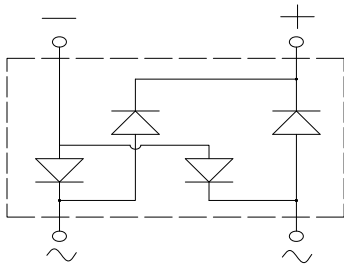
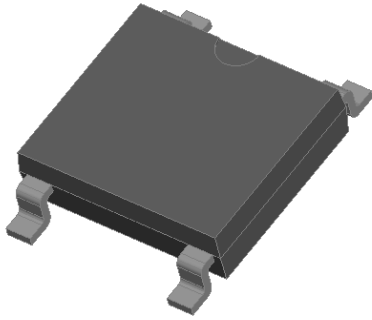


## High Efficient Bridge Rectifiers



### Features

- UL recognition, file #E313149
- Ideal for automated placement
- Glass passivated chip junction
- High surge current capability
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260 °C

### Typical Applications

General purpose use in AC/DC bridge full wave rectification for SMPS, lighting ballast, adapter, battery charger, home appliances, office equipment, and telecommunication applications.

### Mechanical Data

- **Package:** ABS  
Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant, Halogen free
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** As marked on body

### ■ Maximum Ratings (T<sub>a</sub>=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	HABS1506	HABS1508	HABS1510
Device marking code			HABS1506	HABS1508	HABS1510
Maximum Repetitive Peak Reverse Voltage	VRRM	V	600	800	1000
Maximum RMS Voltage	VRMS	V	420	560	700
Maximum DC blocking Voltage	VDC	V	600	800	1000
Average rectified output current @60Hz sine wave, R-load, T <sub>c</sub> =110°C	I <sub>O</sub>	A	1.5		
Forward Surge Current (Non-repetitive) @60Hz Half-sine wave, 1 cycle, T <sub>j</sub> =25°C	IFSM	A	50		
Forward Surge Current (Non-repetitive) @1ms, square wave, 1 cycle, T <sub>j</sub> =25°C			100		
Current squared time @1ms≤t<8.3ms T <sub>j</sub> =25°C, Rating of per diode	I <sup>2</sup> t	A <sup>2</sup> s	10.4		
Storage temperature	T <sub>stg</sub>	°C	-55 ~ +150		
Junction temperature	T <sub>j</sub>	°C	-55 ~ +150		

### ■ Electrical Characteristics (T<sub>a</sub>=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	HABS1506	HABS1508	HABS1510
Maximum reverse recovery time	t <sub>r</sub>	ns	I <sub>F</sub> =0.5A, I <sub>R</sub> =1.0A, I <sub>r</sub> =0.25A	75		
Maximum instantaneous forward voltage drop per diode	V <sub>F</sub>	V	I <sub>FM</sub> =0.7A	1.7		
Maximum DC reverse current at rated DC blocking voltage per diode	I <sub>R</sub>	μA	T <sub>j</sub> =25°C	5		
			T <sub>j</sub> =125°C	100		
Typical junction capacitance	C <sub>j</sub>	pF	Measured at 1MHz and Applied Reverse Voltage of 4.0 V.D.C	15		



# HABS1506 THRU HABS1510

## ■ Thermal Characteristics ( $T_a=25^\circ\text{C}$ Unless otherwise specified)

PARAMETER		SYMBOL	UNIT	HABS1506	HABS1508	HABS1510
Thermal Resistance	Between junction and ambient	$R\theta\text{-A}$	$^\circ\text{C/W}$	62.5		
	Between junction and lead	$R\theta\text{-L}$		25.0		
	Between junction and case	$R\theta\text{-C}$		8.0		

Note: Device mounted on P.C.B with 35mm\*25mm\*1.7mm.

## ■ Ordering Information (Example)

PREFERRED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
HABS1506-HABS1510	F1	Approximate 0.095	4000	/	64000	13" reel
HABS1506-HABS1510	F5	Approximate 0.095	5000	/	80000	13" reel

