

3A, 40V - 60V Schottky Bridge Rectifier

FEATURES

- AEC-Q101 qualified available
- Schottky technology
- Ideal for automated placement
- High surge current capability
- Moisture sensitivity level: level 1, per J-STD-020
- RoHS Compliant
- Halogen-free according to IEC 61249-2-21

APPLICATIONS

- · Charging circuit
- Power over Ethernet
- Lighting application

MECHANICAL DATA

- Case: ABS
- 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: As marked
- Weight: 0.090g (approximately)

KEY PARAMETERS			
PARAMETER	VALUE	TINU	
I _F	3	Α	
V_{RRM}	40 - 60	V	
I _{FSM}	80	Α	
T_{JMAX}	125, 150	°C	
Package	ABS		
Configuration	Quad		

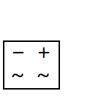


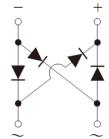






ABS





ABSOLUTE MAXIMUM RATINGS (T _A = 25°C unless otherwise noted)				
PARAMETER	SYMBOL	SBS34	SBS36	UNIT
Marking code on the device		SBS34	SBS36	
Repetitive peak reverse voltage	V_{RRM}	40	60	V
Reverse voltage, total rms value	$V_{R(RMS)}$	28	42	V
Forward current	I _F	;	3	А
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load	I _{FSM}	80		А
Rating for fusing (t<8.3ms)	l ² t	26.56		A ² s
Junction temperature	TJ	- 55 to +125	- 55 to +150	°C
Storage temperature	T _{STG}	- 55 to +150		°C

Version: F2103



THERMAL PERFORMANCE				
PARAMETER	SYMBOL	TYP	UNIT	
Junction-to-lead thermal resistance	$R_{\Theta JL}$	41	°C/W	
Junction-to-ambient thermal resistance	$R_{\Theta JA}$	83	°C/W	

ELECTRICAL SPECIFICATIONS (T _A = 25°C unless otherwise noted)						
PARAMETER		CONDITIONS	SYMBOL	TYP	MAX	UNIT
Forward voltage per diode ⁽¹⁾	SBS34	I _F = 3A, T _J = 25°C	V _F	-	0.50	V
	SBS36			-	0.70	V
Reverse current @ rated V _R per diode ⁽²⁾	SBS34 SBS36	T _J = 25°C	I _R	-	500	μA
	SBS34	T _J = 100°C		-	10	mA
	SBS36			-	-	mA
	SBS34	T _J = 125°C		-	-	mA
	SBS36			-	10	mA

Notes:

- 1. Pulse test with PW = 0.3ms
- 2. Pulse test with PW = 30ms

ORDERING INFORMATION			
ORDERING CODE ⁽¹⁾⁽²⁾	PACKAGE	PACKING	
SBS3x	ABS	5,000 / Tape & Reel	
SBS3xH	ABS	5,000 / Tape & Reel	

Notes:

- 1. "x" defines voltage from 40V(SBS34) to 60V(SBS36)
- 2. "H" means AEC-Q101 qualified

2 Version: F2103



CHARACTERISTICS CURVES

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

Fig.1 Forward Current Derating Curve

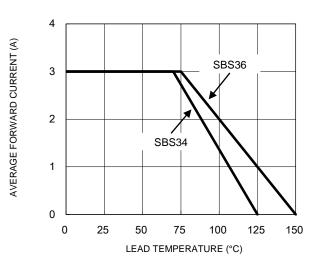


Fig.3 Typical Reverse Characteristics

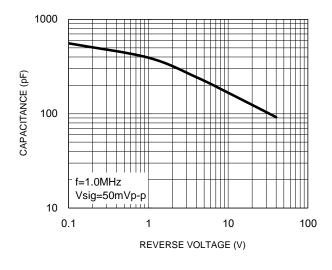
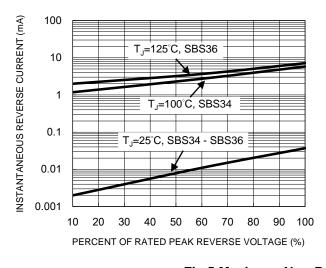


Fig.2 Typical Junction Capacitance

Fig.4 Typical Forward Characteristics



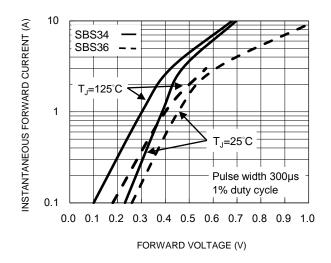
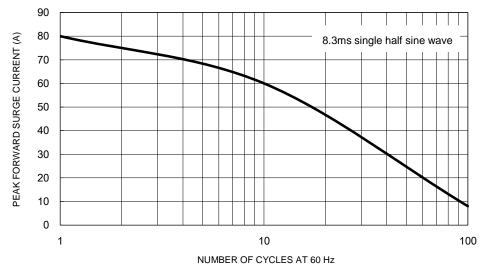
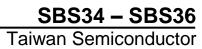


Fig.5 Maximum Non-Repetitive Forward Surge Current



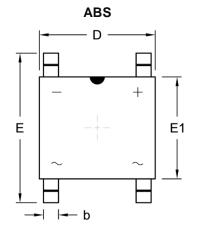
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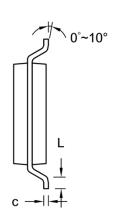
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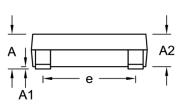




PACKAGE OUTLINE DIMENSIONS

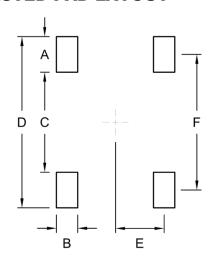






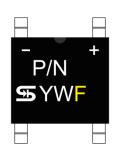
DIM.	Unit (mm)		Unit ((inch)	
DIIVI.	Min.	Max.	Min.	Max.	
Α	1.40	1.60	0.055	0.063	
A1	0.05	0.15	0.002	0.006	
A2	1.35	1.45	0.053	0.057	
b	0.60	0.70	0.024	0.028	
С	0.15	0.25	0.006	0.010	
D	4.90	5.10	0.193	0.201	
Е	6.25	6.65	0.246	0.262	
E1	4.30	4.50	0.169	0.177	
е	3.90	4.10	0.154	0.161	
L	0.30	0.70	0.012	0.028	

SUGGESTED PAD LAYOUT



Symbol	Unit (mm)	Unit (inch)
Α	1.50	0.059
В	0.90	0.035
С	4.22	0.166
D	7.22	0.284
E	2.05	0.081
F	5.72	0.225

MARKING DIAGRAM



P/N = Marking Code YW = Date Code

F = Factory Code



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