

## 3A, 400V - 600V High Efficient Surface Mount Rectifier

### FEATURES

- Glass passivated chip junction
- Ideal for automated placement
- Fast switching for high efficiency
- Moisture sensitivity level: level 1, per J-STD-020
- RoHS Compliant
- Halogen-free according to IEC 61249-2-21

### APPLICATIONS

- Switching mode power supply (SMPS)
- Adapters
- Monitor
- TV

### MECHANICAL DATA

- Case: DO-214AA (SMB)
- Molding compound meets UL 94V-0 flammability rating
- Terminal: Matte tin plated leads, solderable per J-STD-002
- Meet JESD 201 class 2 whisker test
- Polarity: Indicated by cathode band
- Weight: 0.110g (approximately)

KEY PARAMETERS		
PARAMETER	VALUE	UNIT
$I_F$	3	A
$V_{RRM}$	400 - 600	V
$I_{FSM}$	75	A
$T_{JMAX}$	175	°C
Package	DO-214AA (SMB)	
Configuration	Single die	



DO-214AA (SMB)



ABSOLUTE MAXIMUM RATINGS ( $T_A = 25^\circ\text{C}$ unless otherwise noted)				
PARAMETER	SYMBOL	MUR340SB	MUR360SB	UNIT
Marking code on the device		MUR340SB	MUR360SB	
Repetitive peak reverse voltage	$V_{RRM}$	400	600	V
Reverse voltage, total rms value	$V_{R(RMS)}$	280	420	V
Forward current	$I_F$	3		A
Surge peak forward current, 8.3ms single half sine-wave superimposed on rated load	$I_{FSM}$	75		A
Junction temperature	$T_J$	- 55 to +175		°C
Storage temperature	$T_{STG}$	- 55 to +175		°C

<b>THERMAL PERFORMANCE</b>			
<b>PARAMETER</b>	<b>SYMBOL</b>	<b>TYP</b>	<b>UNIT</b>
Junction-to-lead thermal resistance	$R_{\theta JL}$	11	°C/W
Junction-to-ambient thermal resistance	$R_{\theta JA}$	57	°C/W
Junction-to-case thermal resistance	$R_{\theta JC}$	14	°C/W

**Thermal Performance Note:** Units mounted on PCB (10mm x 10mm Cu pad test board)

<b>ELECTRICAL SPECIFICATIONS</b> ( $T_A = 25^\circ\text{C}$ unless otherwise noted)					
<b>PARAMETER</b>	<b>CONDITIONS</b>	<b>SYMBOL</b>	<b>TYP</b>	<b>MAX</b>	<b>UNIT</b>
Forward voltage <sup>(1)</sup>	$I_F = 1.5\text{A}, T_J = 25^\circ\text{C}$	$V_F$	1.00	1.10	V
	$I_F = 3.0\text{A}, T_J = 25^\circ\text{C}$		1.10	1.25	V
	$I_F = 1.5\text{A}, T_J = 150^\circ\text{C}$		0.76	1.00	V
	$I_F = 3.0\text{A}, T_J = 150^\circ\text{C}$		0.89	1.05	V
Reverse current @ rated $V_R$ <sup>(2)</sup>	$T_J = 25^\circ\text{C}$	$I_R$	-	10	$\mu\text{A}$
	$T_J = 150^\circ\text{C}$		-	250	$\mu\text{A}$
Junction capacitance	1MHz, $V_R = 4.0\text{V}$	$C_J$	38	-	pF
Reverse recovery time	$I_F = 0.5\text{A}, I_R = 1.0\text{A}, I_{rr} = 0.25\text{A}$	$t_{rr}$	-	50	ns

**Notes:**

1. Pulse test with  $PW = 0.3\text{ms}$
2. Pulse test with  $PW = 30\text{ms}$

<b>ORDERING INFORMATION</b>		
<b>ORDERING CODE<sup>(1)</sup></b>	<b>PACKAGE</b>	<b>PACKING</b>
MUR3xSB	DO-214AA (SMB)	3,000 / Tape & Reel

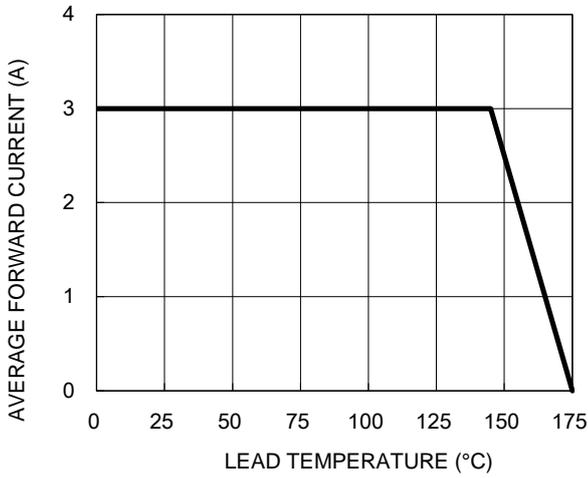
**Notes:**

1. "x" defines voltage from 400V(MUR340SB) to 600V(MUR360SB)

