



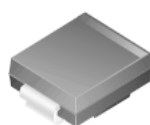
April 2009

S3N

3A, 1200V Surface Mount Rectifier

Features

- Low Profile Package
- Glass Passivated Junction.
- High Breakdown Voltage Rating
- UL Flammability Classification 94V-0



SMC/DO-214AB

COLOR BAND DENOTES CATHODE



ELECTRICAL SYMBOL

DEVICE MARKING CODE : S3N

Absolute Maximum Ratings * $T_a = 25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Value	Units
V_{RRM}	Maximum Repetitive Reverse Voltage	1200	V
$I_{F(AV)}$	Average Rectified Forward Current, @ $T_A=100^\circ\text{C}$	3.0	A
I_{FSM}	Non-Repetitive Peak Forward Surge Current 8.3msec Single Half Sine Wave	100	A
T_{stg}	Storage Temperature range	-55 to +150	$^\circ\text{C}$
T_J	Operating Junction Temperature Range	-55 to +150	$^\circ\text{C}$

* These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

Thermal Characteristics $T_a = 25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Typical	Units
$R_{\theta JL}$	Thermal Resistance, Junction to Lead	13	$^\circ\text{C/W}$
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	47	$^\circ\text{C/W}$

* Device mounted on FR-4 PCB with 0.4" x 0.4" (10mm x 10mm) Cu pad

Electrical Characteristics $T_a = 25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Units
V_F	Forward Voltage	$I_F = 3.0\text{A}$			1.2	V
T_{rr}	Reverse Recovery Time	$I_F = 0.5\text{A}$, $I_R = 1.0\text{A}$, $I_{rr} = 0.25\text{A}$			2.5	μs
I_R	Reverse Current	$V_R = 1200\text{V}$ $T_A=25^\circ\text{C}$ $T_A=125^\circ\text{C}$			5.0 250	μA μA
C_T	Typical Junction Capacitance	$V_R = 4.0\text{V}$, $f = 1.0\text{MHz}$			60	pF

