

**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

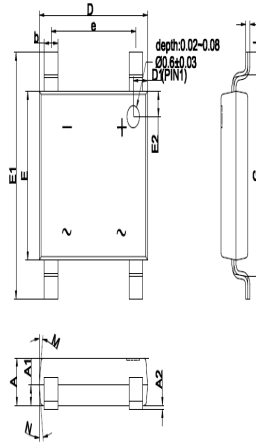
**APPLICATION**

- Low voltage Full Bridge Rectification
- Wireless Charging

**MECHANICAL DATA**

- Case 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**



ABS		
DIM	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
	@ $T_c=120^\circ C$		
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 (Note1)	$I_F=2A$ $T_J=25^\circ C$ $T_J=125^\circ C$	$V_F$	-- 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 2)		$C_J$		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 3,4)	$R_{thJA}$	40	°C/W
	$R_{thJC}$	6	
	$R_{thJL}$	15	

**Note :**

REV.-3, Oct-2019, KBCA02

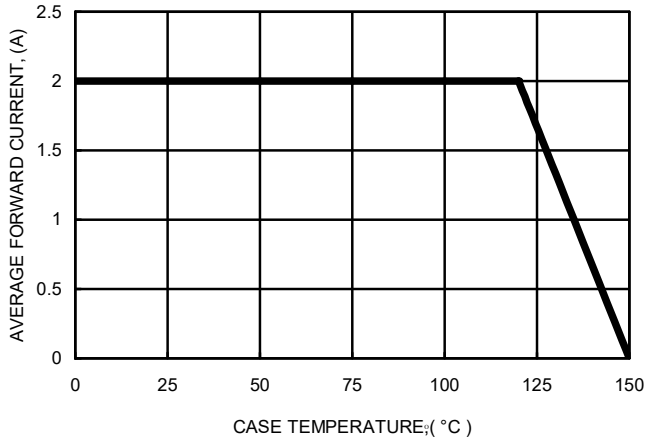
- (1) 300us pulse width, 2% duty cycle.
- (2) Measured at 1.0MHz and applied voltage of 4.0V DC.
- (3) Thermal resistance test performed in accordance with JESD-51.
- (4) The unit mounted on glass-epoxy substrate with 2oz/ft<sup>2</sup> 30 mm x 30 mm copper pad.

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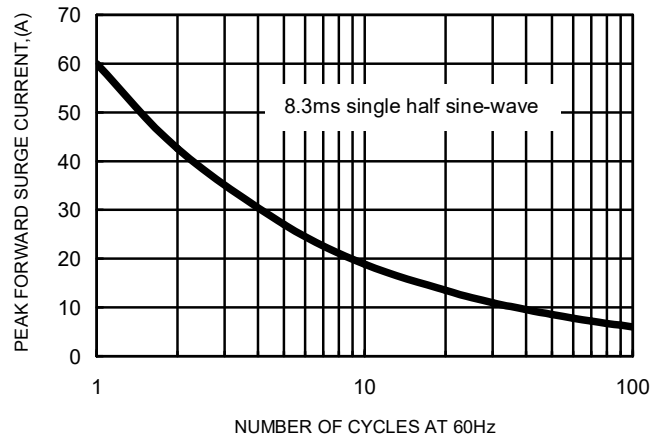
# RATING AND CHARACTERISTIC CURVES RABS20M



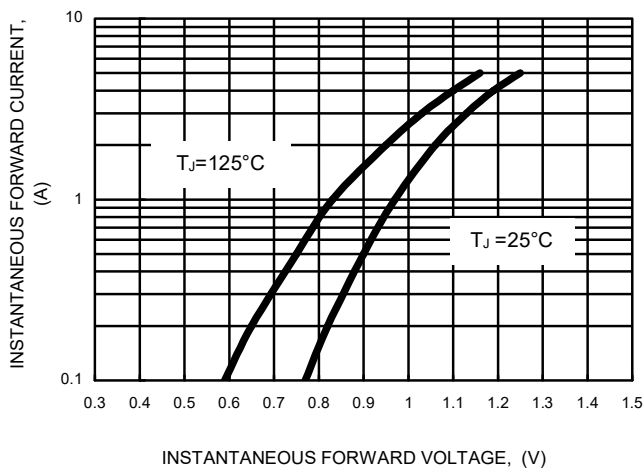
**FIG.1 FORWARD CURRENT DERATING CURVE**



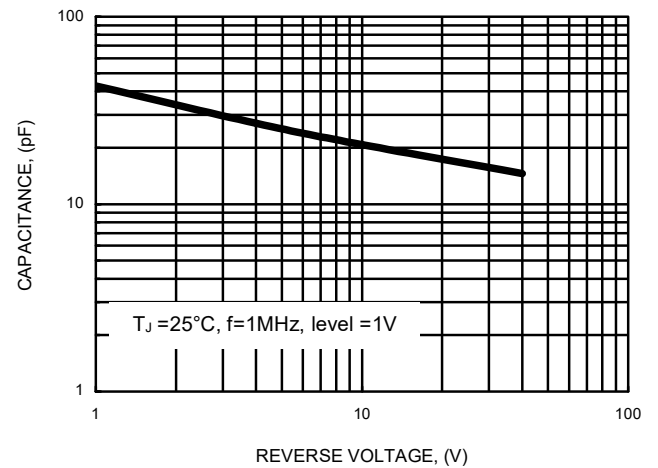
**FIG.2 MAXIMUM NON-REPETITIVE SURGE CURRENT**



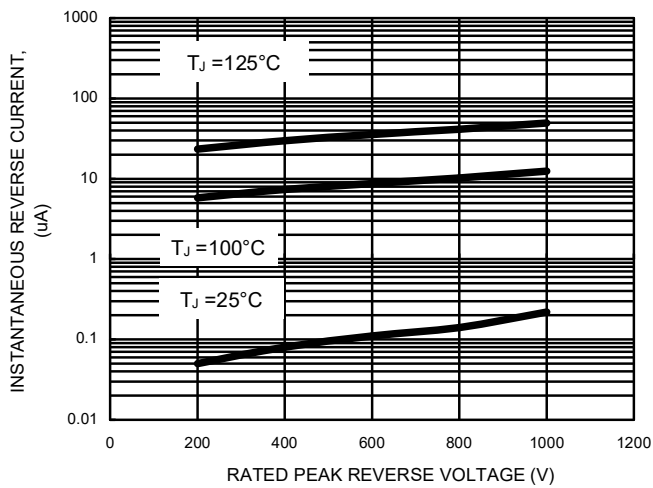
**FIG.3- TYPICAL FORWARD CHARACTERISTICS**



**FIG.4- TYPICAL JUNCTION CAPACITANCE**



**FIG.5- TYPICAL REVERSE CHARACTERISTICS**



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