

## HIGH VOLTAGE ASSEMBLED RECTIFIER

**VOLTAGE RANGE 12000 to 20000 Volts CURRENT 1 Amperes**

### FEATURES

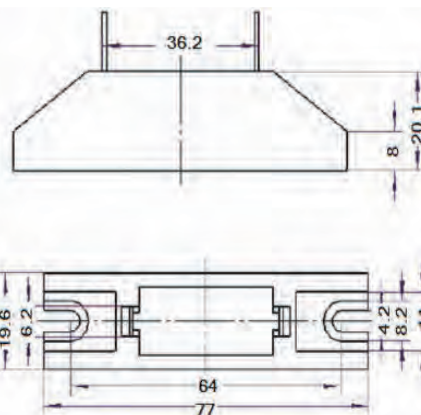
- \* Low cost
- \* Low leakage
- \* Isolated case
- \* Surge overload rating - 50 amperes peak
- \* Mounting position: Any
- \* Low forward voltage drop

### MECHANICAL DATA

- \* Epoxy: Device has UL flammability classification 94V-O



**HVP**



Dimensions in millimeters

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.  
Single phase, half wave, 60 Hz, resistive or inductive load.  
For capacitive load, derate current by 20%.

#### MAXIMUM RATINGS (At TA = 25°C unless otherwise noted)

RATINGS	SYMBOL	HVP12	HVP14	HVP15	HVP16	HVP20	UNITS
Maximum Recurrent Peak Reverse Voltage	VRRM	12	14	15	16	20	K Volts
Maximum RMS Voltage	VRMS	8.4	9.8	10.5	11.2	14	K Volts
Maximum DC Blocking Voltage	VDC	12	14	15	16	20	K Volts
Maximum Average Forward Rectified Current at TA = 50°C	IO	1					Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	IFSM	50					Amps
Typical Current Square Time	I <sup>2</sup> T	10.4					A <sup>2</sup> S
Operating and Storage Temperature Range	TJ, TSTG	-40 to + 120					°C

#### ELECTRICAL CHARACTERISTICS (At TA = 25°C unless otherwise noted)

CHARACTERISTICS	SYMBOL	HVP12	HVP14	HVP15	HVP16	HVP20	UNITS
Maximum Instantaneous Forward Voltage at 1 A DC	VF	18.0	21.0	23.0	24.0	22.0	Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage	IR	5.0					2.0
		50					10

NOTES: Enough heat sink must be considered in application.

# RATING AND CHARACTERISTIC CURVES ( HVP12 THRU HVP20 )

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

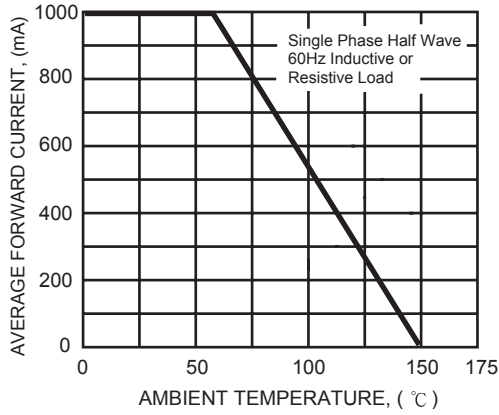


FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

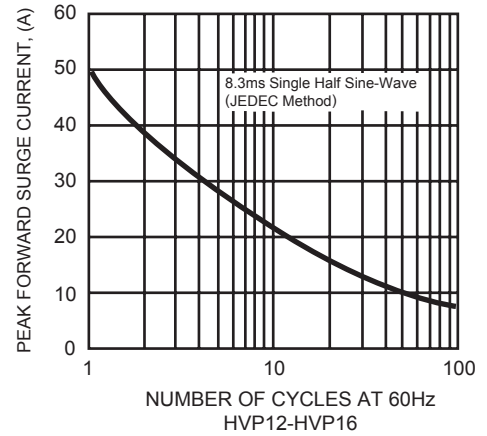


FIG.3 TYPICAL REVERSE CHARACTERISTICS  
HVP12-HVP16

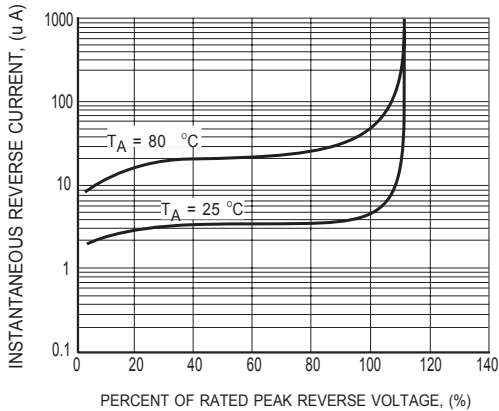
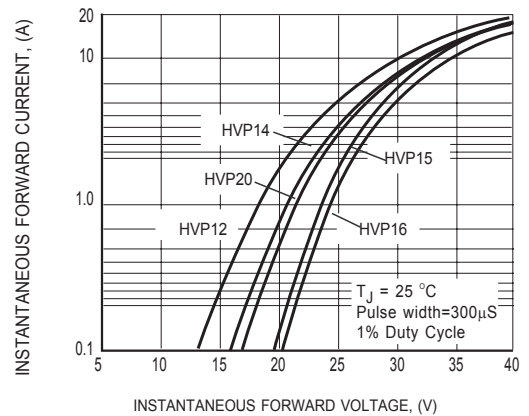