## ■ Characteristics (Typical)

FIG1:Io-Tc Curve

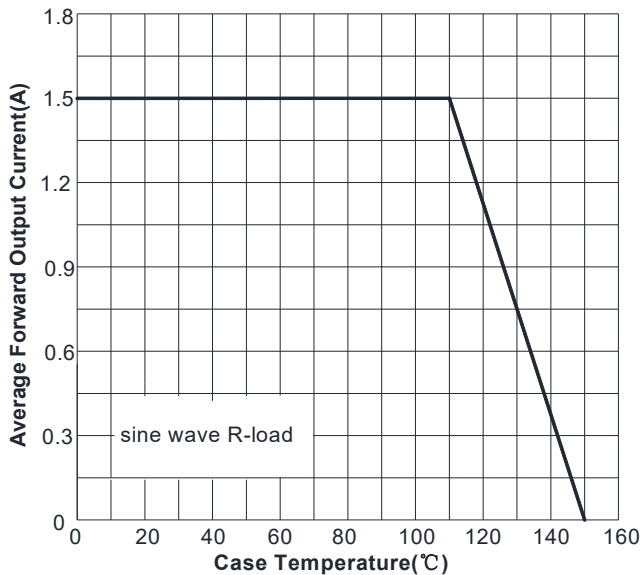


FIG2:Surge Forward Current Capability

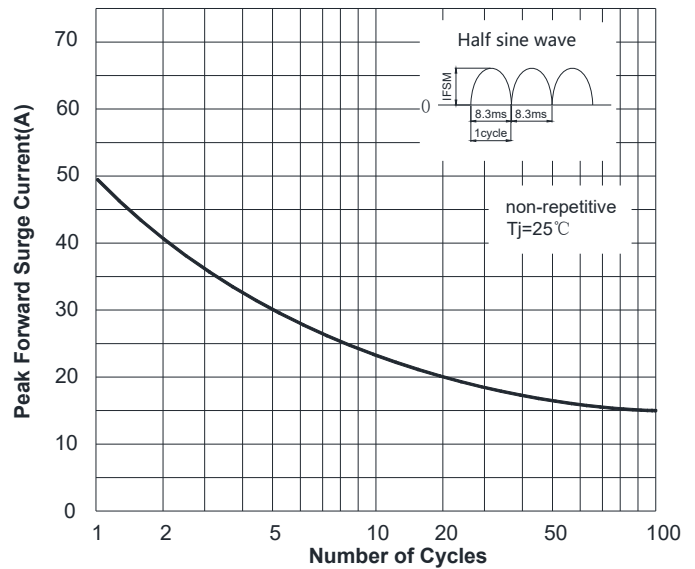


FIG3: Typical Forward Voltage

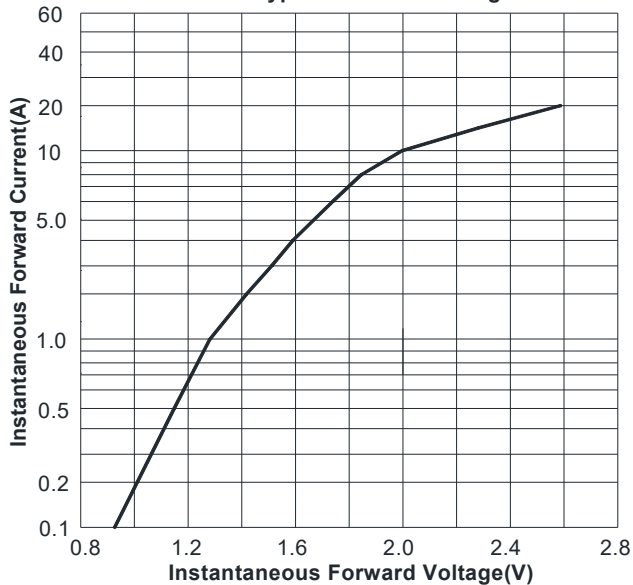
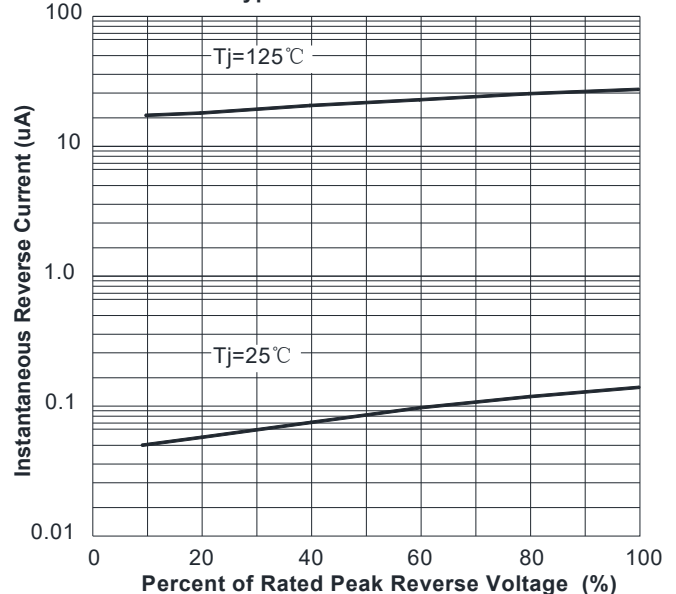


