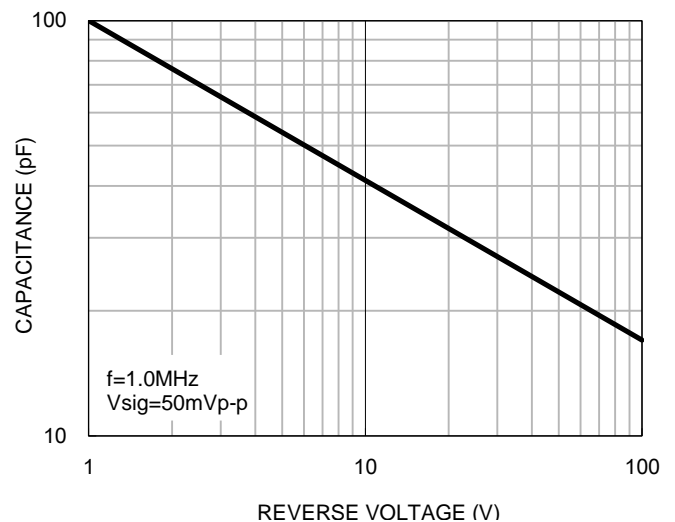
THERMAL PERFORMANCE			
PARAMETER	SYMBOL	TYP	UNIT
Junction-to-lead thermal resistance per diode	$R_{\theta JL}$	15	$^{\circ}C/W$
Junction-to-ambient thermal resistance per diode	$R_{\theta JA}$	50	$^{\circ}C/W$

ELECTRICAL SPECIFICATIONS ($T_A = 25^{\circ}C$ unless otherwise noted)					
PARAMETER	CONDITIONS	SYMBOL	TYP.	MAX.	UNIT
Forward voltage per diode ⁽¹⁾	$I_F = 3A, T_J = 25^{\circ}C$	V_F	-	1.3	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
Reverse recovery time	$I_F = 0.5A, I_R = 1.0A$ $I_{RR} = 0.25A$	t_{rr}	-	150	ns
			-	250	ns
			-	500	ns

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 Typical Junction Capacitance


CHARACTERISTICS CURVES

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

Fig.3 Typical Reverse Characteristics

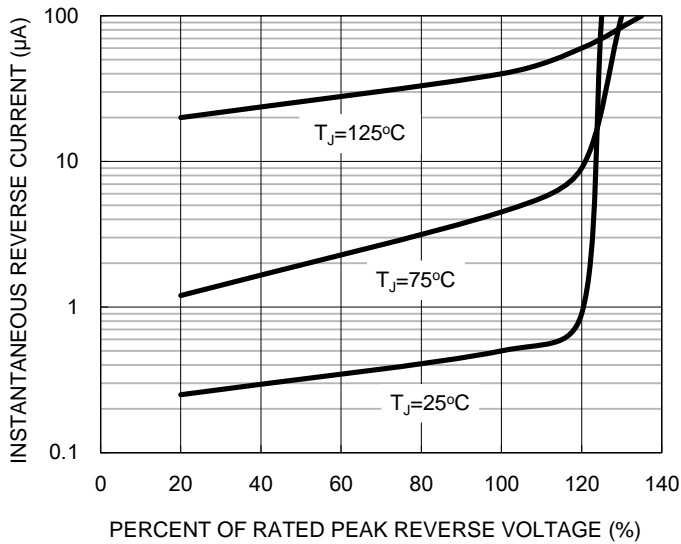


Fig.4 Typical Forward Characteristics

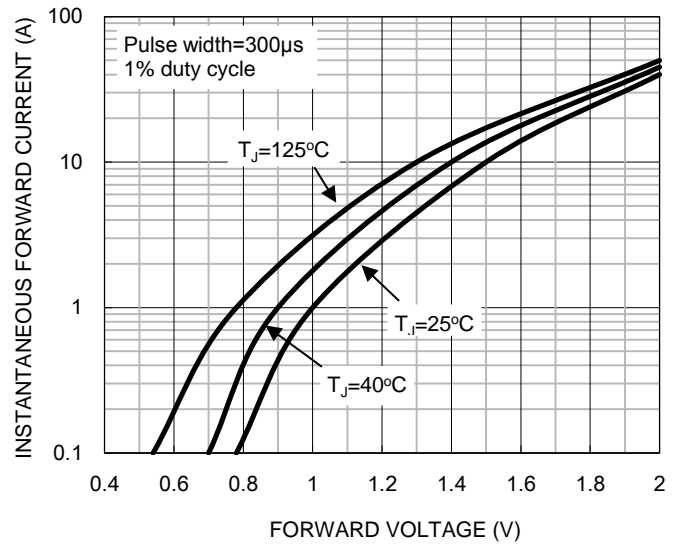


Fig.5 Maximum Non-repetitive Forward Surge Current

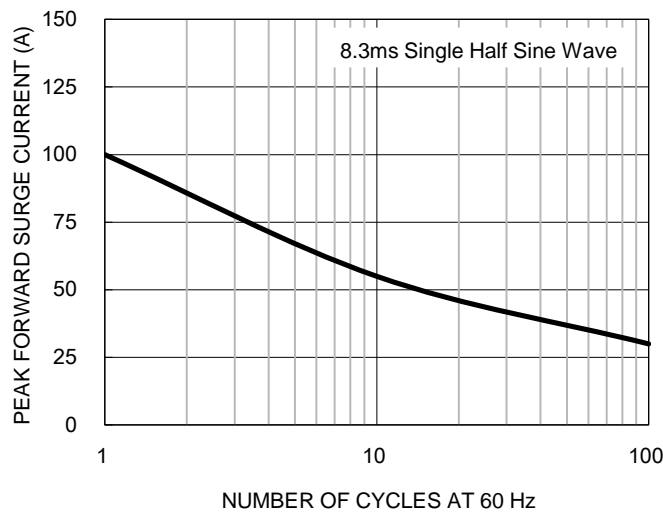


Fig.6 Reverse Recovery Time Characteristic And Test Circuit Diagram

