

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

FEATURES

- AEC-Q101 qualified
- 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

- DC to DC converter
- Automotive application
- Car lighting
- Snubber
- Freewheeling application

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
$T_{J\ MAX}$	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	MUR340SBH	MUR360SBH	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

THERMAL PERFORMANCE			
PARAMETER	SYMBOL	TYP	UNIT
Junction-to-lead thermal resistance	$R_{\theta JL}$	28	°C/W
Junction-to-ambient thermal resistance	$R_{\theta JA}$	52	°C/W
Junction-to-case thermal resistance	$R_{\theta JC}$	23	°C/W

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

ELECTRICAL SPECIFICATIONS ($T_A = 25^\circ\text{C}$ unless otherwise noted)					
PARAMETER	CONDITIONS	SYMBOL	TYP	MAX	UNIT
Forward voltage ⁽¹⁾	$I_F = 1.5\text{A}, T_J = 25^\circ\text{C}$	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 ⁽²⁾	$T_J = 25^\circ\text{C}$	I_R	-	10	μA
	$T_J = 150^\circ\text{C}$		-	250	μA
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 $PW = 30\text{ms}$

ORDERING INFORMATION		
ORDERING CODE⁽¹⁾	PACKAGE	PACKING
MUR3xSBH	DO-214AA (SMB)	3,000 / Tape & Reel

Notes:

1. "x" defines voltage from 400V(MUR340SBH) to 600V(MUR360SBH)

