

**GLASS PASSIVATED
SURFACE MOUNT BRIDGE RECTIFIER**

**REVERSE VOLTAGE – 1000 Volts
FORWARD CURRENT – 1.0 Ampere**

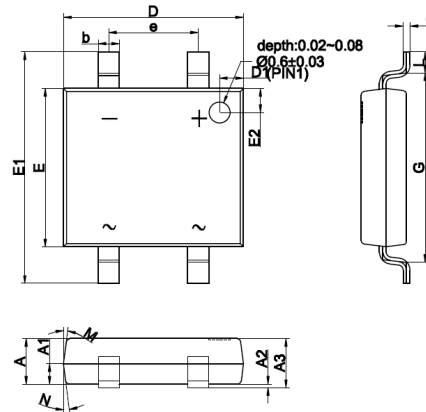
FEATURES

- 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	@ $T_A=25^\circ\text{C}$	30	A
	@ $T_A=125^\circ\text{C}$ (Note 1)	24	A
Peak forward surge current 1ms single half sine-wave superimposed on rated load	@ $T_A=25^\circ\text{C}$	60	A
	@ $T_A=125^\circ\text{C}$ (Note 1)	48	A
$I^2 t$ rating for fusing ($t = 8.3\text{ms}$)	$I^2 t$	2.39	A^2S
Operating and storage temperature range	T_J, T_{STG}	-55 to +150	$^\circ\text{C}$

STATIC ELECTRICAL CHARACTERISTICS

PARAMETER	TEST CONDITION	SYMBOL	MAX.	UNIT
Forward voltage (Note1)	$I_F = 0.5\text{A}$ $T_A = 25^\circ\text{C}$	V_F	0.95	V
Leakage current	$V_R = 1000\text{V}$ $T_A = 25^\circ\text{C}$	I_R	5	μA
	$T_A = 125^\circ\text{C}$ (Note1)		100	
Typical junction capacitance (Note 2)		C_J	8.2	pF

THERMAL CHARACTERISTICS

PARAMETER	SYMBOL	TYP.	UNIT
Typical thermal resistance (Note 3)	R_{thJC}	30	$^\circ\text{C/W}$
	R_{thJL}	18	
	R_{thJA}	40	

