2A, 1000V Glass Passivated Fast Recovery Bridge Rectifiers

FEATURES

- Glass passivated junction
- Ideal for automated placement
- High surge current capability
- UL Recognized file # E-326854
- RoHS Compliant
- Halogen-free according to IEC 61249-2-21

APPLICATIONS

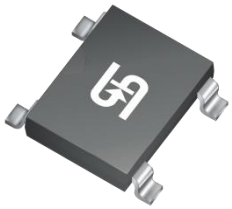
- Switching mode power supply (SMPS)
- Adapters
- Lighting application

MECHANICAL DATA

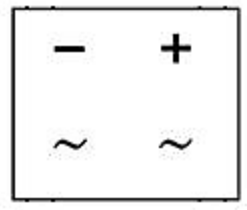
- Case: ABS
- Molding compound meets UL 94V-0 flammability rating
- Moisture sensitivity level: level 1, per J-STD-020
- Terminal: Pure tin plated leads, solderable per J-STD-002
- Meet JESD 201 class 1 whisker test
- Polarity: As marked
- Weight: 0.096 g (approximately)

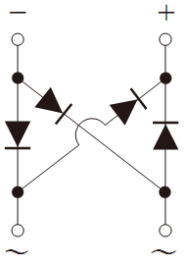
KEY PARAMETERS		
PARAMETER	**VALUE**	**UNIT**
I_F	2	A
V_{RRM}	1000	V
I_{FSM}	50	A
$T_{J\ MAX}$	150	°C
Package	ABS	
Configuration	Quad	

Pb-Free RoHS COMPLIANT HALOGEN FREE



ABS





ABSOLUTE MAXIMUM RATINGS (T_A = 25°C unless otherwise noted)				
PARAMETER		**SYMBOL**	**RABS20M**	**UNIT**
Marking code on the device			RA20M	
Repetitive peak reverse voltage		V_{RRM}	1000	V
Reverse voltage, total rms value		$V_{R(RMS)}$	700	V
Forward current		I_F	2	A
Surge peak forward current, single half sine-wave superimposed on rated load per diode	8.3 ms at T_A= 25°C	I_{FSM}	50	A
	1.0 ms at T_A= 25°C		120	A
I^2t value (of a surge on-state current) at 8.3ms		I^2t	10	A^2s
Junction temperature		T_J	-55 to +150	°C
Storage temperature		T_{STG}	-55 to +150	°C

THERMAL PERFORMANCE

PARAMETER	SYMBOL	TYP	UNIT
Junction-to-lead thermal resistance	$R_{\Theta JL}$	39	°C/W
Junction-to-ambient thermal resistance	$R_{\Theta JA}$	82	°C/W
Junction-to-case thermal resistance	$R_{\Theta JC}$	24	°C/W

Thermal Performance Note: Units mounted on PCB (5mm x 5mm Cu pad test board)

ELECTRICAL SPECIFICATIONS (T_A = 25°C unless otherwise noted)

PARAMETER	CONDITIONS	SYMBOL	TYP	MAX	UNIT
Forward voltage per diode (1)	I_F = 1.0A, T_J = 25°C	V_F	1.06	-	V
	I_F = 2.0A, T_J = 25°C		1.16	1.30	V
	I_F = 1.0A, T_J = 125°C		0.89	-	V
	I_F = 2.0A, T_J = 125°C		1.00	1.16	V
Reverse current @ rated V_R per diode (2)	T_J = 25°C	I_R	-	5	μA
	T_J = 125°C		-	90	μA
Junction Capacitance per diode	1 MHz, V_R=4.0V	C_j	15	-	pF
Maximum reverse recovery time per diode	I_F=0.5A , I_R=1.0A I_{RR}=0.25A	t_{rr}	-	300	ns

Notes:

(1) Pulse test with PW=0.3 ms

(2) Pulse test with PW=30 ms

ORDERING INFORMATION

ORDERING CODE	PACKAGE	PACKING
RABS20M M3G	ABS	1,000 / 7" reel
RABS20M M2G	ABS	5,000 / 13” reel

CHARACTERISTICS CURVES

(T_A = 25°C unless otherwise noted)