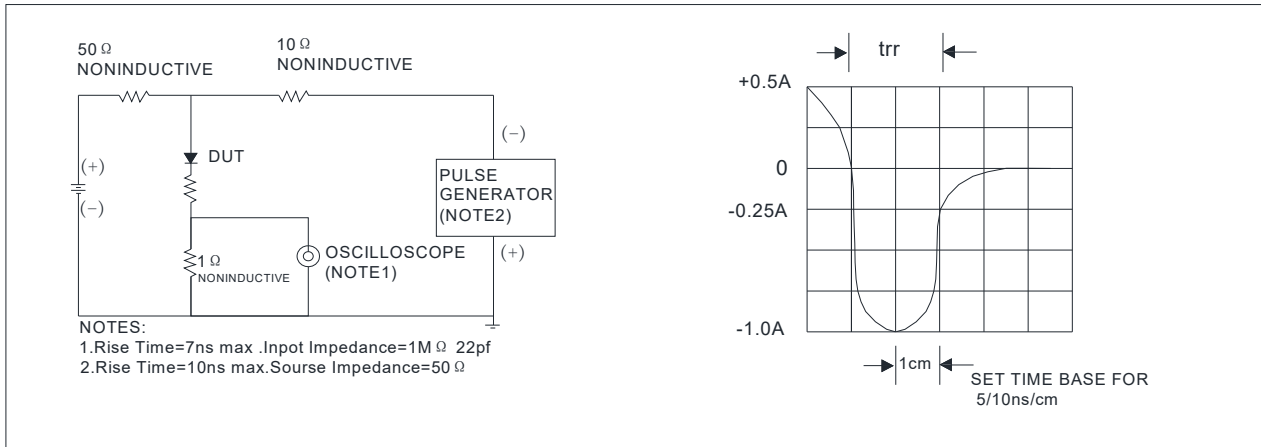
FIG4:Typical Reverse Characteristics



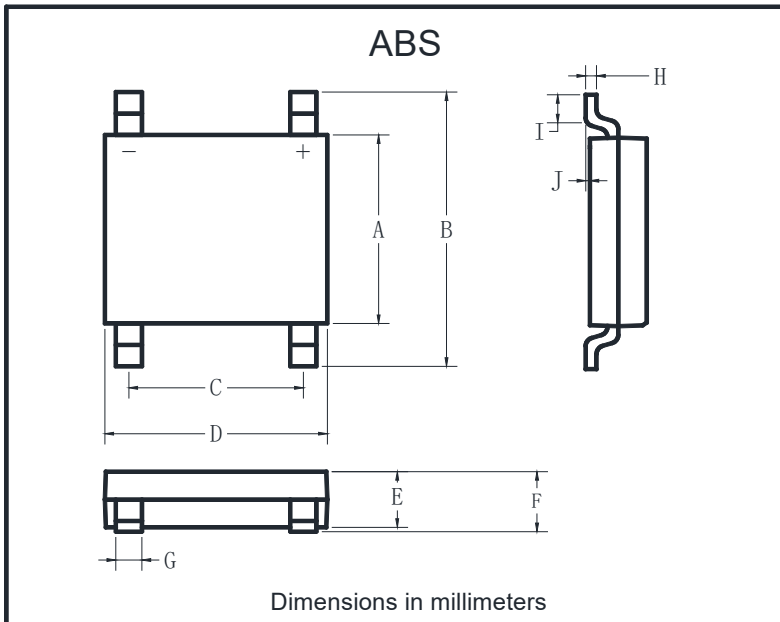


# HABS1506 THRU HABS1510

FIG.5: Diagram of circuit and Testing wave form of reverse recovery time

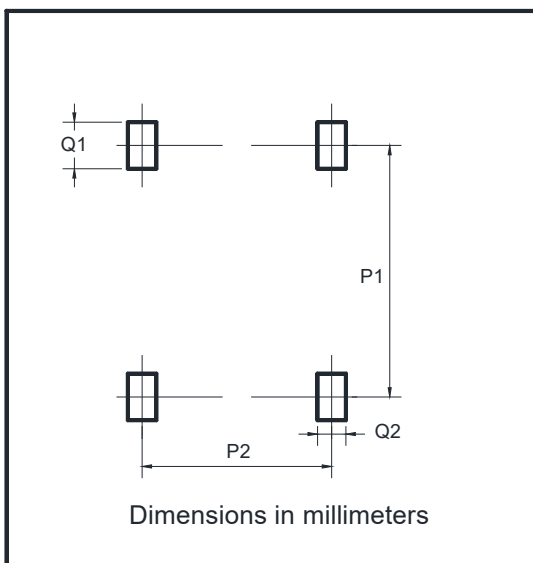


## ■ Outline Dimensions



ABS		
Dim	Min	Max
A	4.30	4.50
B	6.00	6.40
C	3.90	4.10
D	4.90	5.10
E	1.25	1.45
F	1.60 Max	
G	0.60	0.70
H	0.15	0.25
I	0.30	0.80
J	0.02	0.15

## ■ Suggested pad layout



Dim	Min
P1	5.72
P2	4.00
Q1	1.00
Q2	0.90



## HABS1506 THRU HABS1510

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