

5A, 50V - 1000V Surface Mount Rectifier

FEATURES

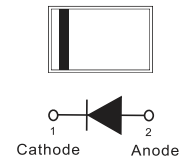
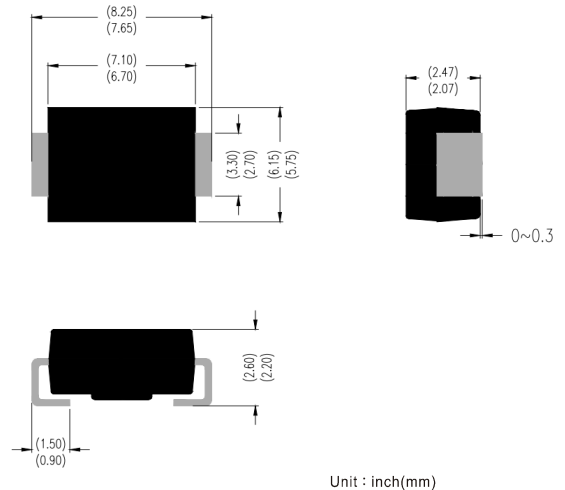
- Glass passivated chip junction
- Ideal for automated placement
- Low forward voltage drop
- High current capability
- High surge current capability
- Compliant to RoHS Directive 2011/65/EU and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21

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)


ABSOLUTE MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$ unless otherwise noted)									
PARAMETER	SYMBOL	S5A	S5B	S5D	S5G	S5J	S5K	S5M	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	$I_{F(AV)}$	5							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	$R_{\theta JL}$	13	$^{\circ}C/W$
Junction-to-ambient thermal resistance per diode	$R_{\theta JA}$	47	$^{\circ}C/W$

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

PARAMETER	CONDITIONS	SYMBOL	TYP.	MAX.	UNIT
Forward voltage per diode ⁽¹⁾	$I_F = 5A, T_J = 25^{\circ}C$	V_F	-	1.15	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	60	-	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

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

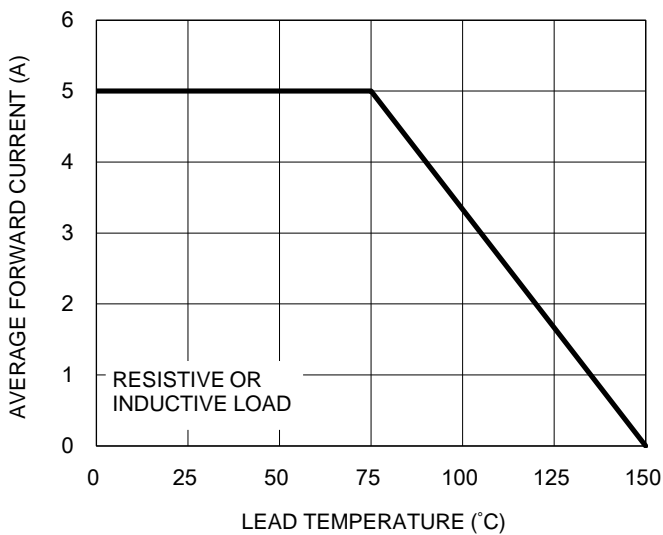
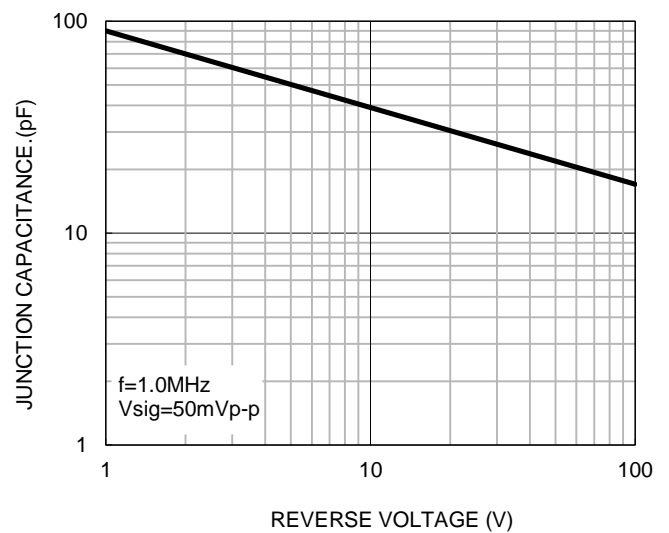
Fig.1 Forward Current Derating Curve

