

HBS Plastic-Encapsulate Bridge Rectifier

● Features

- Ideal for printed circuit board
- Glass passivated junction
- High surge current capability
- The plastic material used carries Underwriters Laboratory flammability recognition 94V-0
- High temperature soldering guaranteed: 260/10 seconds at 5lbs., (2.3kg) tension

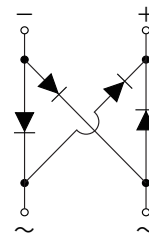
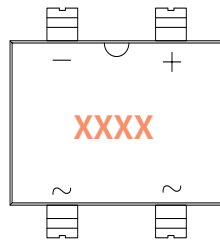
● Applications

General purpose 1 phase Bridgerectifier applications

● Mechanical Data

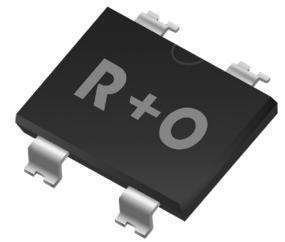
- Case: HBS
Molding compound meets UL 94V-0 flammability rating, RoHS-compliant, halogen-free
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: Polarity symbols molded or Marked on body

● Function Diagram



Reverse Voltage
50-1000 V
Forward Current
4.0 Ampere

HBS



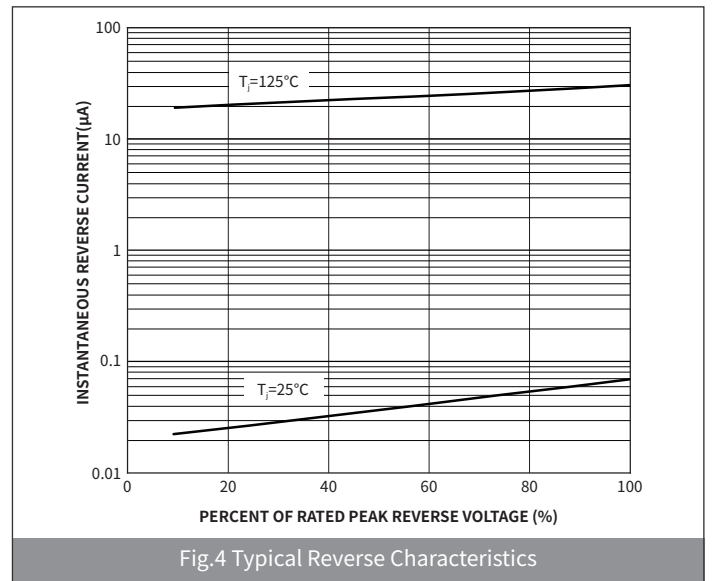
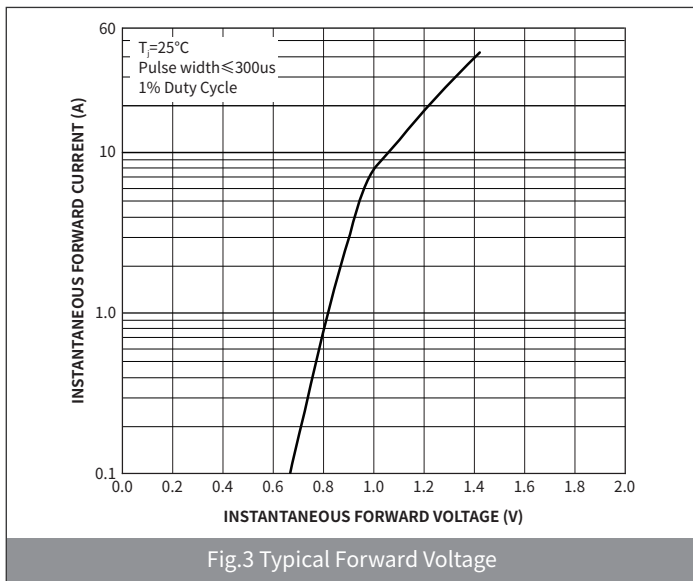
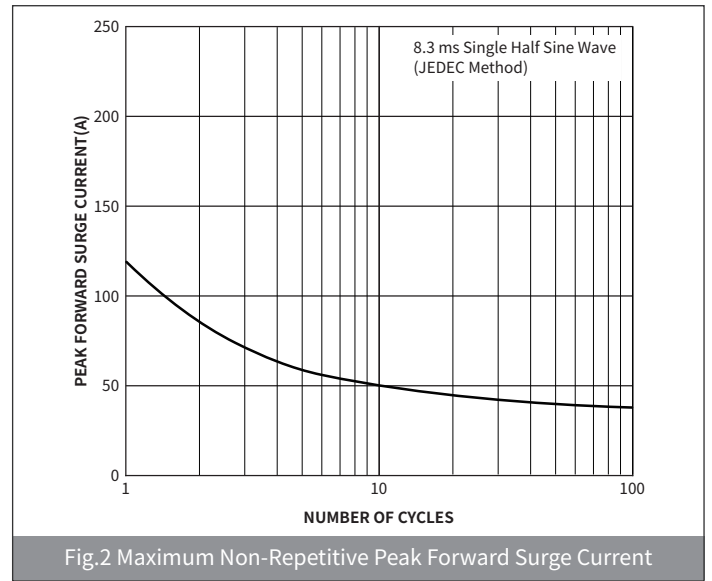
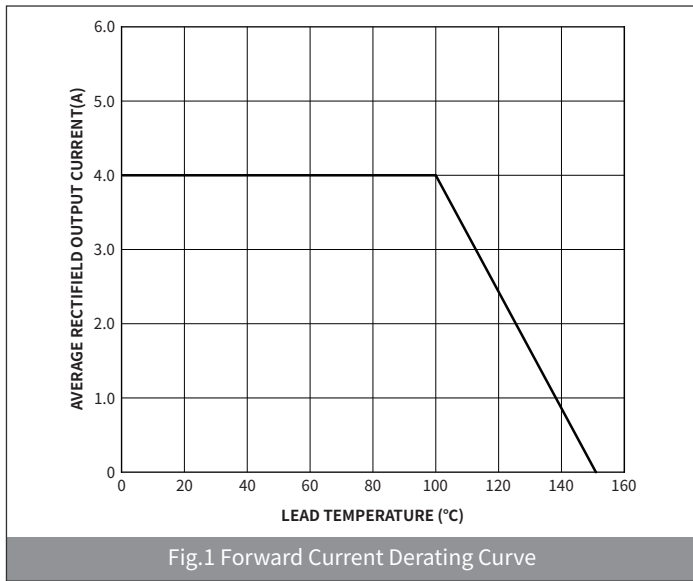
● Maximum Ratings (Ta=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	HBS4005	HBS401	HBS402	HBS404	HBS406	HBS408	HBS410
Device marking code			HBS4005	HBS401	HBS402	HBS404	HBS406	HBS408	HBS410
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	V	50	100	200	400	600	800	1000
Maximum RMS Voltage	V_{RMS}	V	35	70	140	280	420	560	700
Maximum DC blocking Voltage	V_{DC}	V	50	100	200	400	600	800	1000
Maximum Average Forward Rectified Current @60Hz sinewave, Resistance load, TL (Fig.1)	$I_{F(AV)}$	A	4.0						
Non-repetitive Peak Forward Surge Current @ t=8.3ms Half-sine wave	I_{FSM}	A	120						
Rating for fusing (t=8.3ms, Ta=25 °C)	I^2t	A ² S	59.8						
Storage temperature	T_{stg}	°C	-55 ~ +150						
Junction temperature	T_j	°C	-55 ~ +150						
Typical Thermal Resistance	$R_{\theta J-A}$	°C /W	55						
	$R_{\theta J-L}$	°C /W	10						
	$R_{\theta J-C}$	°C /W	6						

