

CURRENT 1.0 Ampere  
VOLTAGE RANG 50 to 1000 Volts

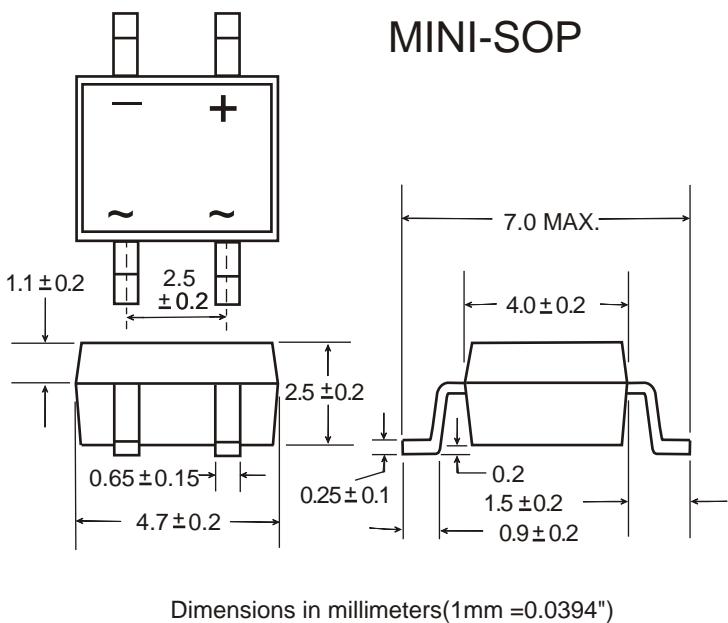
HD01 THRU HD10

## Features

- This series is SGS listed under the Recognized Component Index, file number SZXEC1902259902
- Ideal for surface mount application
- The plastic material used carries Underwriters Laboratory flammability recognition 94V-0
- Surge overload ratings to 30 amperes
- High temperature soldering guaranteed 265°C/10 seconds at 5 lbs (2.3kg) tension

## Mechanical Data

Case: Molded plastic  
Terminals: Plated leads solderable per MIL-STD-202, Method 208  
Polarity: Marked on body  
Mounting Position: Any  
Weight: 0.0044 ounce, 0.125 grams (approx)



## Maximum Ratings & Thermal Characteristics

Rating at 25°C ambient temperature unless otherwise specified, Resistive or Inductive load, 60 Hz.  
For Capacitive load derate current by 20%.

Parameter	Symbol	HD01	HD02	HD03	HD04	HD06	HD08	HD10	unit
Maximum repetitive peak reverse voltage	VRRM	50	100	200	400	600	800	1000	V
Maximum RMS bridge input voltage	VRMS	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	VDC	50	100	200	400	600	800	1000	V
Maximum average forward rectified output current at TA=40°C (*3)	IF(AV)	0.8*~1A							A
Peak forward surge current single sine-wave superimposed on rated load (JEDEC Method)	IFSM	30							A
Rating for fusing ( t<8.3ms)	I <sup>2</sup> t	10							A <sup>2</sup> sec
Typical thermal resistance per element (1)	ReJA	110							°C /W
Typical junction capacitance per element (2)	C <sub>j</sub>	25.0							pF
Operating junction and storage temperature range	T <sub>J</sub> , T <sub>TSG</sub>	-55 to + 150							°C

## Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified. Resistive or Inductive load, 60Hz.  
For Capacitive load derate by 20 %.

Parameter	Symbol	HD01	HD02	HD03	HD04	HD06	HD08	HD10	Unit
Maximum instantaneous forward voltage drop per leg at 1A	VF	1.1							V
Maximum DC reverse current at rated TA =25 °C DC blocking voltage per element TA =125 °C	IR	10 500							μA

