

5.0A Surface Mount Rectifier

Features

- Low profile surface mounted package
- Ideal for automated placement
- Glass passivated chip junction
- Low forward voltage drop
- Low leakage current
- High forward surge capability
- High temperature soldering: 250 °C / 10 seconds at terminals
- RoHS compliant



DO-214AB
(SMC)



Mechanical Data

Case:	JEDEC DO-214AB (SMC) molded plastic
Epoxy:	Plastic package has UL flammability classification 94V-0
Terminals:	Solder plated, solderable per MIL-STD-750, Method 2026
Polarity:	Color band denotes cathode end
Weight:	0.007 ounce, 0.21 gram

Maximum Ratings ($T_{Ambient}=25^{\circ}C$ unless noted)

Symbol	Description	S5A	S5B	S5D	S5G	S5J	S5K	S5M	Unit	Conditions
VRRM	Maximum Repetitive Peak Reverse Voltage	50	100	200	400	600	800	1000	V	
VRMS	Maximum RMS Voltage	35	70	140	280	420	560	700	V	
VDC	Maximum DC Blocking Voltage	50	100	200	400	600	800	1000	V	
IF(AV)	Maximum Average Forward Rectified Current	5.0							A	TL=75°C
IFSM	Peak Forward Surge Current	100							A	8.3ms single half sine-wave superimposed on rated load (JEDEC Method)
TJ, TSTG	Operating Junction and Storage Temperature Range	-55 to 150							°C	

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S5A - S5M

Electrical Characteristics ($T_{Ambient}=25^{\circ}C$ unless noted)

Symbol	Description	S5A	S5B	S5D	S5G	S5J	S5K	S5M	Unit	Conditions
V_F	Maximum Instantaneous Forward Voltage	1.15							V	$I_F=5.0A$
I_R	Maximum DC Reverse Current at Rated DC Blocking Voltage	5.0							μA	$T_A=25^{\circ}C$
		250								$T_A=125^{\circ}C$
T_{rr}	Typical Reverse Recovery Time	2.5							μS	$I_F=0.5A, I_R=1.0A, I_{rr}=0.25A$
C_J	Typical Junction Capacitance	40							pF	$V_R=4V, f=1MHz$
$R_{\theta-JL}$	Typical Thermal Resistance	10							$^{\circ}C/W$	Note 1

- Note:** (1) Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 0.3 x 0.3" (8.0 x 8.0mm) copper pad areas.
- (2) Single phase half wave, 60 Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

Typical Characteristics Curves

Fig.1- Forward Current Derating Curve

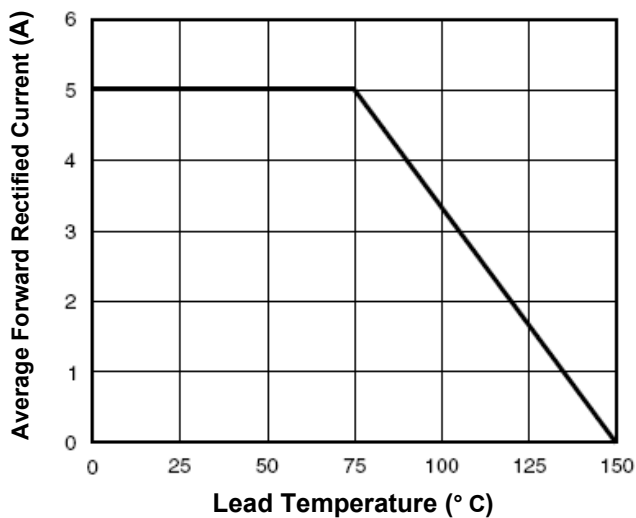
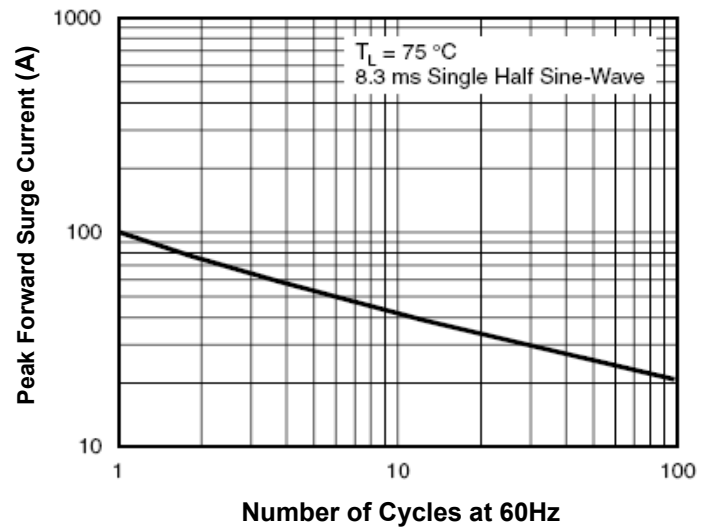