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

RATING AND CHARACTERISTIC CURVES HDS10M



FIG.1- FORWARD CURRENT DERATING CURVE

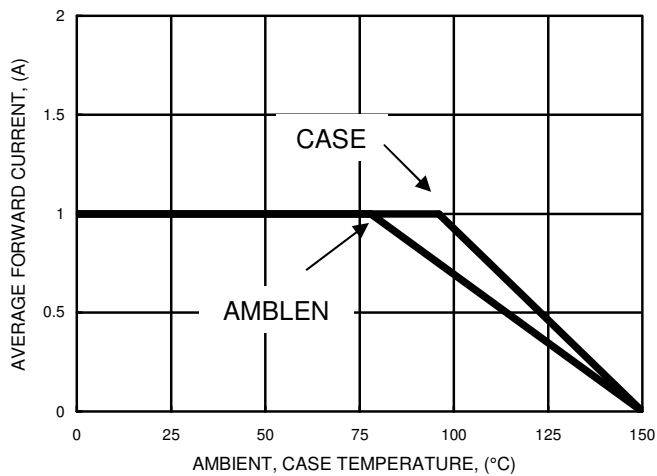


FIG.2- MAXIMUM NON-REPETITIVE SURGE CURRENT

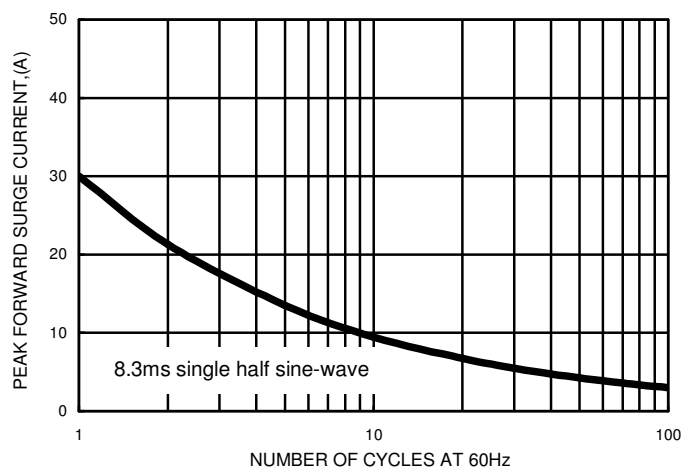


FIG.3- TYPICAL FORWARD CHARACTERISTICS

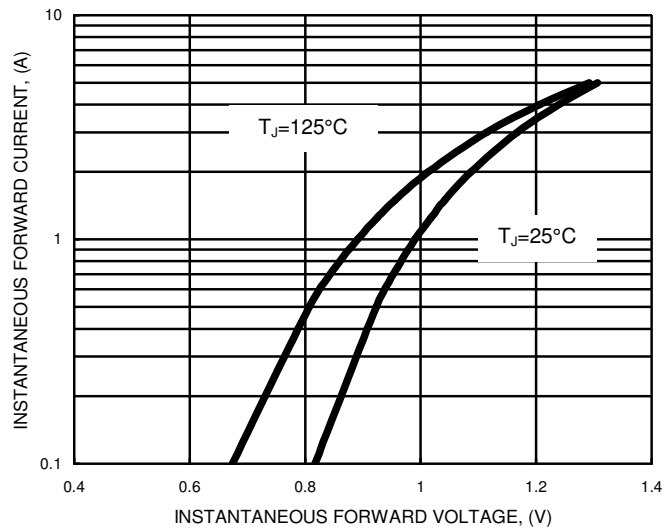


FIG.4- TYPICAL JUNCTION CAPACITANCE

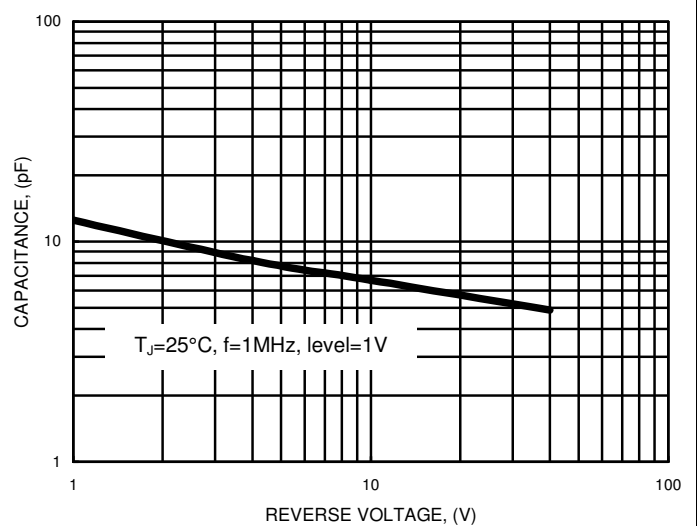
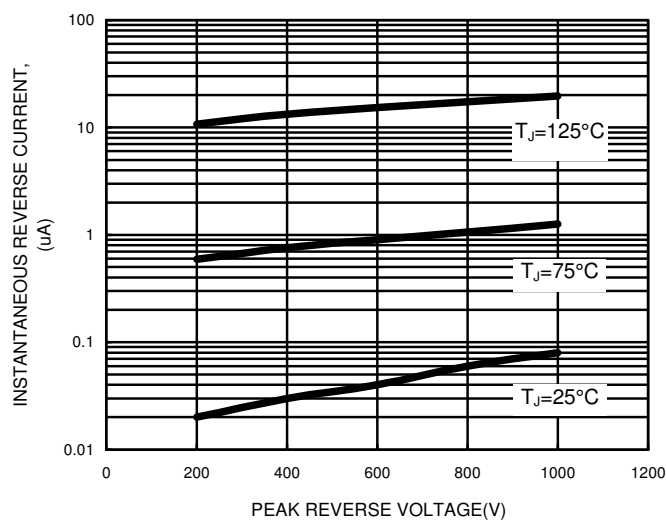


FIG.5- TYPICAL REVERSE CHARACTERISTICS



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