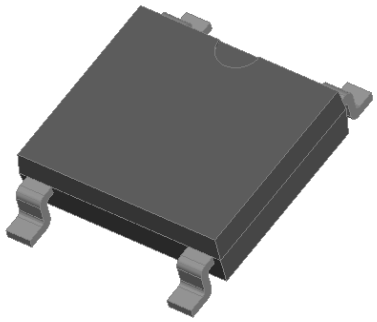
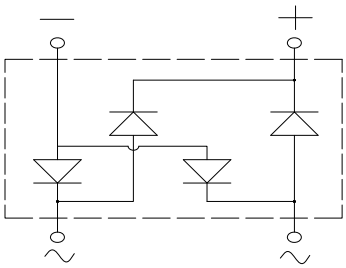
High Efficient Bridge Rectifiers





Features

- 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 (Ta=25℃ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	HABS1506	HABS1508	HABS1510
Device marking code			HABS1506	HABS1508	HABS1510
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	V	600	800	1000
Maximum RMS Voltage	V_{RMS}	V	420	560	700
Maximum DC blocking Voltage	V_{DC}	V	600	800	1000
Average rectified output current @60Hz sine wave, R-load, Tc=110℃	I_O	A	1.5		
Forward Surge Current (Non-repetitive) @60Hz Half-sine wave,1 cycle, Tj=25℃	I_{FSM}	A	50		
Forward Surge Current (Non-repetitive) @1ms, square wave, 1 cycle, Tj=25℃			100		
Current squared time @1ms≤t<8.3ms Tj=25℃, Rating of per diode	I^2t	A^2s	10.4		
Storage temperature	T_{stg}	℃	-55 ~ +150		
Junction temperature	T_j	℃	-55 ~ +150		

■Electrical Characteristics (Ta=25℃ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	HABS1506	HABS1508	HABS1510
Maximum reverse recovery time	t_{rr}	ns	I_F=0.5A, I_R=1.0A, I_{rr}=0.25A	75		
Maximum instantaneous forward voltage drop per diode	V_F	V	I_{FM}=0.7A	1.7		
Maximum DC reverse current at rated DC blocking voltage per diode	I_R	μA	T_j=25℃	5		
			T_j=125℃	100		
Typical junction capacitance	Cj	pF	Measured at 1MHz and Applied Reverse Voltage of 4.0 V.D.C	15		

■ Thermal Characteristics (Ta=25℃ Unless otherwise specified)

PARAMETER		SYMBOL	UNIT	HABS1506	HABS1508	HABS1510
Thermal Resistance	Between junction and ambient	RθJ-A	℃/W	62.5		
	Between junction and lead	RθJ-L		25.0		
	Between junction and case	RθJ-C		8.0		

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

■ Ordering Information (Example)

PREFERED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIIMUM 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