● **Electrical Characteristics** (Ta=25°C Unless otherwise noted)

PARAMETER	TEST CONDITIONS	SYMBOL	UNIT	HBS4005	HBS401	HBS402	HBS404	HBS406	HBS408	HBS410
Maximum instantaneous forward voltage	$I_F=1.0A$	V_F	V	0.89						
	$I_F=2.0A$			0.93						
	$I_F=4.0A$			0.98						
Maximum DC reverse current at rated DC blocking voltage	$V_R=V_{DC}, T_A=25^\circ C$	I_{R1}	μA	5.0						
	$V_R=V_{DC}, T_A=125^\circ C$	I_{R2}		100						

● **Ratings And Characteristics Curves** (Ta=25°C Unless otherwise specified)



HBS4005 THRU HBS410

HBS 4.0 AMP Plastic-Encapsulate Bridge Rectifier

● Ordering Information

PACKAGE	PACKAGE CODE	REEL(pcs)	BOX(pcs)	CARTON(pcs)	DELIVERY MODE
HBS	R3	2500	5000	20000	13"

● Package Outline Dimensions (HBS)

Symbol	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	1.40	1.80	0.055	0.071
A1	0.05	0.20	0.002	0.008
B	10.00	10.40	0.394	0.409
C	0.20	0.40	0.008	0.016
D	6.90	7.30	0.272	0.287
E	9.60	10.20	0.378	0.402
b	1.30	1.70	0.051	0.067
e	4.90	5.30	0.193	0.209

● Suggested Pad Layout

Symbol	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
M	9.30	—	0.366	—
N	3.50	—	0.138	—
Y	1.00	—	0.039	—
X	1.60	—	0.063	—