LITE-ON SEMICONDUCTOR

HDS10M

GLASS PASSIVATED SURFACE MOUNT BRIDGE RECTIFIER

REVERSE VOLTAGE – 1000 Volts
FORWARD CURRENT – 1.0 Ampere

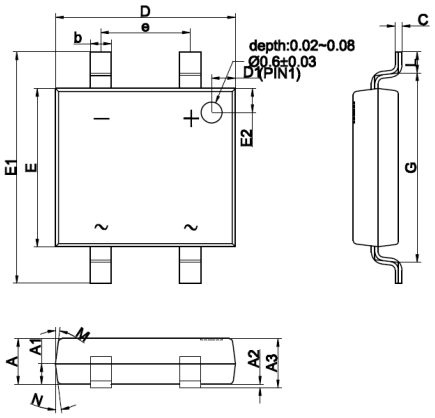
FEATURES

- Ideal for printed circuit board
- Reliable low cost construction utilizing molded plastic technique

MECHANICAL DATA

- Case Material: “Green” molding compound, UL flammability classification 94V-0,(No Br. Sb. Cl.) “Halogen-free”
- Polarity indicator: As marked on the body
- Weight: 92.3mg (Approximate)
- Marking Code: HDS10M

HDS



HDS		
DIM	MIN	MAX
A	1.20	1.30
A1	0.43	0.63
A2	0.00	0.15
A3	1.20	1.40
b	0.45	0.75
C	0.10	0.30
D	4.85	5.25
D1	0.45	0.85
e	2.54 BSC.	
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
Average rectified output current per device	@T_A =75 (Note 1)	$I_{(AV)}$	1.0	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load	@ T_A=25°C @ T_A=125°C (Note 1)	I_{FSM}	30 24	A
Peak forward surge current 1ms single half sine-wave superimposed on rated load	@ T_A=25°C @ T_A=125°C (Note 1)	I_{FSM}	60 48	A
I^2 t rating for fusing (t = 8.3ms)		I^2t	2.39	A^2S
Operating and storage temperature range		T_J ,T_{STG}	-55 to +150	°C

STATIC ELECTRICAL CHARACTERISTICS

PARAMETER	TEST CONDITION		SYMBOL	MAX.	UNIT
Forward voltage (Note1)	I_F = 0.5A	T_A = 25°C	V_F	0.95	V
Leakage current	V_R = 1000V	T_A = 25°C T_A = 125°C (Note1)	I_R	5 100	uA
Typical junction capacitance (Note 2)			C_J	8.2	pF

THERMAL CHARACTERISTICS

PARAMETER	SYMBOL	TYP.	UNIT
Typical thermal resistance (Note 3)	$RthJ_C$ $RthJ_L$ $RthJ_A$	30 18 40	°C/W

Note :

(1) Perform static test after the temperature of oven is steady 20 minutes.
(2) Measured at 1.0MHz and applied reverse voltage of 4.0V DC
(3) Thermal resistance junction to case, lead and ambient in accordance with JESD-51. Unit mounted on glass-epoxy substrate with foot print copper pad per pin