FIG.4 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS  
HVP12-HVP20



# RATING AND CHARACTERISTIC CURVES ( HVP12 THRU HVP20 )

FIG.5 TYPICAL REVERSE CHARACTERISTICS  
HVP20

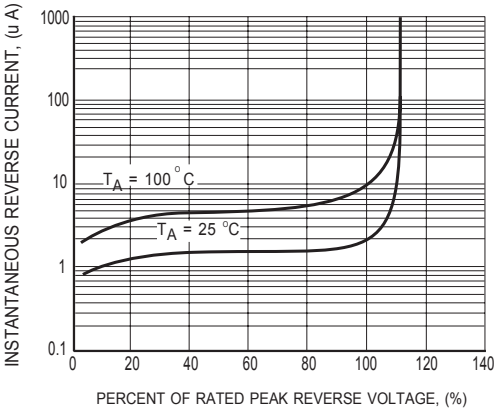
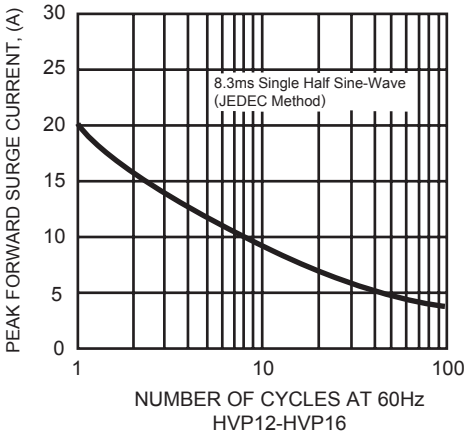


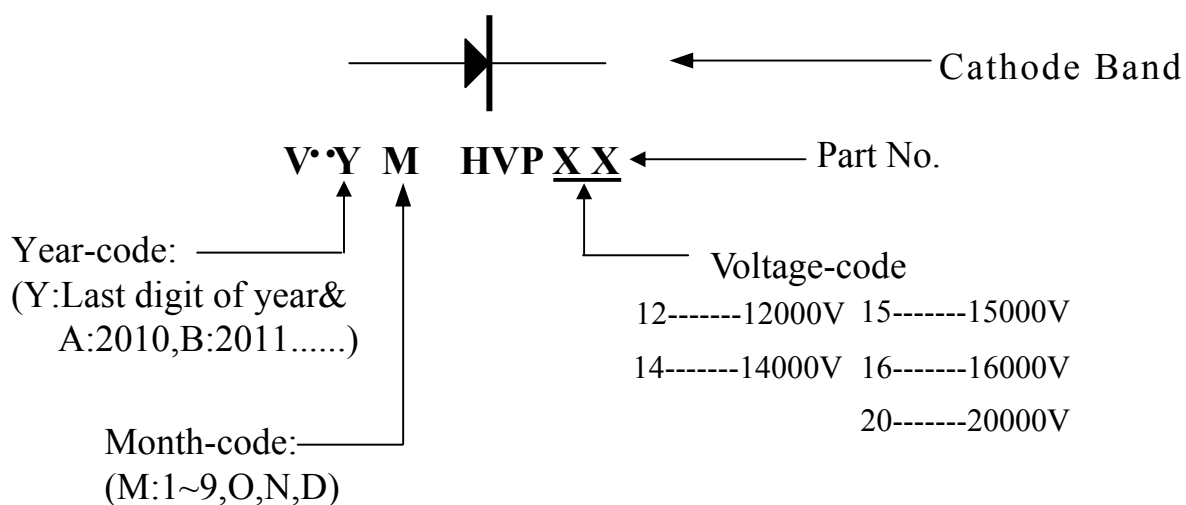
FIG. 6 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT  
HVP20





## Attachment information about HVPXX

### 1. Marking on the body



### 2. Items marked on the carton

**CUSTOMER**  
**TYPE**  
**QUANTITY**  
**LOT NO.**  
**REMARK**

## DISCLAIMER NOTICE

Rectron Inc reserves the right to make changes without notice to any product specification herein, to make corrections, modifications, enhancements or other changes. Rectron Inc or anyone on its behalf assumes no responsibility or liability for any errors or inaccuracies. Data sheet specifications and its information contained are intended to provide a product description only. "Typical" parameters which may be included on RECTRON data sheets and/ or specifications can and do vary in different applications and actual performance may vary over time. Rectron Inc does not assume any liability arising out of the application or use of any product or circuit.

Rectron products are not designed, intended or authorized for use in medical, life-saving implant or other applications intended for life-sustaining or other related applications where a failure or malfunction of component or circuitry may directly or indirectly cause injury or threaten a life without expressed written approval of Rectron Inc. Customers using or selling Rectron components for use in such applications do so at their own risk and shall agree to fully indemnify Rectron Inc and its subsidiaries harmless against all claims, damages and expenditures.