



FEATURES

TAIWAN

• AEC-Q101 qualified available

SEMICONDUCTOR

- Ideal for automated placement, for compact PCB design
- High surge current capability
- Super fast reverse recovery time for high frequency
- Negligible leakage current
- 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
- Lighting application

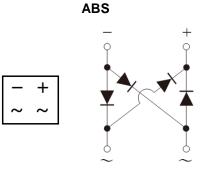
MECHANICAL DATA

- 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	UNIT		
١ _F	1	А		
V _{RRM}	200 - 600	V		
I _{FSM}	40	А		
T _{J MAX}	150 °C			
Package	ABS			
Configuration	Quad			







ABSOLUTE MAXIMUM RATINGS (T _A = 25°C unless otherwise noted)						
PARAMETER	SYMBOL	EABS1D	EABS1G	EABS1J	UNIT	
Marking code on the device		EABS1D	EABS1G	EABS1J		
Repetitive peak reverse voltage	V _{RRM}	200	400	600	V	
Reverse voltage, total rms value	V _{R(RMS)}	140	280	420	V	
Forward current	I _F	1		Α		
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load	I _{FSM}	40		А		
Rating for fusing (t<8.3ms)	l ² t	6.64		A ² s		
Junction temperature	TJ	- 55 to +150		°C		
Storage temperature	T _{STG}	- 55 to +150 °			°C	



Taiwan Semiconductor

THERMAL PERFORMANCE					
PARAMETER	SYMBOL	ТҮР	UNIT		
Junction-to-lead thermal resistance	R _{eJL}	25	°C/W		
Junction-to-ambient thermal resistance	R _{eja}	80	°C/W		

ELECTRICAL SPECIFICATIONS ($T_A = 25^{\circ}C$ unless otherwise noted)						
PARAMETER		CONDITIONS	SYMBOL	ТҮР	MAX	UNIT
	EABS1D	I _F = 1A, T _J = 25°C	V _F	-	0.95	V
Forward voltage per diode ⁽¹⁾	EABS1G			-	1.20	V
	EABS1J			-	1.70	V
Reverse current @ rated V _R per diode ⁽²⁾		$T_J = 25^{\circ}C$	- I _R	-	1	μA
		T _J = 125°C		-	200	μA
Reverse recovery time		$I_F = 0.5A$, $I_R = 1.0A$ $I_{rr} = 0.25A$	t _{rr}	-	35	ns

Notes:

1. Pulse test with PW = 0.3ms

2. Pulse test with PW = 30ms

ORDERING INFORMATION			
ORDERING CODE ⁽¹⁾⁽²⁾	PACKAGE	PACKING	
EABS1x	ABS	5,000 / Tape & Reel	
EABS1xH	ABS	5,000 / Tape & Reel	

Notes:

1. "x" defines voltage from 200V(EABS1D) to 600V(EABS1J)

2. "H" means AEC-Q101 qualified



10

REVERSE VOLTAGE (V)

Fig.4 Typical Forward Characteristics

100

CHARACTERISTICS CURVES

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

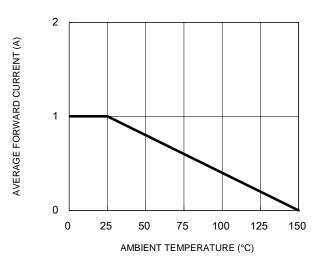
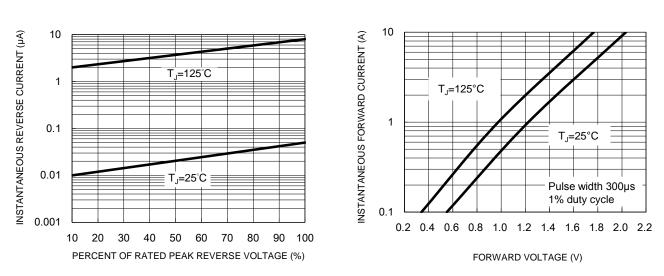


Fig.1 Forward Current Derating Curve

Fig.3 Typical Reverse Characteristics



100

10

1

0.1

f=1.0MHz Vsig=50mVp-p

1

CAPACITANCE (pF)

Fig.5 Maximum Non-Repetitive Forward Surge Current

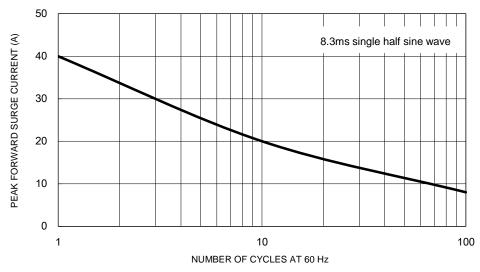
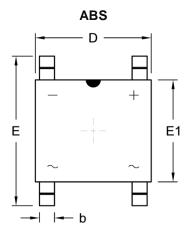


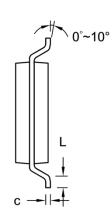
Fig.2 Typical Junction Capacitance



Taiwan Semiconductor

PACKAGE OUTLINE DIMENSIONS





DIM.	Unit (mm)		Unit	inch)
	Min.	Max.	Min.	Max.
A	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
E	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

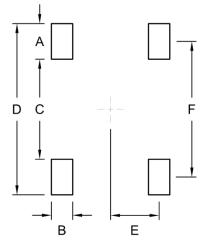


е

1

А

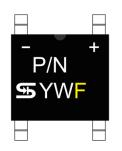
SUGGESTED PAD LAYOUT



A2

Symbol	Unit (mm)	Unit (inch)
A	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



Taiwan Semiconductor

Notice

Specifications of the products displayed herein are subject to change without notice. TSC or anyone on its behalf, assumes no responsibility or liability for any errors or inaccuracies.

Purchasers are solely responsible for the choice, selection, and use of TSC products and TSC assumes no liability for application assistance or the design of Purchasers' products.

Information contained herein is intended to provide a product description only. No license, express or implied, to any intellectual property rights is granted by this document. Except as provided in TSC's terms and conditions of sale for such products, TSC assumes no liability whatsoever, and disclaims any express or implied warranty, relating to sale and/or use of TSC products including liability or warranties relating to fitness for a particular purpose, merchantability, or infringement of any patent, copyright, or other intellectual property right.

The products shown herein are not designed for use in medical, life-saving, or life-sustaining applications. Customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify TSC for any damages resulting from such improper use or sale.