Fig.2- Max. Non-Repetitive Forward Surge Current



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S5A - S5M

Fig.3- Typical Instantaneous Forward Characteristics

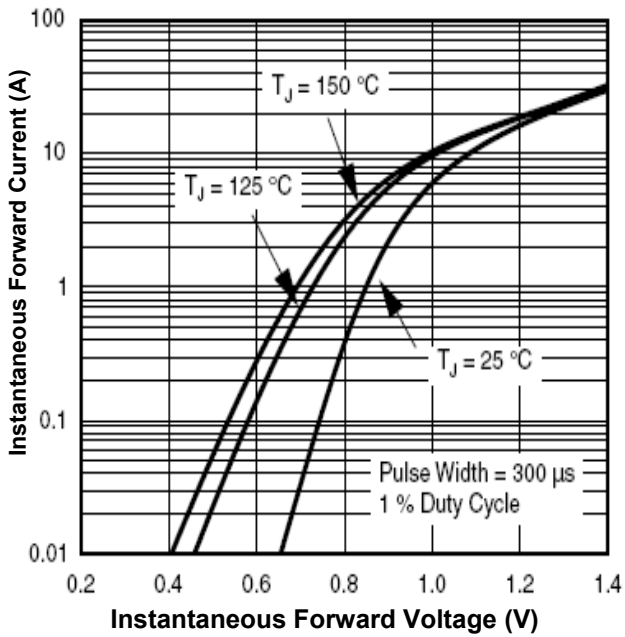


Fig.4- Typical Reverse Characteristics

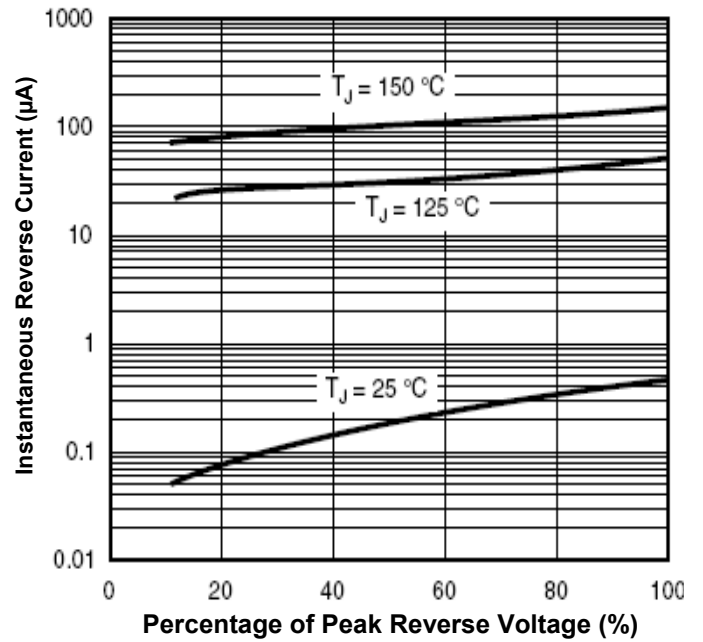
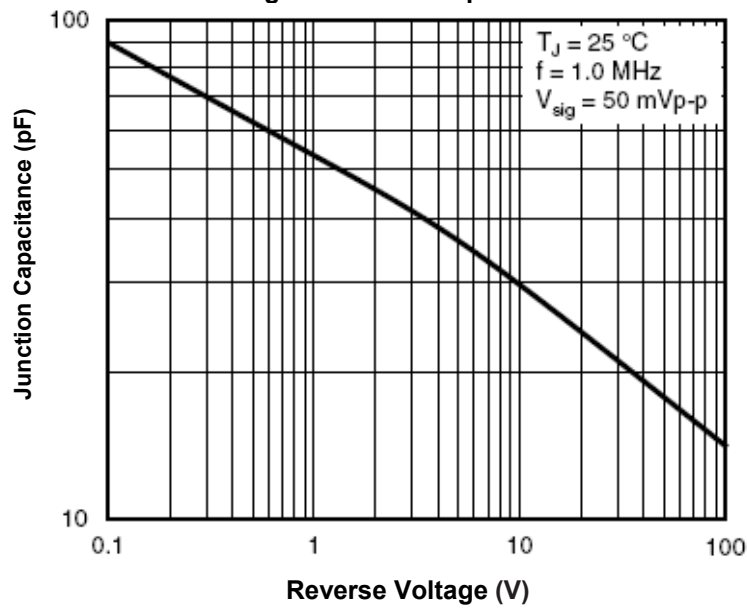