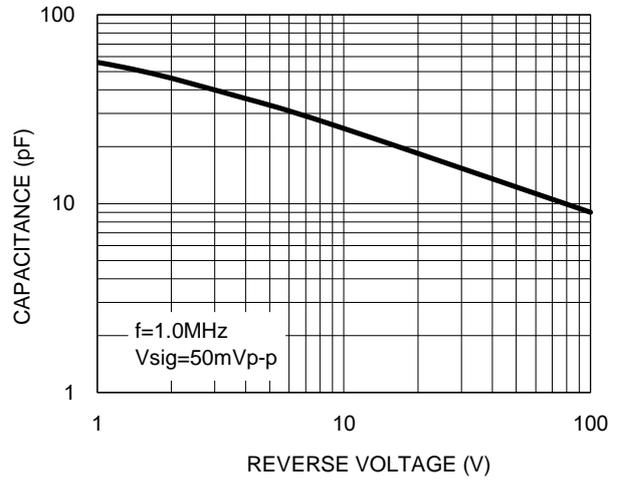
**CHARACTERISTICS CURVES**

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

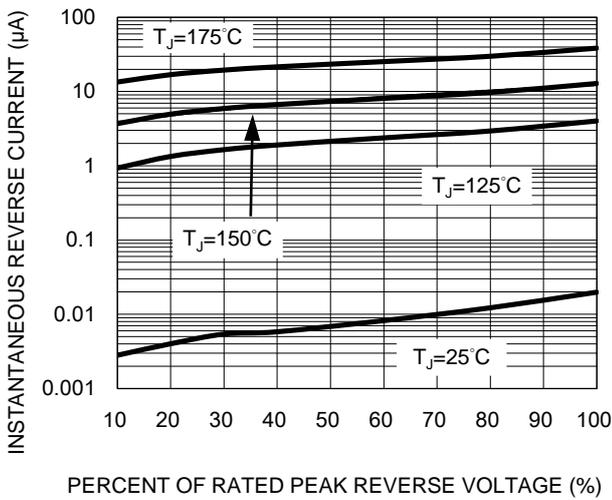
**Fig.1 Forward Current Derating Curve**