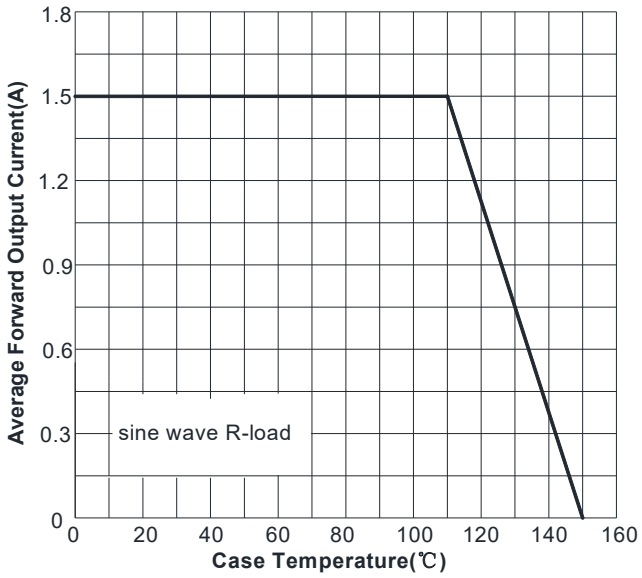


FIG2:Surge Forward Current Capability

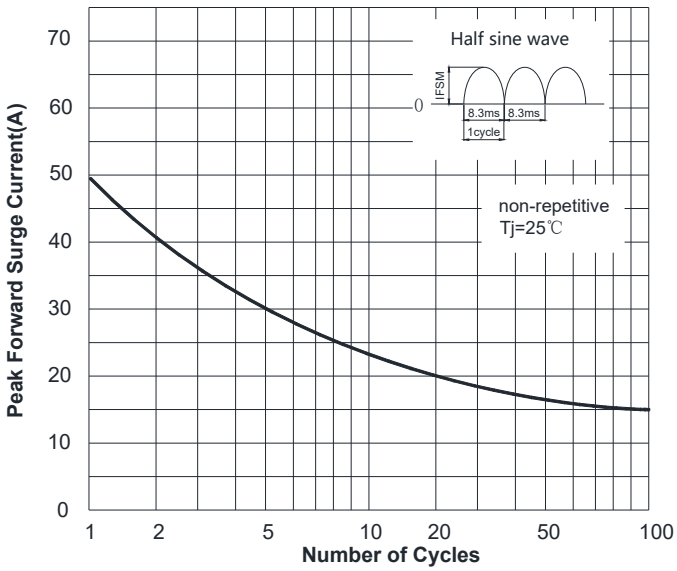


FIG3: Typical Forward Voltage

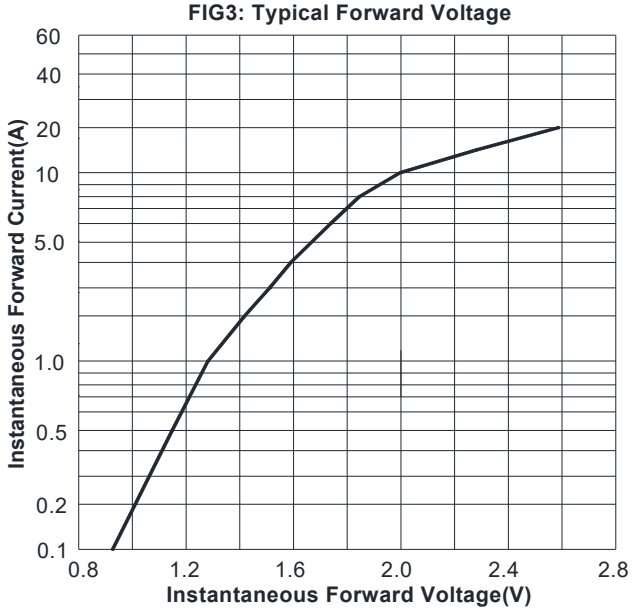


FIG4:Typical Reverse Characteristics

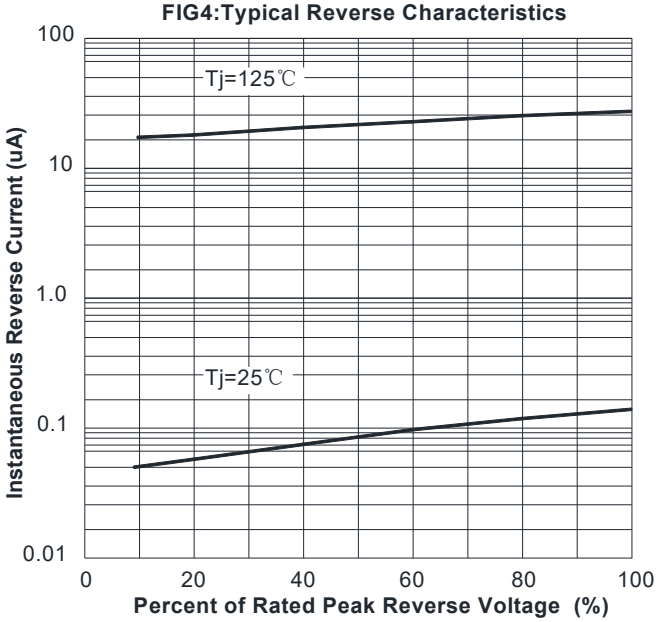
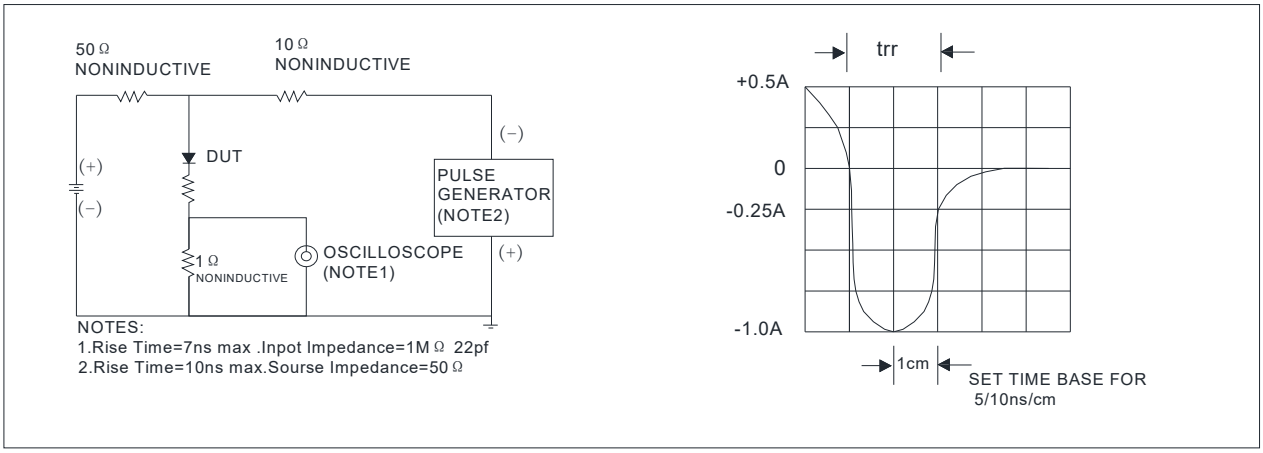