Typical Characteristics

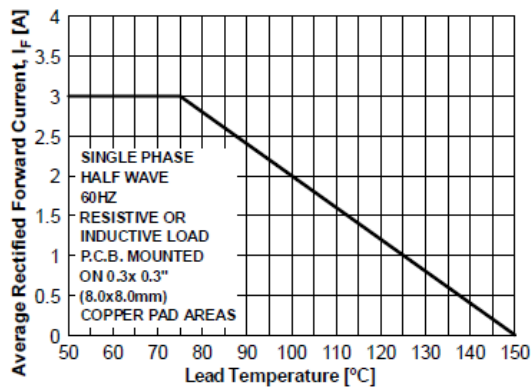


Figure 1. Foward Current Deration Curve

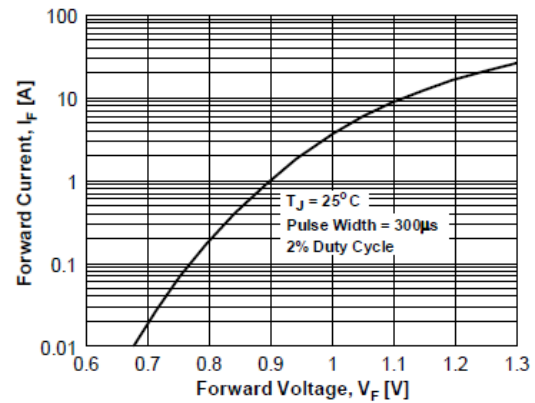


Figure 2. Foward Voltage Characteristics

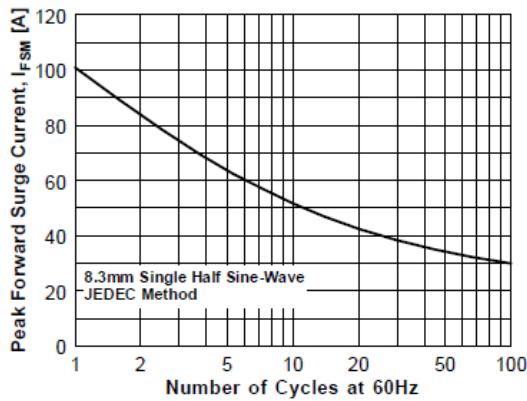


Figure 3. Non-Repetitive Surge Current

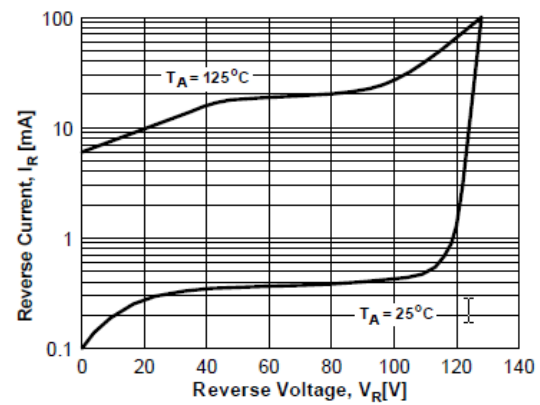


Figure 4. Reverse Current vs Reverse Voltage

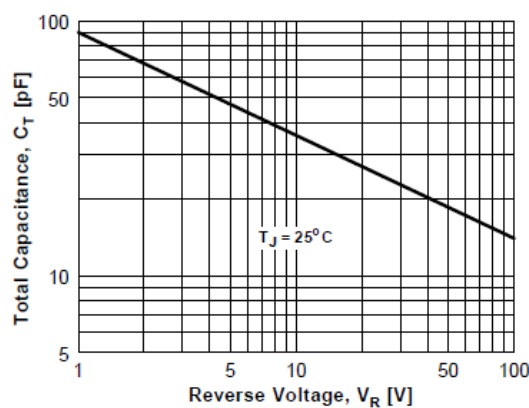
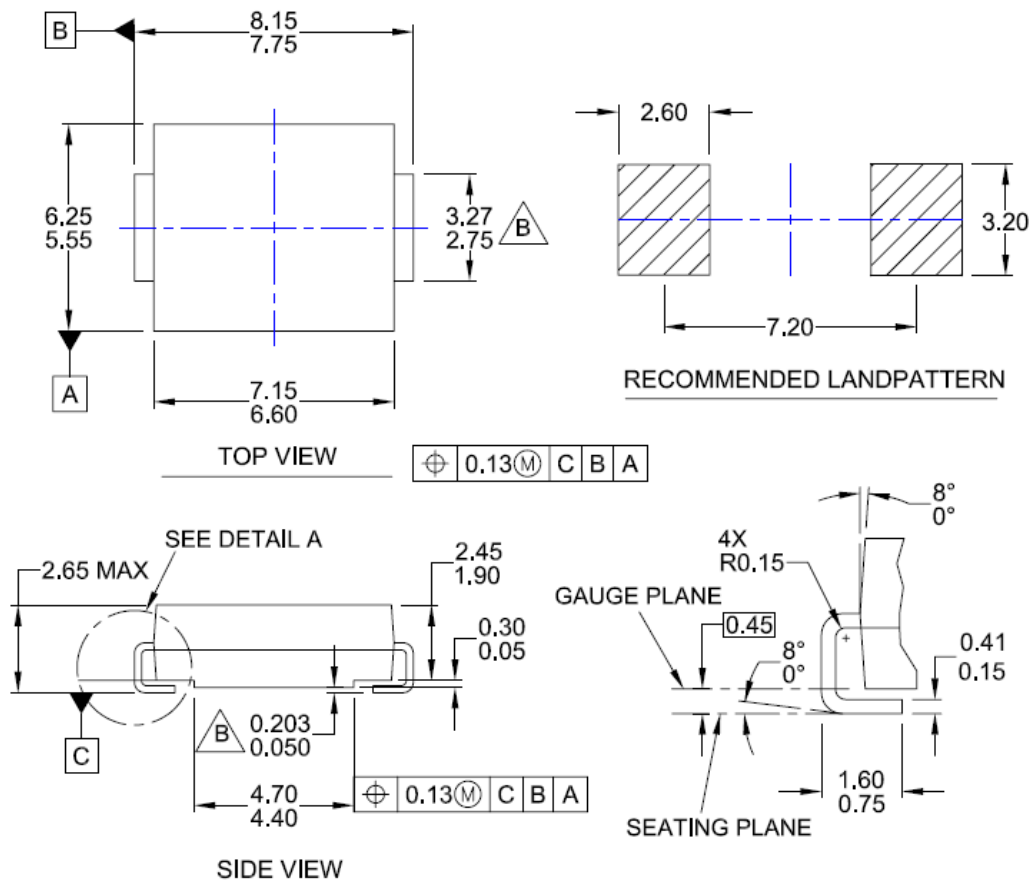


Figure 5. Total Capacitance

Package Dimensions

SMC/DO-214AB



NOTES:

- EXCEPT WHERE NOTED CONFORMS TO JEDEC DO-214, VARIATION AB.
- DOES NOT COMPLY TO JEDEC STD. VALUE.
- ALL DIMENSIONS ARE IN MILLIMETERS.
- DIMENSIONS ARE EXCLUSIVE OF BURRS, MOLD FLASH, AND TIE BAR PROTRUSIONS.
- DIMENSIONS AND TOLERANCING AS PER ASME Y14.5M-1994
- LAND PATTERN STANDARD: DIOM7957X241M
- DRAWING FILE NAME: DO214ABREV1

DETAIL A

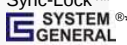
SCALE: 2:1

Dimensions in Millimeters



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