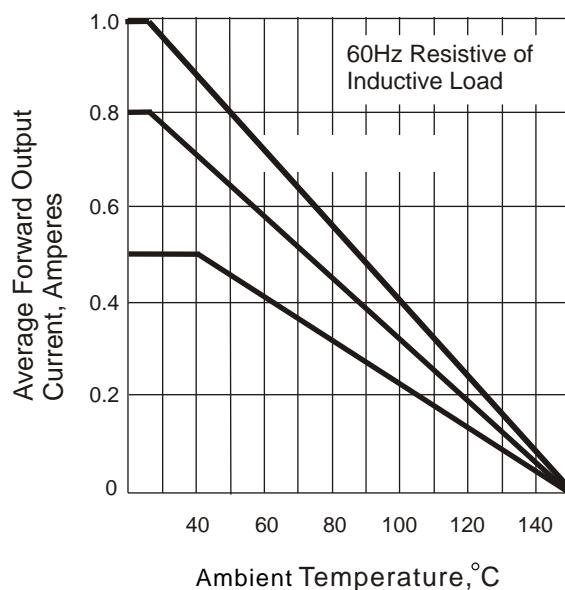
**Notes:** (1)Thermal resistance from Junction to Ambient on P.C.board mounting.  
(2)Measured at 2.0MHz and applied reverse voltage of 4.0 volts.  
(3)R-load on aluminum substrate TA=25°C.

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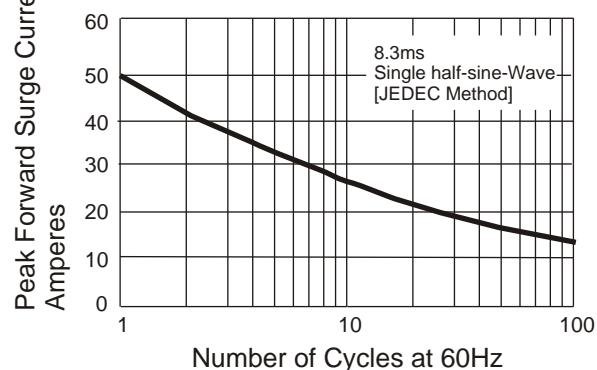
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### Rating and Characteristic Curves ( $T_A=25^\circ\text{C}$ Unless otherwise noted )

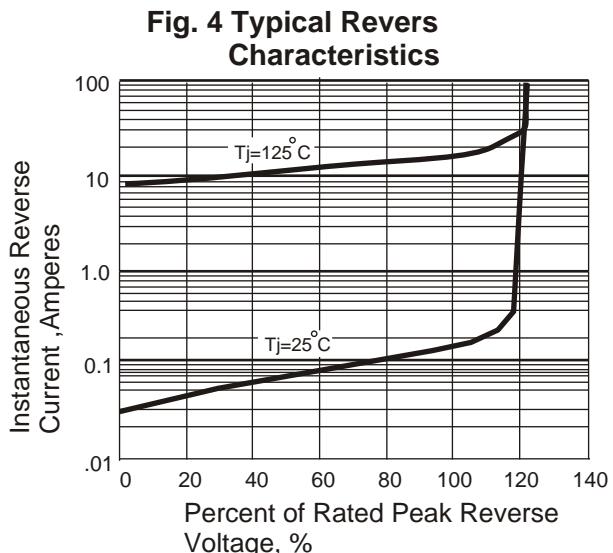
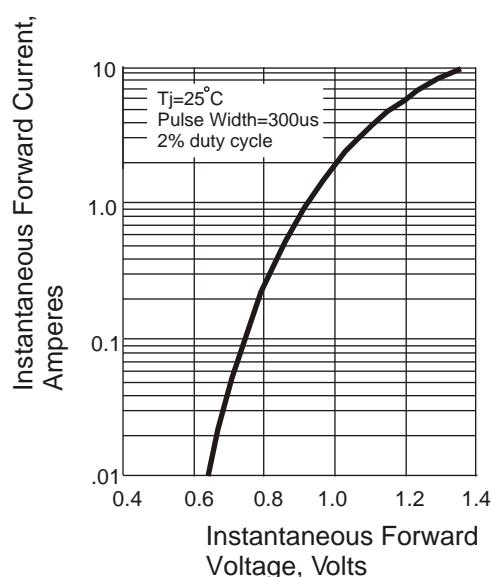
**Fig. 1 Derating Curve for Output Rectified Current**



**Fig. 2 Maximum Non-repetitive Peak Forward Surge Current**



**Fig. 3 Typical Instantaneous Forward Characteristics**



**Fig. 5 Typical Junction Capacitance**

