

## GLASS PASSIVATED SURFACE MOUNT BRIDGE RECTIFIER

**REVERSE VOLTAGE** – 1000 Volts  
**FORWARD CURRENT** – 2 Amperes

### FEATURES

- Ideal for automated placement, for compact PCB design
- High surge current capability
- Negligible leakage current
- Glass Passivated Chip
- Qualified according to AEC-Q101 Rev\_C
- **Lead-Free Finish; RoHS Compliant (Notes 1 & 2)**
- **Halogen and Antimony Free. "Green" Device (Note 3)**

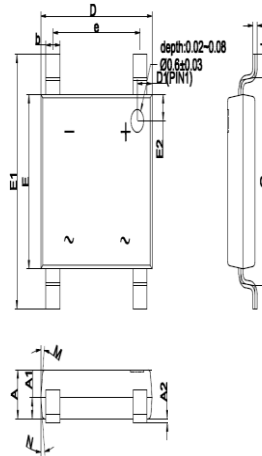
### APPLICATION

- Low voltage Full Bridge Rectification
- Wireless Charging

### MECHANICAL DATA

- Package Material: "Green" molding compound, UL flammability classification 94V-0, "Halogen-free".
- Moisture Sensitivity: Level 1 per J-STD-020
- Lead free finish, RoHS compliant
- Weight: 88 mgrams (Approximate)
- Marking code: RABS20M

### ABS



DIM	ABS	
	MIN	MAX
A	1.20	1.30
A1	0.43	0.63
A2	0.00	0.10
b	0.50	0.80
C	0.10	0.30
D	4.85	5.25
D1	0.45	0.85
e	4.00 TYP	
E	4.25	4.65
E1	6.40	6.80
E2	0.45	0.85
G	5.20	5.60
L	0.40	0.80
M	7° TYP	
N	7° TYP	

All dimension in millimeter

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

### ABSOLUTE RATINGS

PARAMETER	SYMBOL	VALUE	UNIT
Maximum repetitive peak reverse voltage	$V_{RRM}$	1000	V
Maximum DC blocking voltage	$V_{DC}$	1000	V
Maximum Average rectified output current	$I_{(AV)}$	2	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load.	$I_{FSM}$	60	A
$I^2t$ Rating for fusing ( 1ms < t < 8.3ms )	$I^2t$	14.9	A <sup>2</sup> S
Operating junction and Storage Temperature range	$T_J, T_{STG}$	-55 ~ +150	°C

### STATIC ELECTRICAL CHARACTERISTICS

PARAMETER	TEST CONDITIONS	SYMBOL	TYP	MAX	UNIT
Forward voltage (Note4)	$I_F=2A$ $T_J=25^\circ C$ $T_J=125^\circ C$	$V_F$	-- 1.0	1.3 --	V
Leakage current	$V_R=1000V$ $T_J=25^\circ C$ $T_J=125^\circ C$	$I_R$	-- 51	1 200	uA
Typical junction capacitance (Note 5)		$C_J$		27	pF

### DYNAMIC ELECTRICAL CHARACTERISTICS

PARAMETER	TEST CONDITIONS	SYMBOL	MAX	UNIT
Reverse Recovery Time	$I_F=0.5A, I_R=1.0A, I_{RR}=0.25A$	$T_{rr}$	250	nS

### THERMAL CHARACTERISTICS

PARAMETER	SYMBOL	TYP	UNIT
Typical thermal resistance (Note 6,7)	$R_{thJA}$	40	°C/W
	$R_{thJC}$	6	
	$R_{thJL}$	15	

