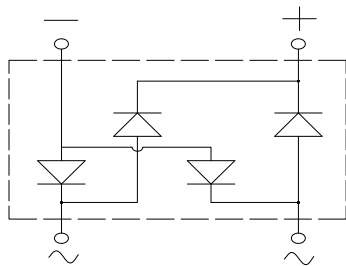


High Efficient Bridge Rectifiers



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, -compliant, Halogen free
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** As marked on body

■ Maximum Ratings ($T_a=25^{\circ}\text{C}$ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	HABS6	HABS8	HABS10
Device marking code			HABS6	HABS8	HABS10
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, $T_c=120^{\circ}\text{C}$	I_O	A	1.0		
Forward Surge Current (Non-repetitive) @60Hz Half-sine wave, 1 cycle, $T_j=25^{\circ}\text{C}$	IFSM	A	30		
Forward Surge Current (Non-repetitive) @1ms, square wave, 1 cycle, $T_j=25^{\circ}\text{C}$			60		
Current squared time @1ms≤t<8.3ms $T_j=25^{\circ}\text{C}$, Rating of per diode	I^2t	A^2s	3.74		
Storage temperature	T_{stg}	$^{\circ}\text{C}$	-55 ~ +150		
Junction temperature	T_j	$^{\circ}\text{C}$	-55 ~ +150		

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

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	HABS6	HABS8	HABS10
Maximum reverse recovery time	t_r	ns	$I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_F=0.25\text{A}$	75		
Maximum instantaneous forward voltage drop per diode	V_F	V	$I_{FM}=0.5\text{A}$	1.7		
Maximum DC reverse current at rated DC blocking voltage per diode	IR	μA	$T_j=25^{\circ}\text{C}$	5		
			$T_j=125^{\circ}\text{C}$	100		
Typical junction capacitance	C_j	pF	Measured at 1MHz and Applied Reverse Voltage of 4.0 V.D.C	12		

HABS6 THRU HABS10

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

PARAMETER		SYMBOL	UNIT	HABS6	HABS8	HABS10
Thermal Resistance	Between junction and ambient	$R_{\theta J-A}$	$^{\circ}\text{C/W}$	62.5		
	Between junction and lead	$R_{\theta J-L}$		25.0		
	Between junction and case	$R_{\theta J-C}$		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
HABS6 - HABS10	F1	Approximate 0.095	4000	/	64000	13" reel
HABS6 - HABS10	F5	Approximate 0.095	5000	/	80000	13" reel

■ Characteristics (Typical)