Fig.1 Forward Current Derating Curve

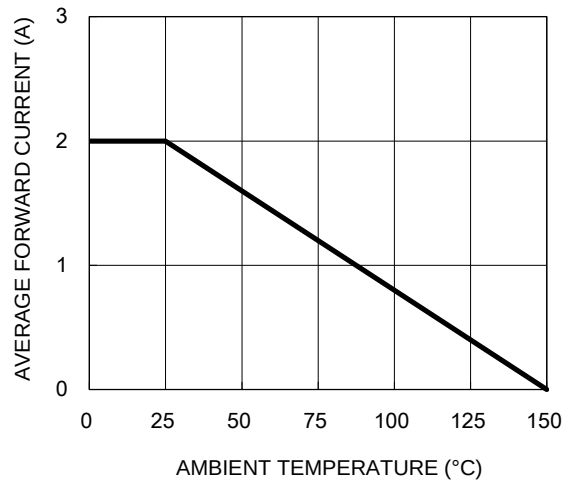


Fig.2 Typical Junction Capacitance

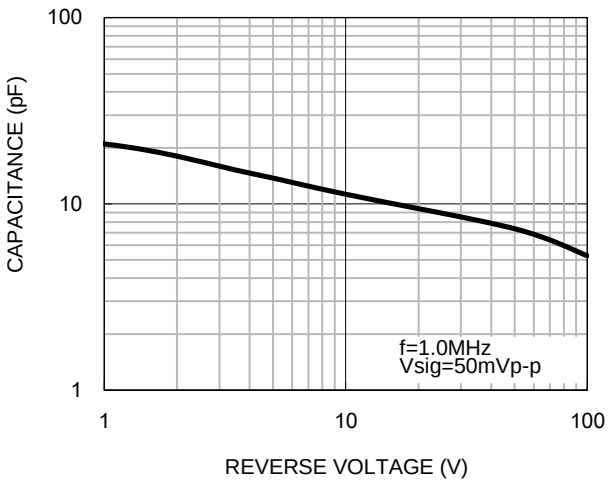


Fig.3 Typical Reverse Characteristics

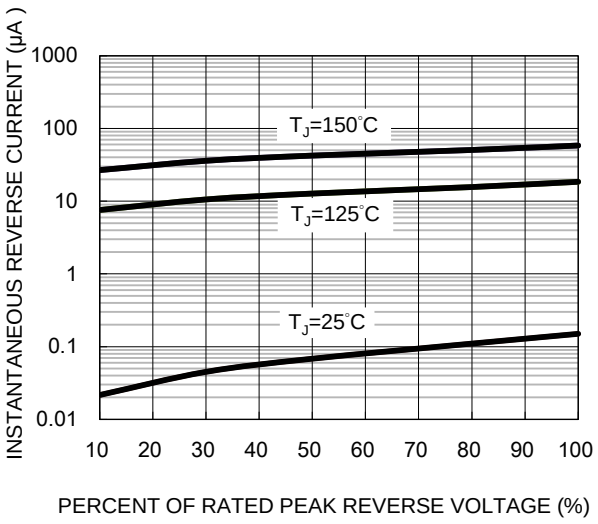
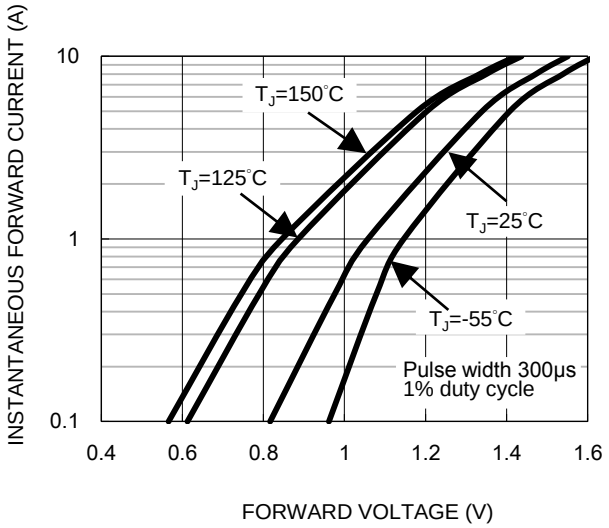
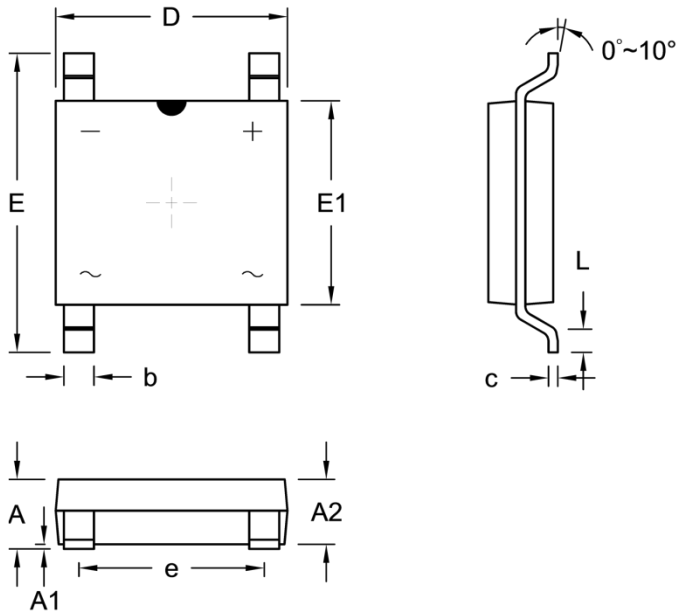


Fig.4 Typical Forward Characteristics



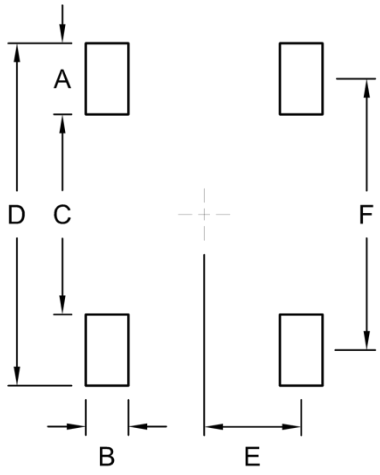
PACKAGE OUTLINE DIMENSIONS

ABS



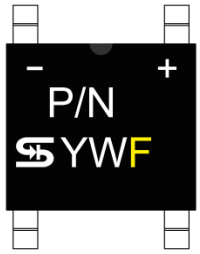
DIM.	Unit (mm)		Unit (inch)	
	Min.	Max.	Min.	Max.
A	1.40	1.60	0.055	0.063
A1	0.05	0.15	0.002	0.006
A2	1.35	1.45	0.053	0.057
b	0.60	0.70	0.024	0.028
c	0.15	0.25	0.006	0.010
D	4.90	5.10	0.193	0.201
E	6.25	6.65	0.246	0.262
E1	4.30	4.50	0.169	0.177
e	3.90	4.10	0.154	0.161
L	0.30	0.70	0.012	0.028

SUGGESTED PAD LAYOUT



Symbol	Unit (mm)	Unit (inch)
A	1.50	0.059
B	0.90	0.035
C	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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