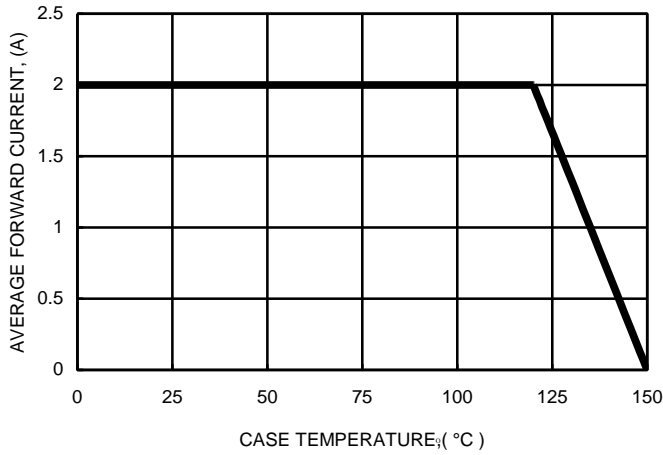
### Note :

1. EU Directive 2002/95/EC (RoHS), 2011/65/EU (RoHS 2) & 2015/863/EU (RoHS 3) compliant. All applicable RoHS exemptions applied.
2. See <https://www.diodes.com/quality/lead-free/> for more information about Diodes Incorporated's definitions of Halogen- and Antimony-free, "Green" and Lead-free.
3. Halogen- and Antimony-free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
4. 300us pulse width, 2% duty cycle.
5. Measured at 1.0MHz and applied voltage of 4.0V DC.
6. Thermal resistance test performed in accordance with JESD-51.
7. The unit mounted on glass-epoxy substrate with 2oz/ft<sup>2</sup>\_30 mm x 30 mm copper pad.

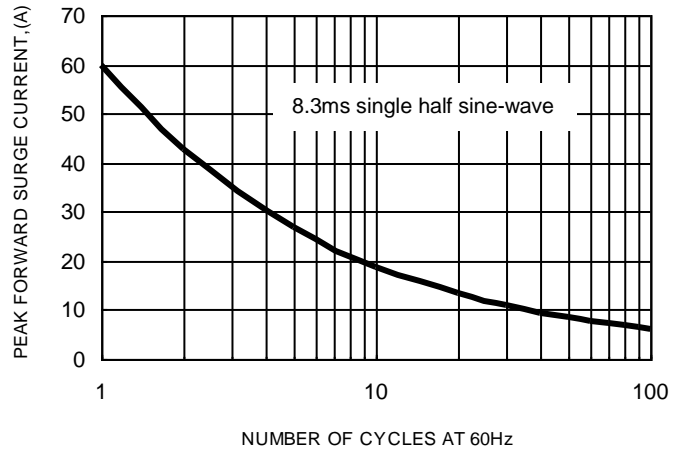
REV.-4, Oct-2021, KBCA02

**RATING AND CHARACTERISTIC CURVES**  
**RABS20M**

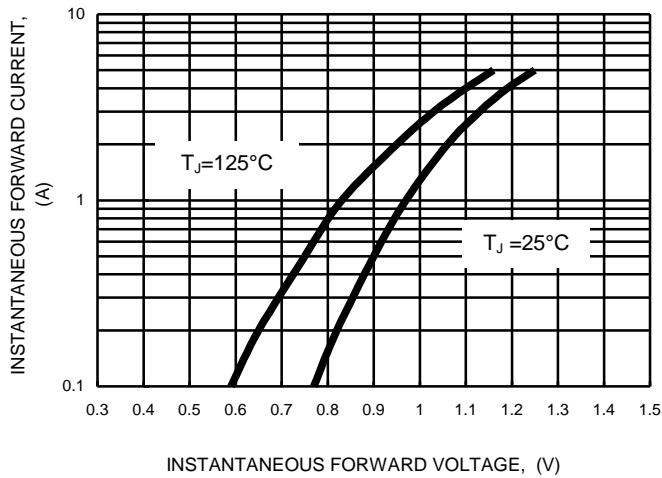
**FIG.1 FORWARD CURRENT DERATING CURVE**