REV.0, Jun.-2016, KBDB48

RATING AND CHARACTERISTIC CURVES
HDS10M

FIG.1- FORWARD CURRENT DERATING CURVE

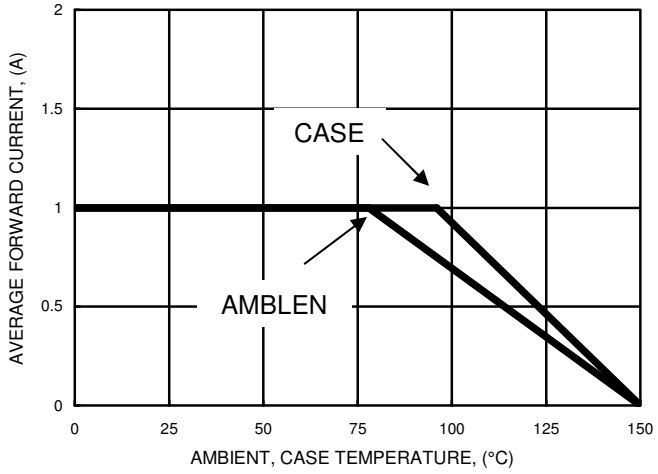


FIG.2- MAXIMUM NON-REPETITIVE SURGE CURRENT

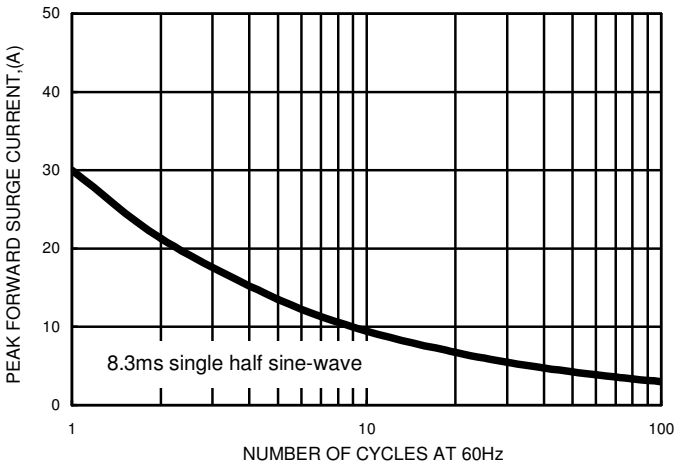


FIG.3- TYPICAL FORWORD CHARACTERISTICS

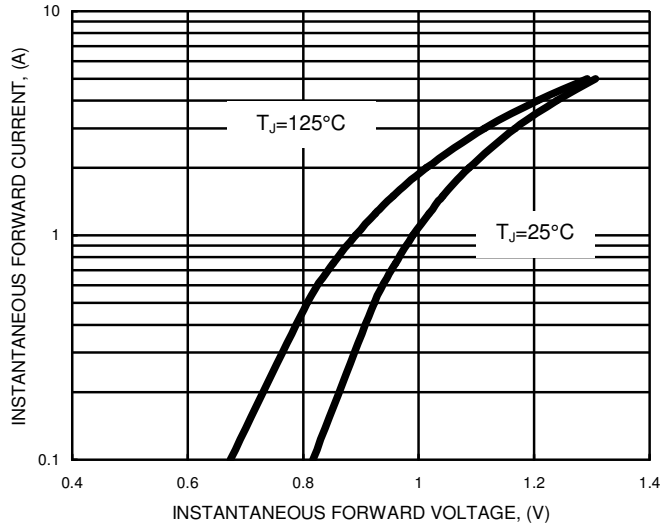


FIG.4- TYPICAL JUNCTION CAPACITANCE

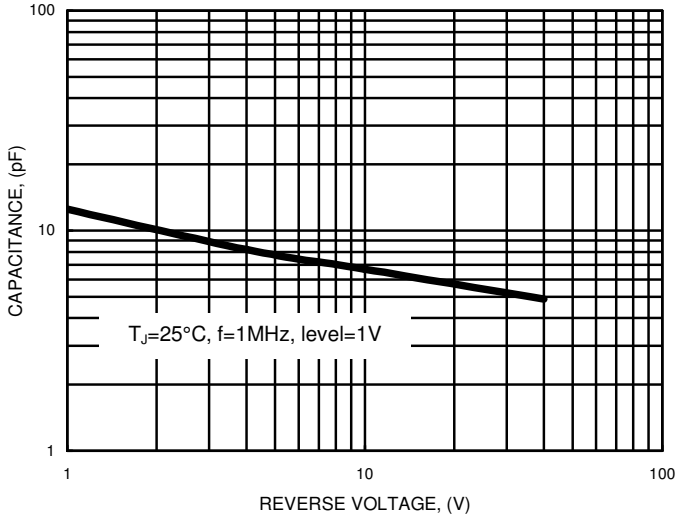
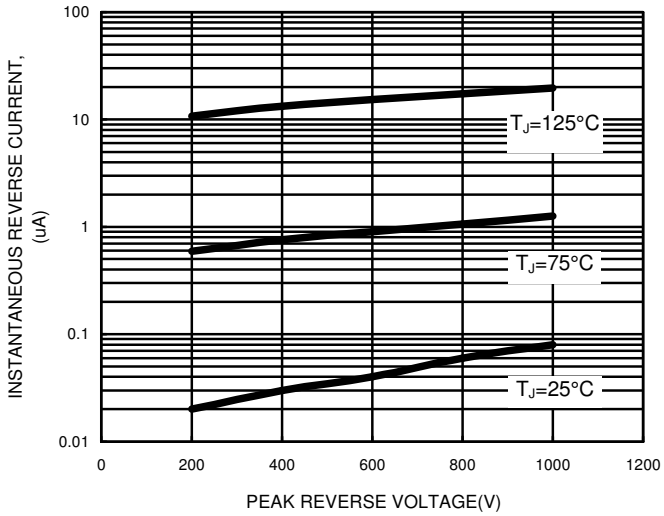


FIG.5- TYPICAL REVERSE CHARACTERISTICS



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