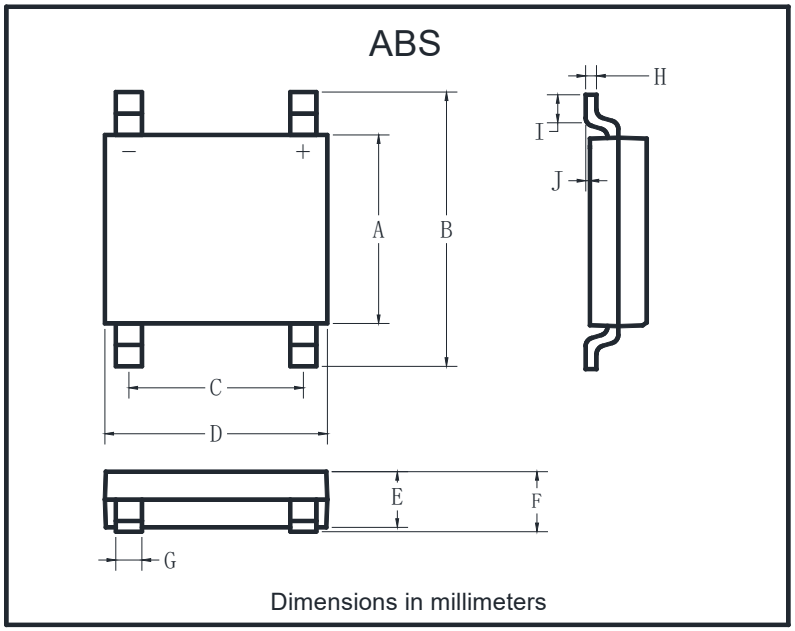


FIG.5: Diagram of circuit and Testing wave form of reverse recovery time

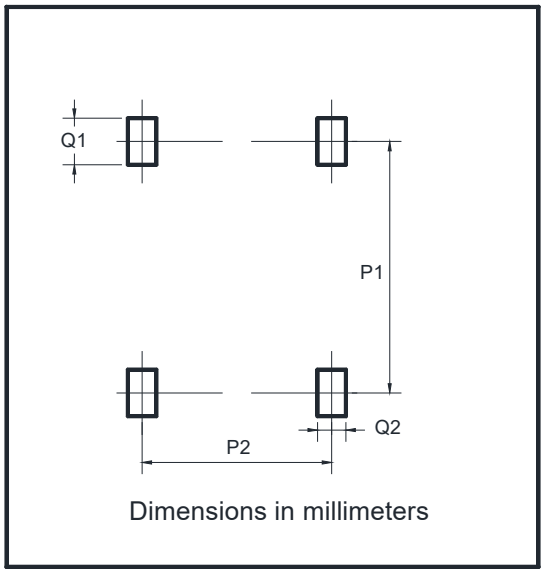


■ Outline Dimensions



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

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