LITE-ON SEMICONDUCTOR

RABS20M

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

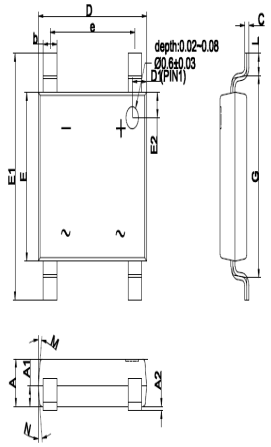
APPLICATION

- 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	@T_C=120°C	$I_{(AV)}$	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^2S
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°C T_J=125°C	V_F	-- 1.0	1.3 --	V
Leakage current	V_R=1000V	T_J=25°C T_J=125°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)	$RthJ_A$ $RthJ_C$ $RthJ_L$	40 6 15	°C/W

REV.-3, Oct-2019, KBCA02

Note :

(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^2_30 mm x 30 mm copper pad.

RATING AND CHARACTERISTIC CURVES
RABS20M

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FIG.1 FORWARD CURRENT DERATING CURVE

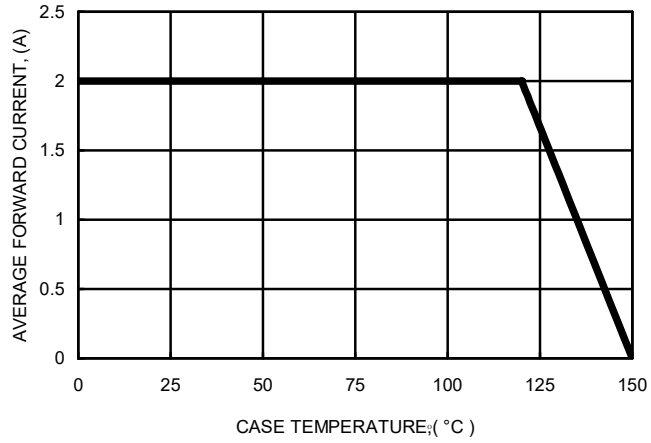


FIG.2 MAXIMUM NON-REPETITIVE SURGE CURRENT

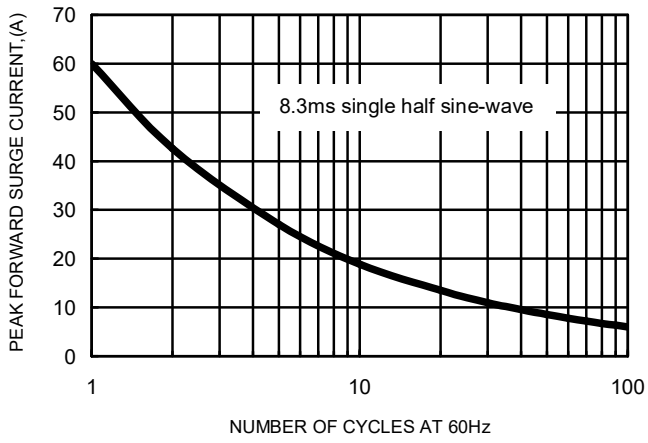


FIG.3- TYPICAL FORWARD CHARACTERISTICS

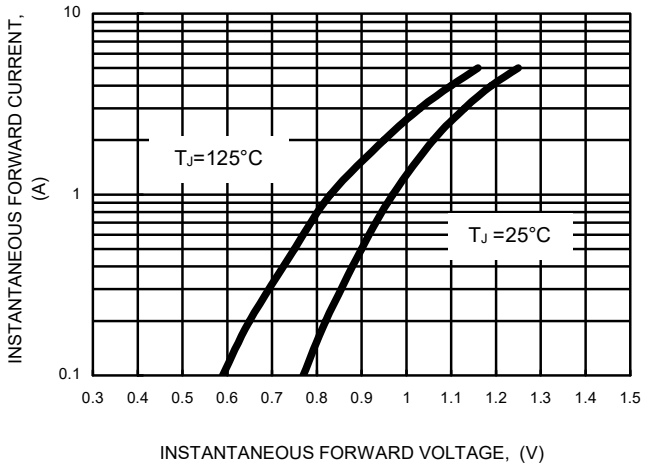


FIG.4- TYPICAL JUNCTION CAPACITANCE

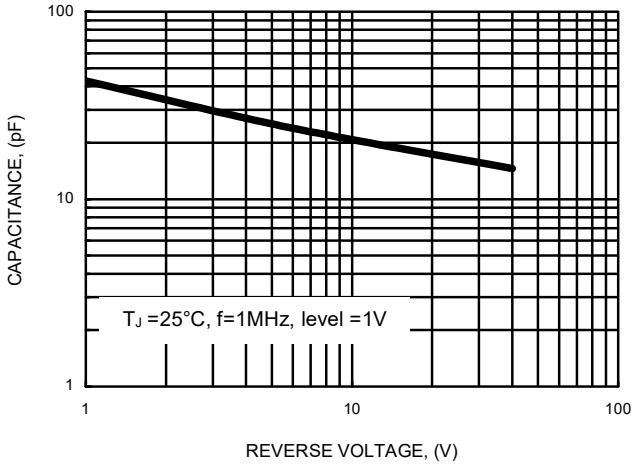
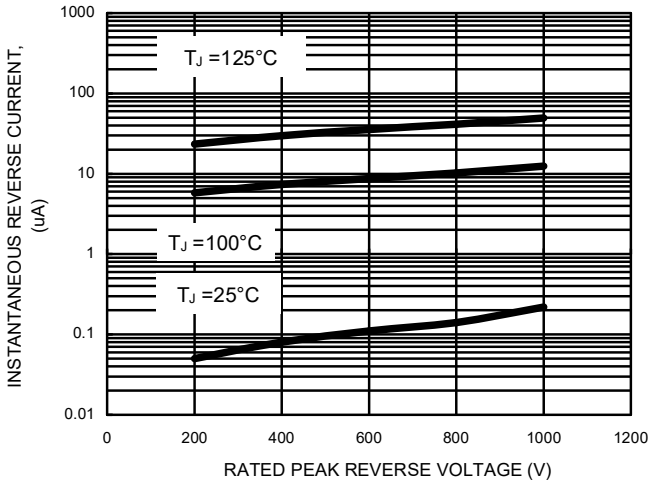


FIG.5- TYPICAL REVERSE CHARACTERISTICS



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