

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

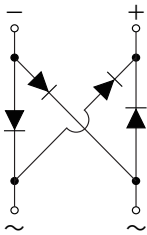
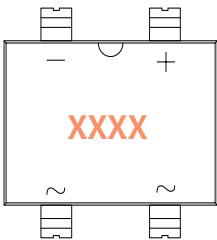
Applications

General purpose 1 phase Bridgerectifier applications

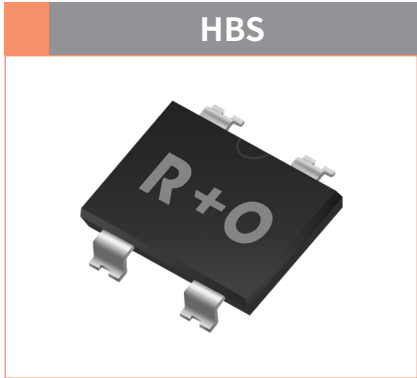
Mechanical Data

- 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
6.0 Ampere



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

PARAMETER	SYMBOL	UNIT	HBS6005	HBS601	HBS602	HBS604	HBS606	HBS608	HBS610
Device marking code			HBS6005	HBS601	HBS602	HBS604	HBS606	HBS608	HBS610
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	6.0						
Non-repetitive Peak Forward Surge Current @ t=8.3ms Half-sine wave	I_{FSM}	A	170						
Rating for fusing (t=8.3ms, Ta=25 °C)	I^2t	A ² S	119.9						
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						

HBS6005 THRU HBS610

HBS 6.0 AMP Plastic-Encapsulate Bridge Rectifier

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

PARAMETER	TEST CONDITIONS	SYMBOL	UNIT	HBS6005	HBS601	HBS602	HBS604	HBS606	HBS608	HBS610
Maximum instantaneous forward voltage	$I_F=1.0A$	V_F	V	0.88						
	$I_F=3.0A$			0.93						
	$I_F=6.0A$			0.96						
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)

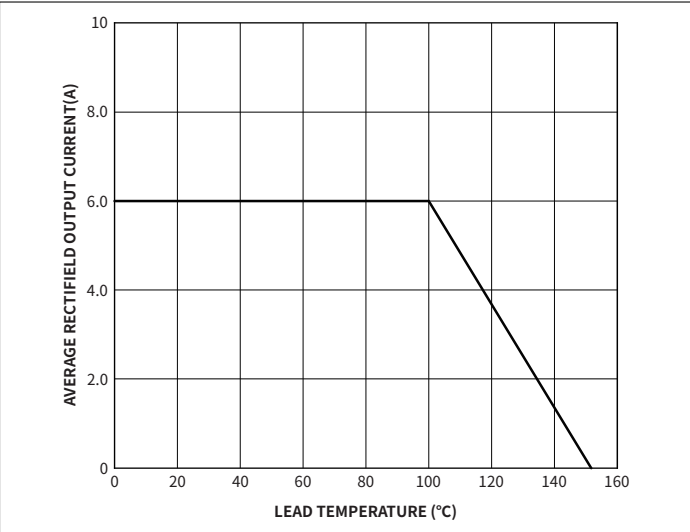


Fig.1 Forward Current Derating Curve

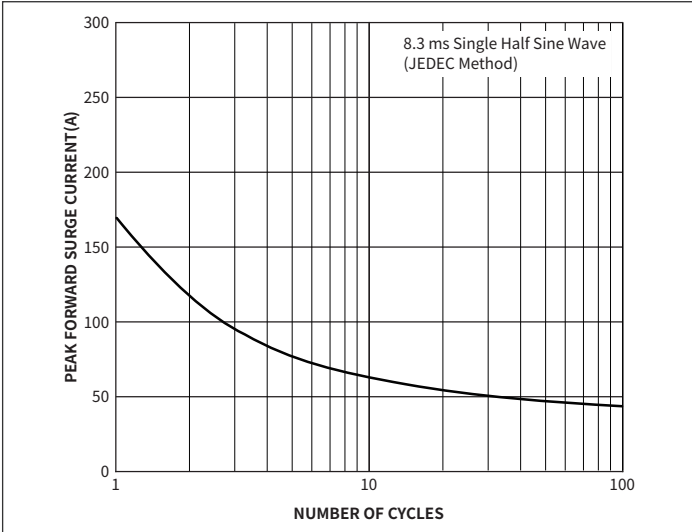


Fig.2 Maximum Non-Repetitive Peak Forward Surge Current

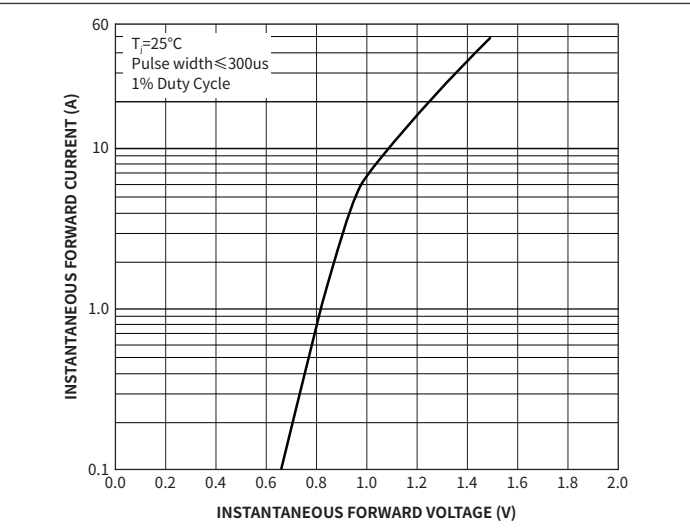


Fig.3 Typical Forward Voltage

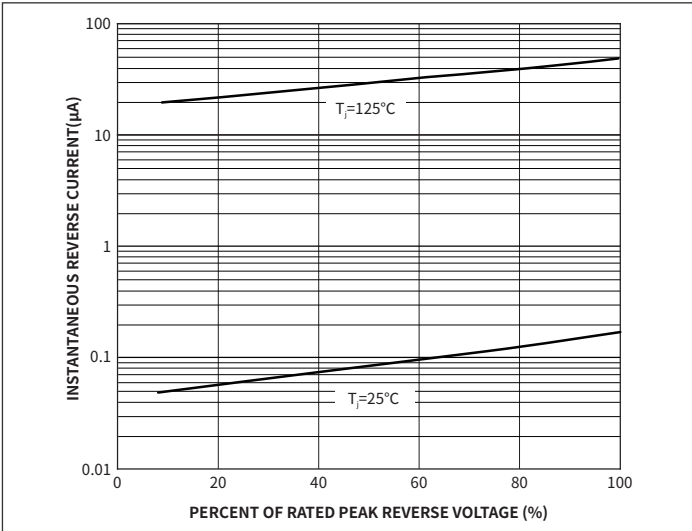


Fig.4 Typical Reverse Characteristics

HBS6005 THRU HBS610

HBS 6.0 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	—