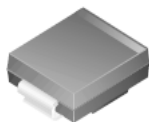


S3N

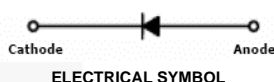
3 A, 1200 V Surface Mount Rectifier

Features

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



SMC/DO-214AB
COLOR BAND DENOTES CATHODE



Ordering Information

Part Number	Top Mark	Package	Packing Method
S3N	S3N	DO-214AB (SMC)	Tape and Reel

Absolute Maximum Ratings

Stresses exceeding the absolute maximum ratings may damage the device. The device may not function or be operable above the recommended operating conditions and stressing the parts to these levels is not recommended. In addition, extended exposure to stresses above the recommended operating conditions may affect device reliability. The absolute maximum ratings are stress ratings only. Values are at $T_A = 25^\circ\text{C}$ 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 8.3 ms 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	$^\circ\text{C}$

Thermal Characteristics⁽¹⁾

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

Note:

1. Device mounted on FR-4 PCB with 0.4 inch x 0.4 inch (10 mm x 10 mm) Cu pad.

Electrical Characteristics

Values are at $T_A = 25^\circ\text{C}$ 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	$V_r = 1200\text{V}$	$T_A = 25^\circ\text{C}$		5	μA
			$T_A = 125^\circ\text{C}$		250	
C_T	Typical Junction Capacitance	$V_r = 4.0 \text{ V}$, $f = 1.0 \text{ MHz}$			60	pF

