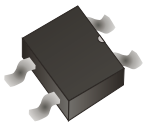
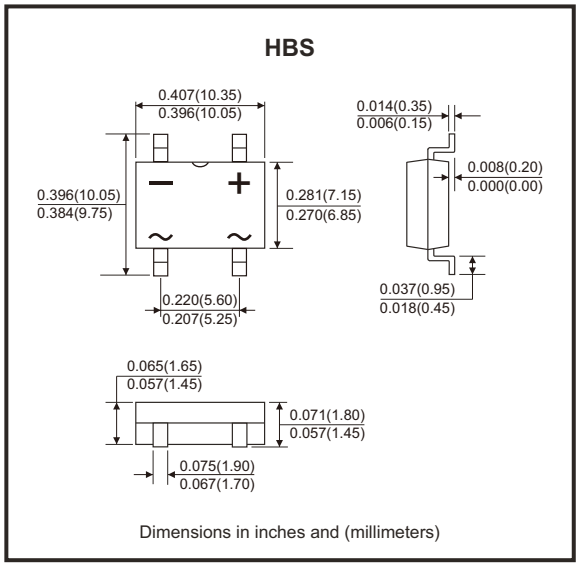
HBS502-HF Thru. HBS510-HF

Reverse Voltage: 200 to 1000 V
Forward Current: 5.0 A
RoHS Device
Halogen Free



Features

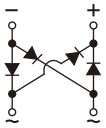
- Surface mount bridge, small package.
- Ideal for printed circuit boards.
- Glass passivated chip junction.
- High forward current capability up to 5A.
- High surge current capability.
- Low profile package.
- Low forward voltage drop.
- Plastic package has underwrites laboratory flammability classification 94V-0.



Mechanical data

- Case: HBS, molded plastic.
- Epoxy: UL-94V-0 flammability rating.
- Terminals: Matte tin plated leads, solderable per J-STD-002 and JESD22-B102.
- Polarity: As marked on body.

Circuit Diagram



Maximum Ratings and Electrical Characteristics (at T_A=25°C, unless otherwise specified)

Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Parameter	Symbol	HBS 502-HF	HBS 504-HF	HBS 506-HF	HBS 508-HF	HBS 510-HF	Unit
Max. repetitive peak reverse voltage	V_{RRM}	200	400	600	800	1000	V
Max. RMS voltage	V_{RMS}	140	280	420	560	700	V
Max. DC blocking voltage	V_{DC}	200	400	600	800	1000	V
Max. average forward rectified output current at T_A=25°C	$I_{F(AV)}$	5					A
Non-repetitive peak forward surge current 8.3ms single sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	130					A
Rating for fusing (t < 8.3ms)	I^2t	93					A^2_{sec}
Instantaneous forward voltage drop per diode @ I_F=1A @ I_F=2.5A @ I_F=5A	V_F	0.83 Typ. 0.88 Typ. 0.92 Typ.		0.88 Max. 0.93 Max. 0.97 Max.			V
Reverse current at rated DC blocking voltage T_A=25° T_A=125°	I_R	0.15 Typ. 20 Typ.		5 Max. 100 Max.			μA
Typical capacitance (Note 1)	C_J	38					pF
Typical thermal resistance	$R_{\theta JA}$ $R_{\theta JC}$ $R_{\theta JL}$	69 12 12					°C/W
Operating junction and storage temperature range	T_J, T_{STG}	-55 to +150					°C

Notes: 1. Measured at 1MHz and applied reverse voltage of 5V DC.

Company reserves the right to improve product design , functions and reliability without notice.

Rating and Characteristics Curves (HBS502-HF Thru. HBS510-HF)