FIG1: I_o - T_c Curve

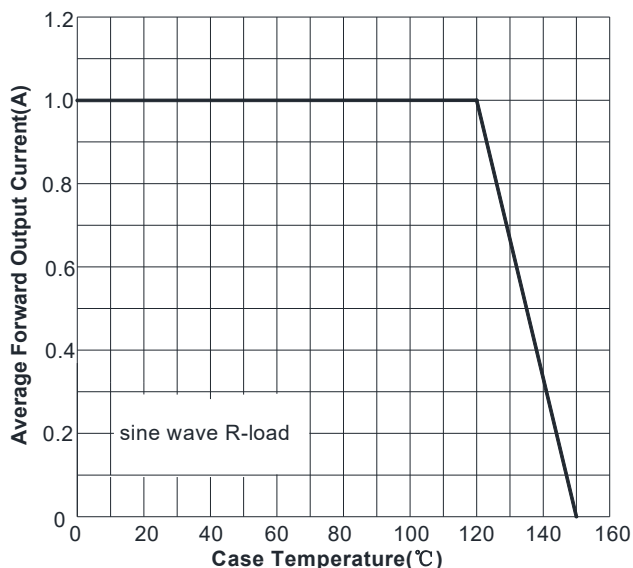


FIG2: Surge Forward Current Capability

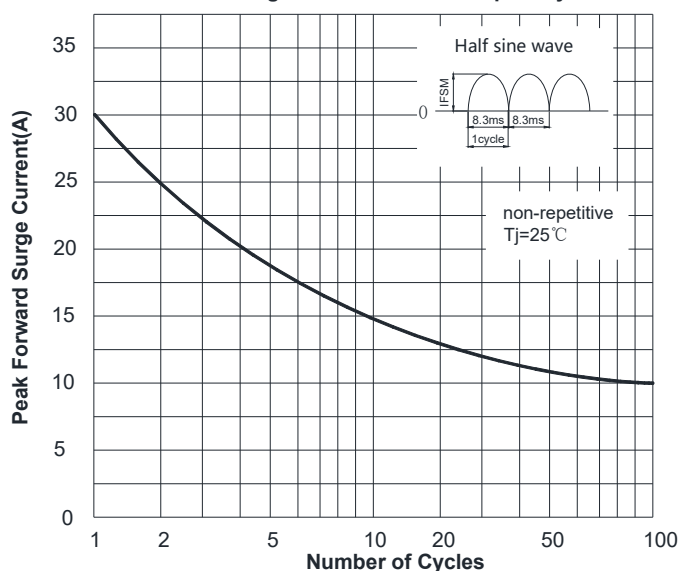


FIG3: Typical Forward Voltage

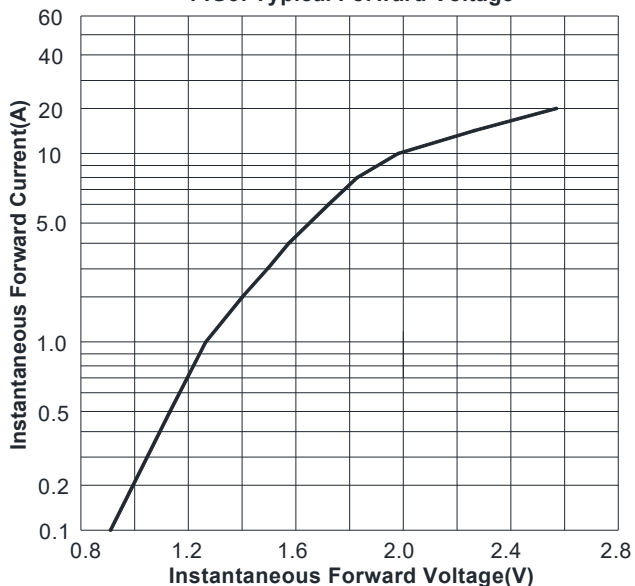
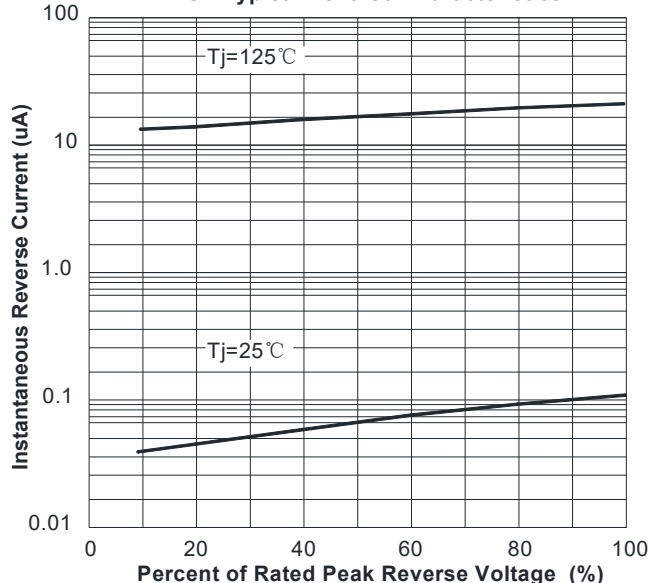
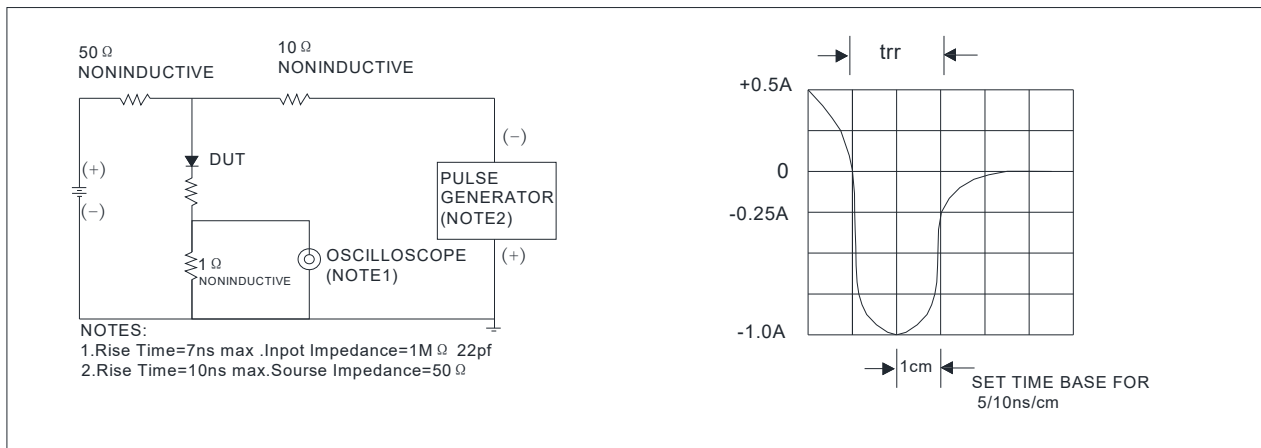