Fig.2 Typical Junction Capacitance




Fig.3 Typical Reverse Characteristics

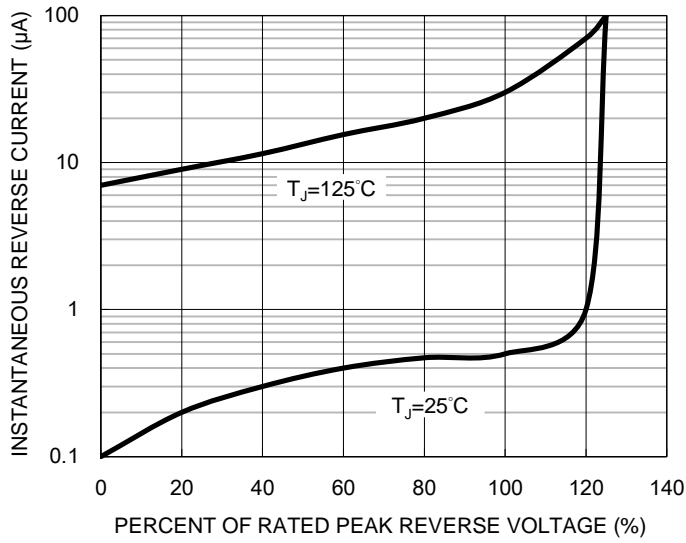


Fig.4 Typical Forward Characteristics

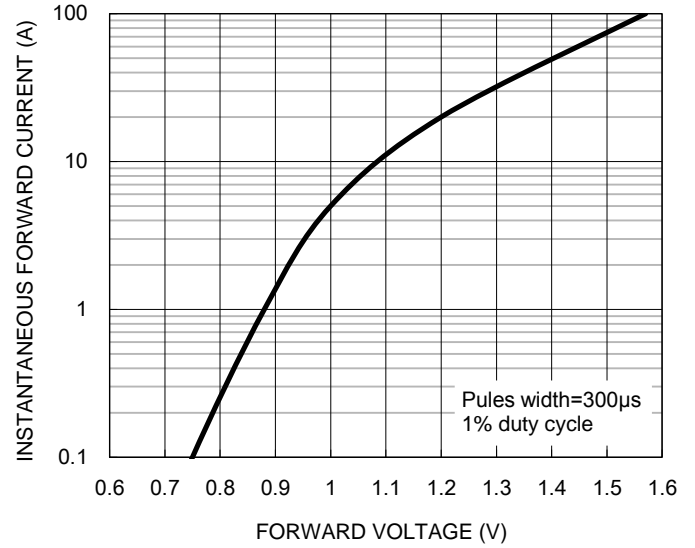


Fig.5 Maximum Non-repetitive Forward Surge Current

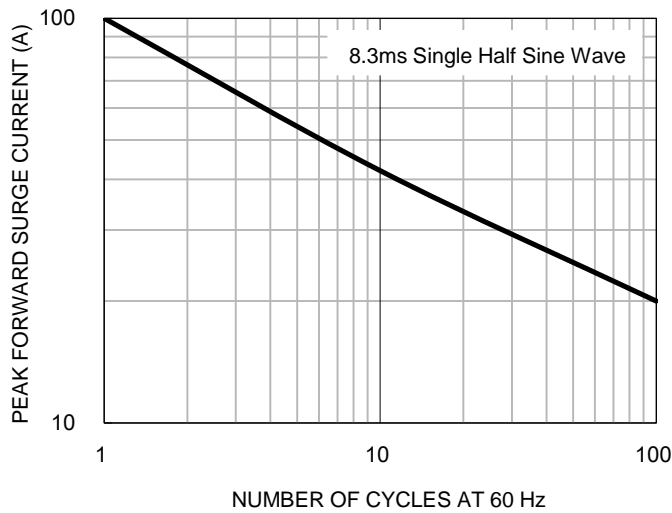


Fig.6 Reverse Recovery Time Characteristic And Test Circuit Diagram