Fig.1 - Derating Curve Output Rectified Current

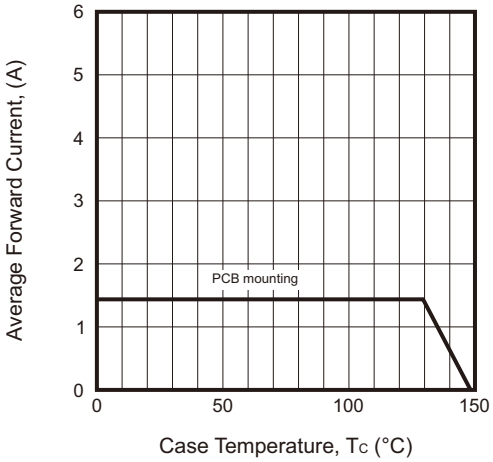


Fig.2 - Typ. Forward Characteristics per Diode

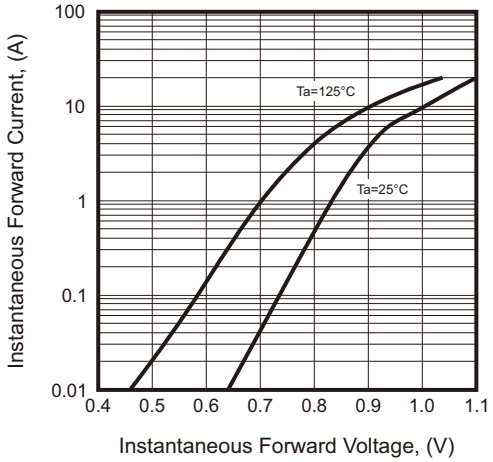


Fig.3 - Max. Non-Repetitive Peak Forward Surge Current per Diode

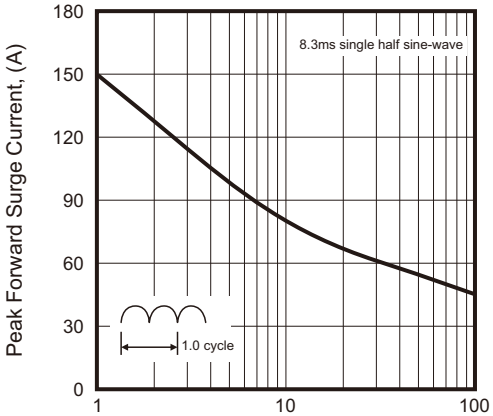


Fig.4 - Typ. Reverse Characteristics per Diode

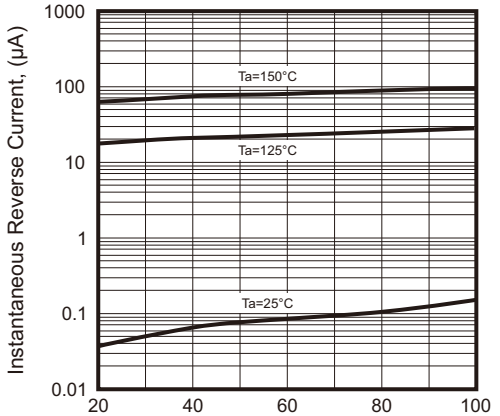
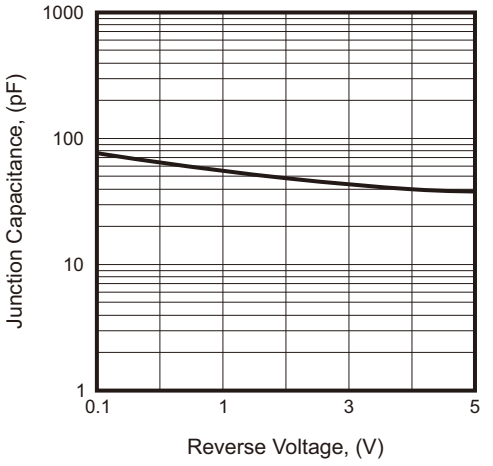
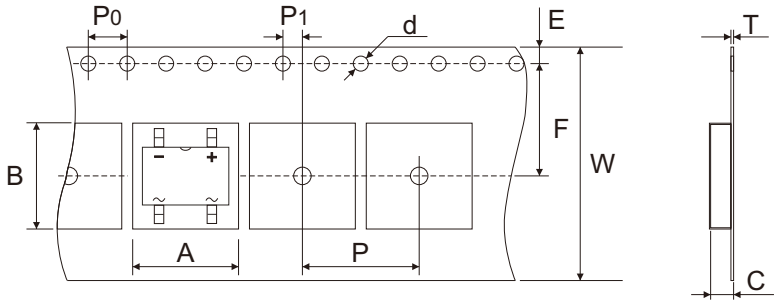
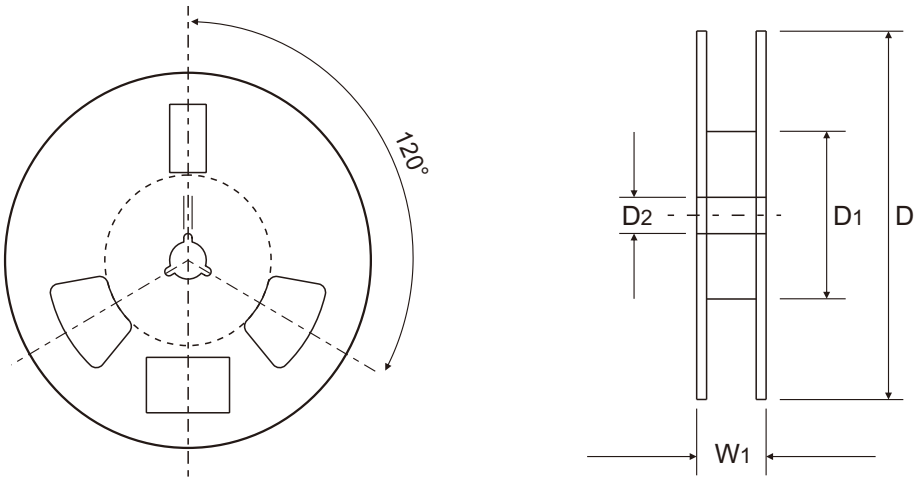