CHARACTERISTICS CURVES

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

Fig.1 Forward Current Derating Curve

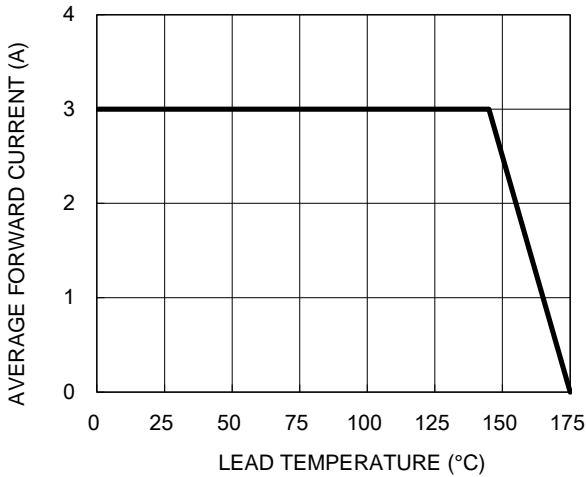


Fig.2 Typical Junction Capacitance

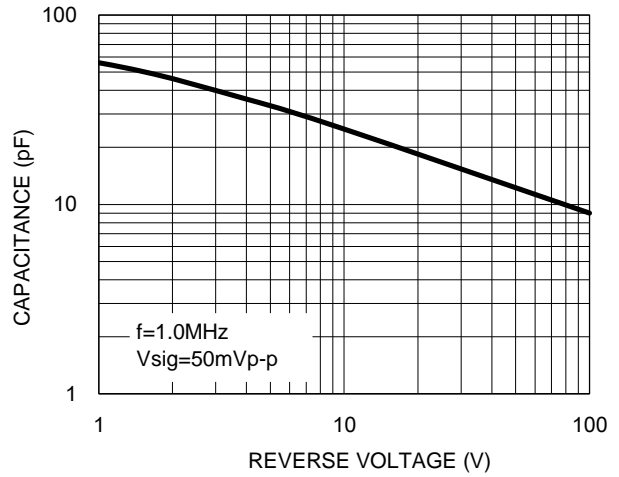


Fig.3 Typical Reverse Characteristics

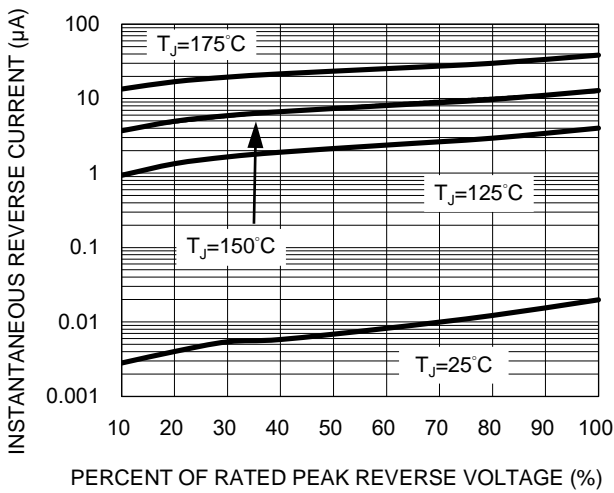
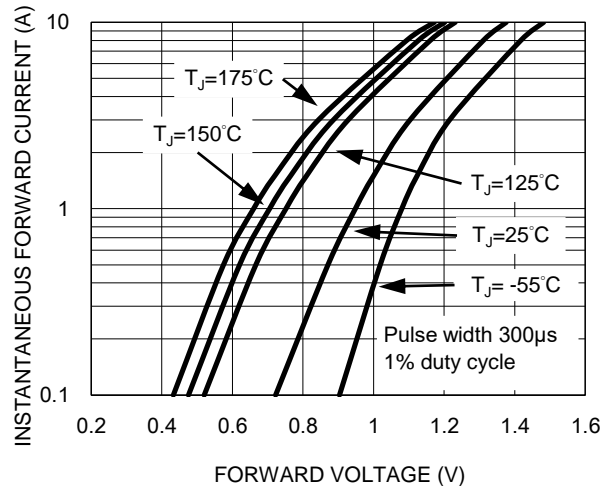
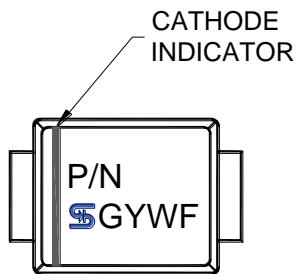
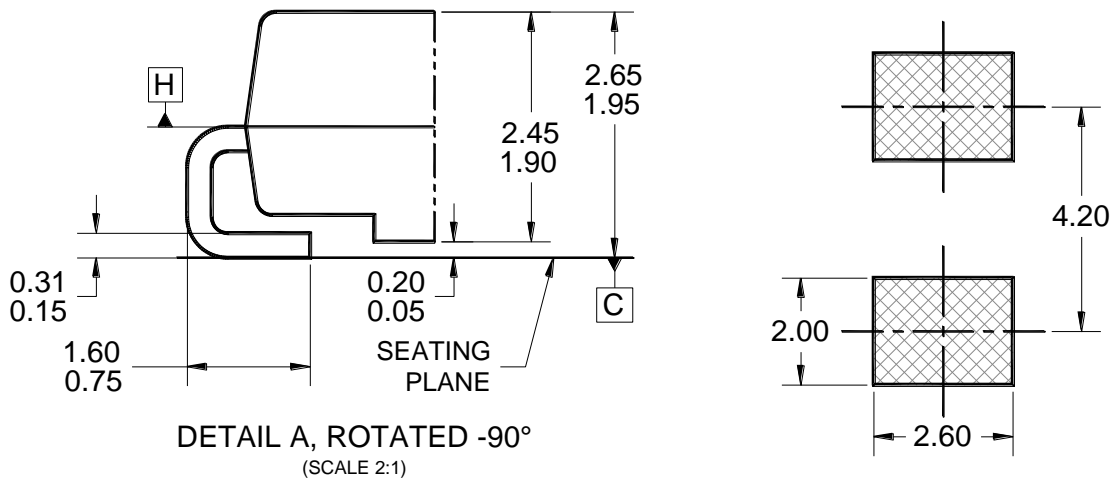
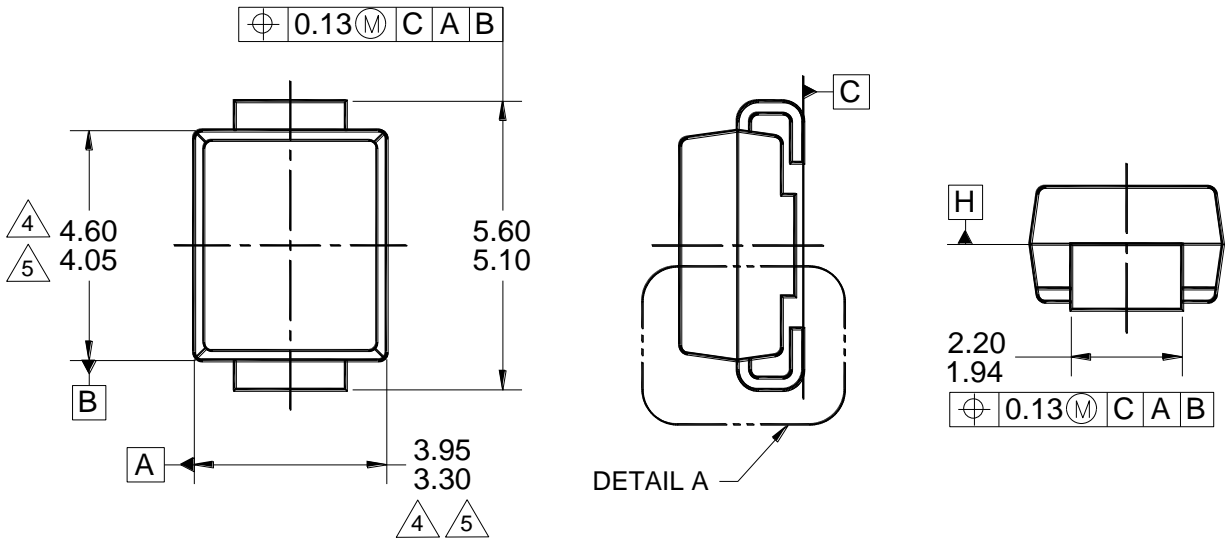


Fig.4 Typical Forward Characteristics



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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