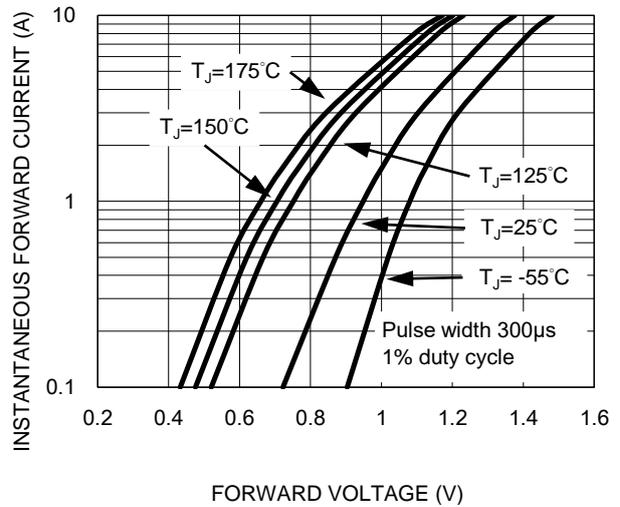
**Fig.2 Typical Junction Capacitance**



**Fig.3 Typical Reverse Characteristics**

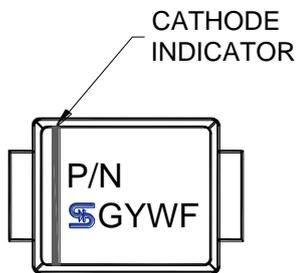
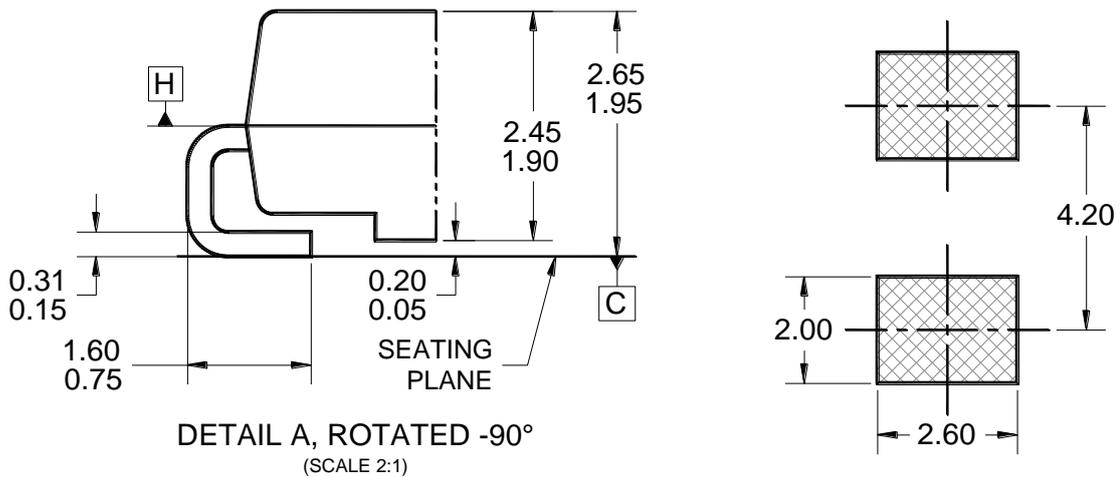
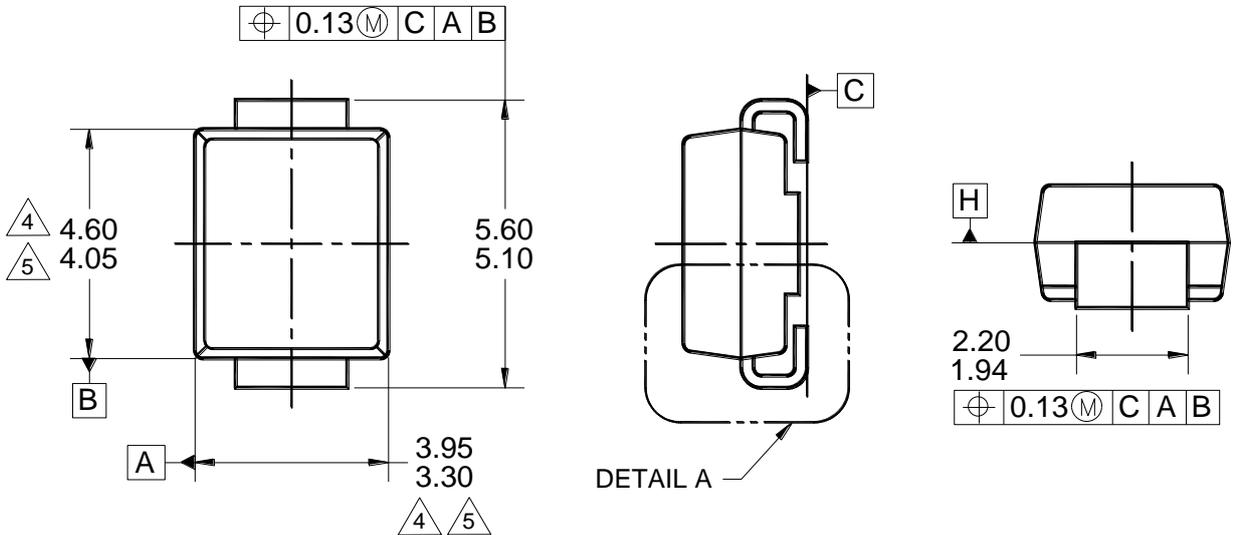


**Fig.4 Typical Forward Characteristics**



**PACKAGE OUTLINE DIMENSIONS**

**DO-214AA (SMB)**



**MARKING DIAGRAM**

P/N = MARKING CODE  
 G = GREEN COMPOUND  
 YW = DATE CODE  
 F = FACTORY CODE

**NOTES: UNLESS OTHERWISE SPECIFIED**

1. ALL DIMENSIONS ARE IN MILLIMETERS.
2. DIMENSIONING AND TOLERANCING PER ASME Y14.5M-1994.
3. PACKAGE OUTLINE REFERENCE: JEDEC DO-214, VARIATION AA, ISSUE D.
4. MOLDED PLASTIC BODY DIMENSIONS DO NOT INCLUDE MOLD FLASH.
5. MOLDED PLASTIC BODY LATERAL DIMENSIONS TO BE DETERMINED AT DATUM PLANE H.
6. DWG NO. REF: HQ2SD07-DO214SMB-035 REV A.

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