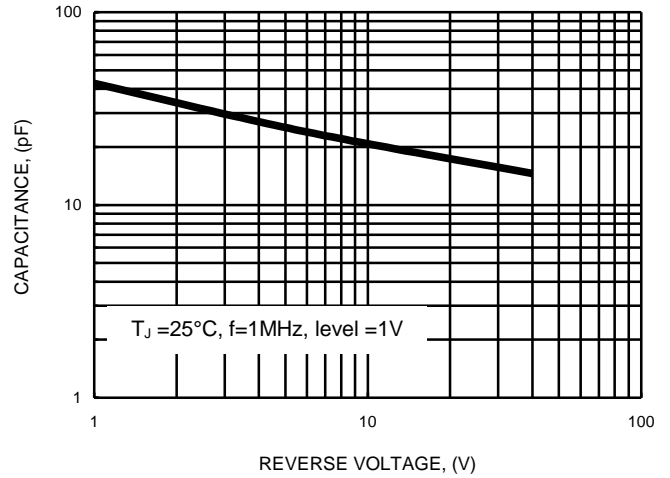
**FIG.2 MAXIMUM NON-REPETITIVE SURGE CURRENT**



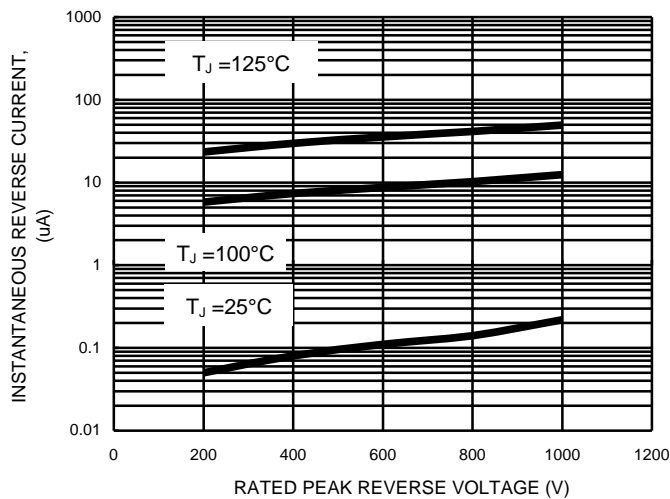
**FIG.3- TYPICAL FORWARD CHARACTERISTICS**



**FIG.4- TYPICAL JUNCTION CAPACITANCE**



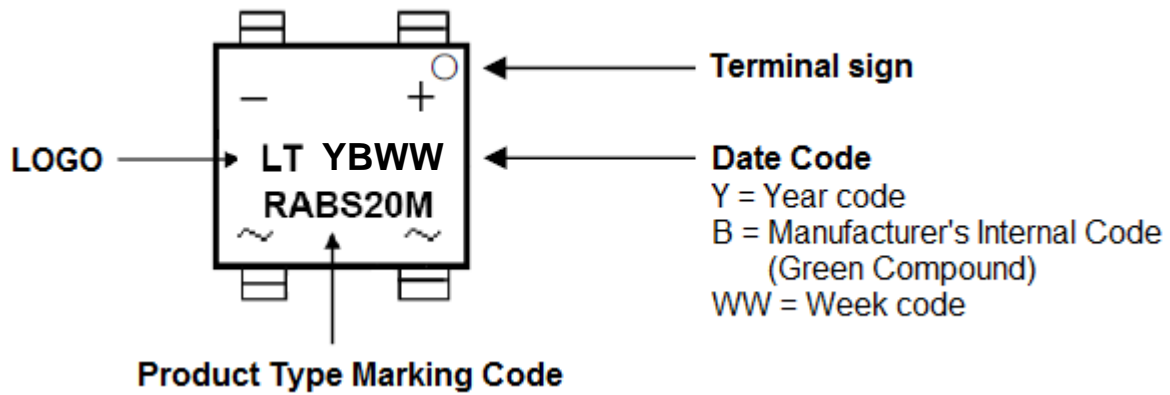
**FIG.5- TYPICAL REVERSE CHARACTERISTICS**



**Ordering Information :**

Part Number	Package	Packing	
		Qty.	Carrier
RABS20M	ABS	3000pcs	Tape & Reel

**Marking Information :**



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