FIG4: Typical Reverse Characteristics

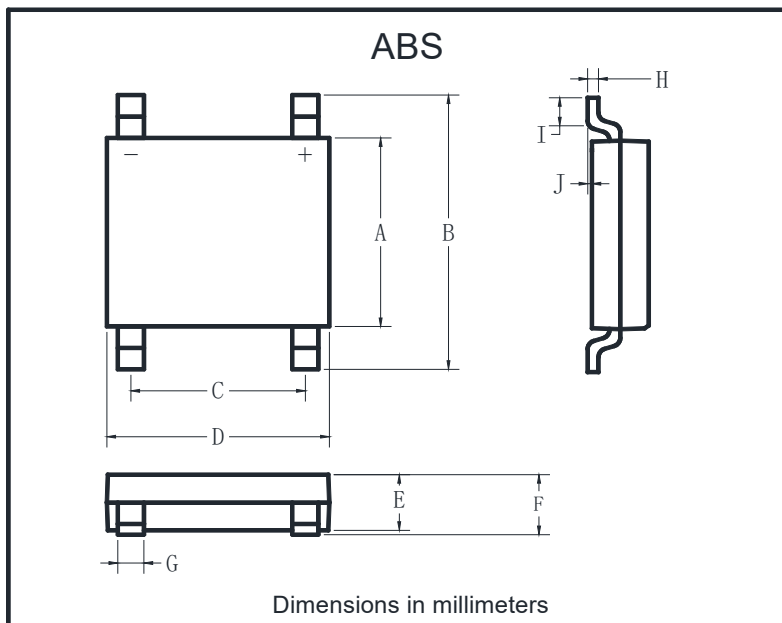


HABS6 THRU HABS10

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

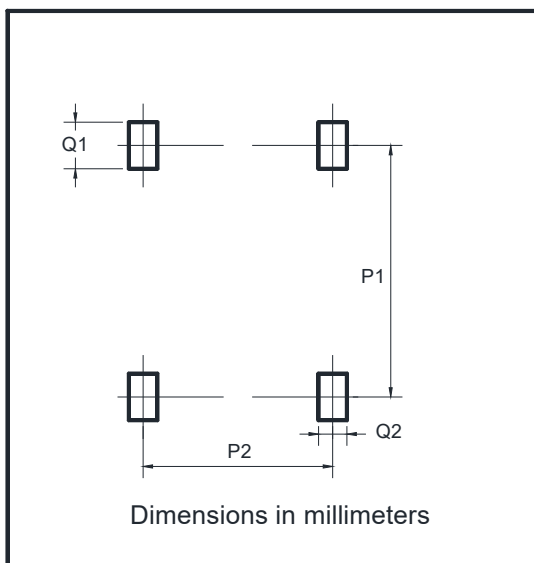


■ Outline Dimensions



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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