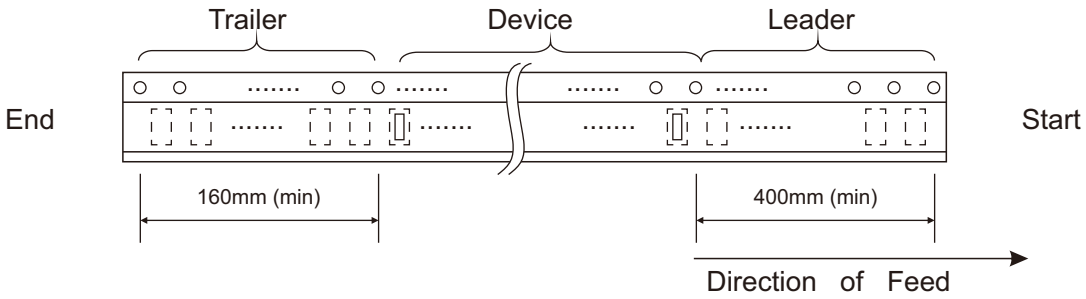
Fig.5 - Typ. Junction Capacitance per Diode



Reel Taping Specification





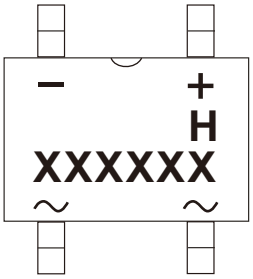


	SYMBOL	A	B	C	d	D	D1	D2
HBS	(mm)	10.60 ± 0.10	10.60 ± 0.10	1.95 ± 0.10	1.50 + 0.10 − 0.00	330 ± 1.00	100.00 ± 0.50	13.00 + 0.50 − 0.00
	(inch)	0.417 ± 0.004	0.417 ± 0.004	0.077 ± 0.004	0.059 + 0.004 − 0.000	12.992 ± 0.039	3.937 ± 0.020	0.512 + 0.020 − 0.000

	SYMBOL	E	F	P	P0	P1	T	W	W1
HBS	(mm)	1.75 ± 0.10	11.50 ± 0.10	12.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.10	0.30 ± 0.05	24.00 ± 0.30	28.50 Max
	(inch)	0.069 ± 0.004	0.453 ± 0.004	0.472 ± 0.004	0.157 ± 0.004	0.079 ± 0.004	0.012 ± 0.002	0.945 ± 0.012	1.122 Max

Marking Code

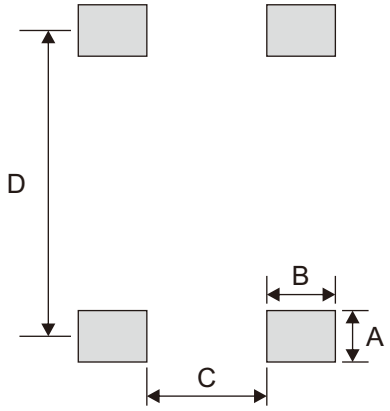
Part Number	Marking Code
HBS502-HF	HBS502
HBS504-HF	HBS504
HBS506-HF	HBS506
HBS508-HF	HBS508
HBS510-HF	HBS510



xxxxxx = Product type marking code
H = Halogen free

Suggested P.C.B. PAD Layout

SIZE	HBS	
	(mm)	(inch)
A	1.50	0.059
B	2.00	0.079
C	3.50	0.138
D	8.92	0.351



Standard Packaging

Case Type	REEL PACK	
	REEL (pcs)	Reel Size (inch)
HBS	2,500	13

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

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