Typical Performance Characteristics

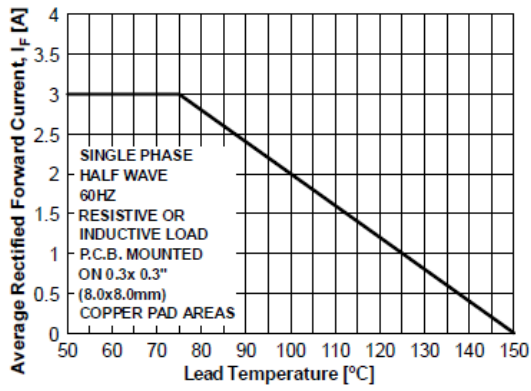


Figure 1. Forward Current Deration Curve

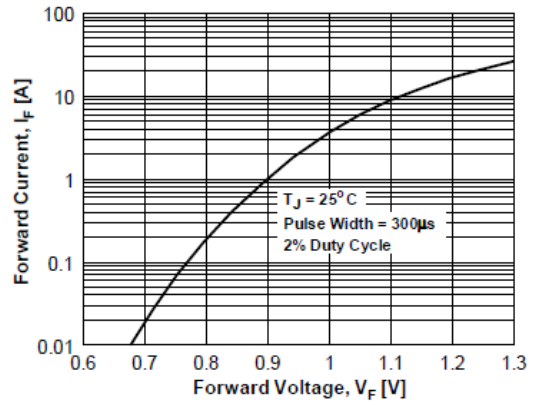


Figure 2. Forward Voltage Characteristics

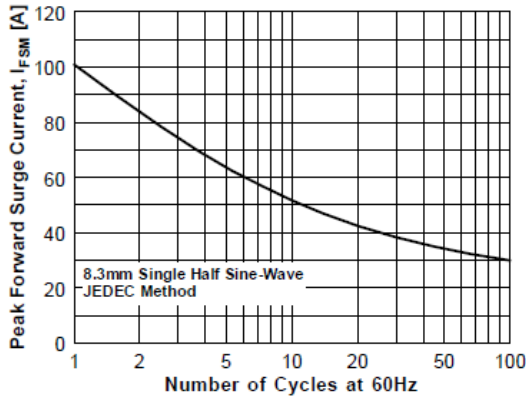


Figure 3. Non-Repetitive Surge Current

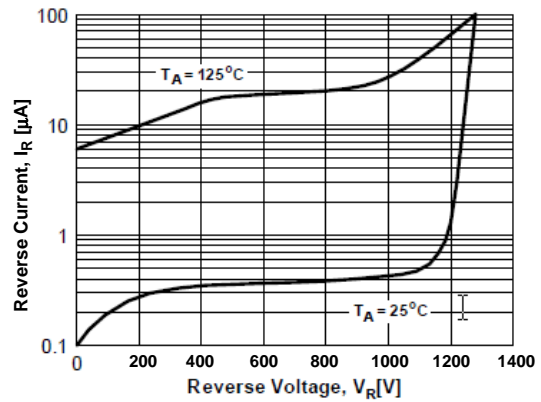


Figure 4. Reverse Current vs. Reverse Voltage

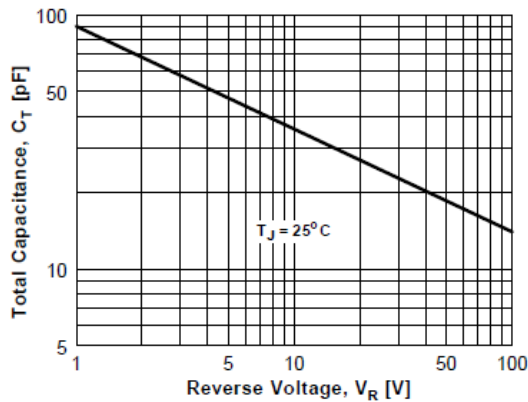
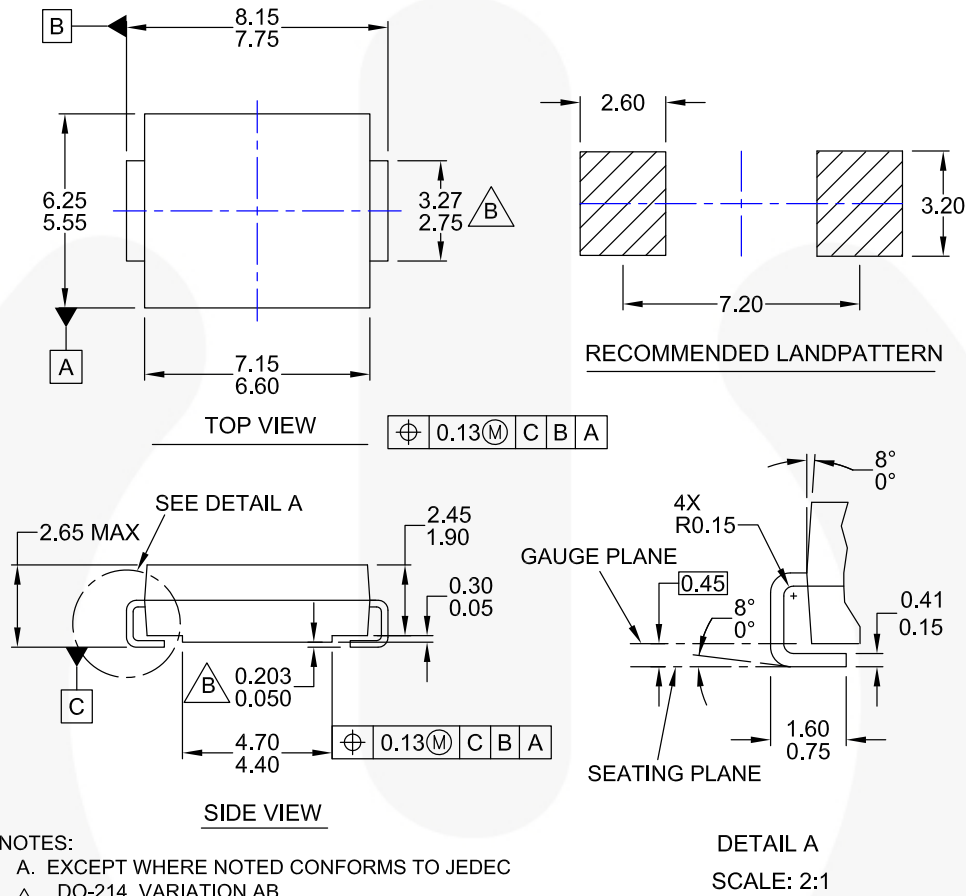


Figure 5. Total Capacitance

Physical Dimensions

SMC/DO-214AB



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

Figure 6. 2-Lead, SMC, JEDEC DO-214, Variation AB

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