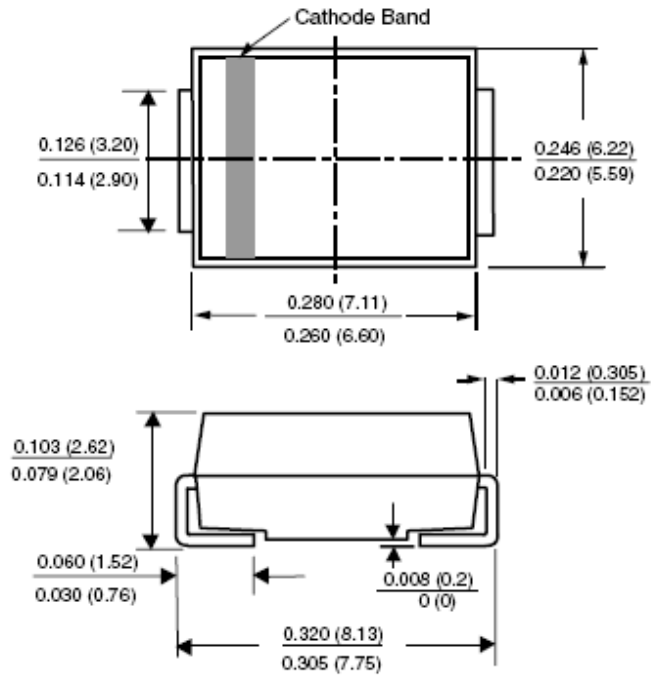
Fig.5- Junction Capacitance



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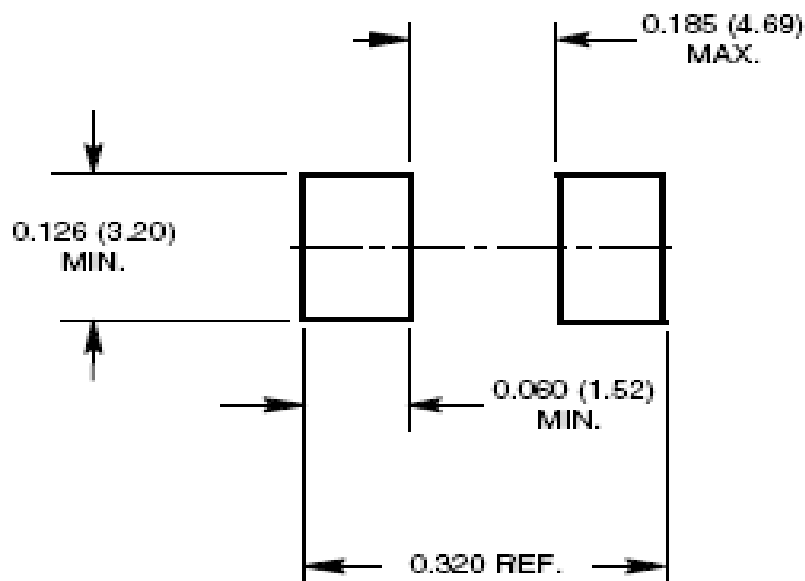
S5A - S5M

Dimensions in inch (mm)



DO-214AB
(SMC)

Mounting Pad Layout in inch (mm)



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