



## MASTER INSTRUMENT CORPORATION

### HIGH VOLTAGE SILICON RECTIFIER HVM5-HVM12

**VOLTAGE RANGE** 5000 to 12000 Volts  
**Forward Current** 0.3-0.5 Amperes

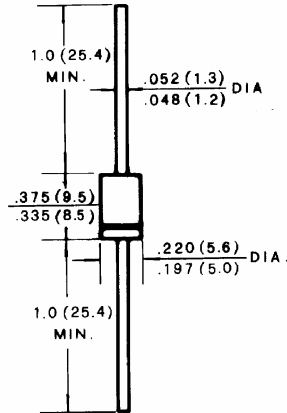
#### FEATURES

- I Low leakage
- I High surge capability
- I High current capability
- I High temperature soldering guaranteed:  
200 °C/10 seconds, 0.375" (9.5mm) lead length at 5 lbs.  
(2.3kg) tension.

#### MECHANICAL DATA

- I Case: Transfer molded plastic
- I Epoxy: UL94V-0 rate flame retardant.
- I Polarity: Color band denotes cathode end .
- I Lead: Plated axial lead solderable per MIL-STD-202E method  
208C
- I Mounting Position: Any.
- I Weight: 0.05 ounce, 1.43 gram (DO-27)

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DO-27

#### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

Dimension in inches and (millimeters)

	SYMBOLS	HVM5	HVM8	HVM10	HVM12	UNITS
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	5000	8000	10000	12000	Volts
Maximum RMS Voltage	$V_{RMS}$	3500	5600	7000	8400	Volts
Maximum DC Blocking Voltage	$V_{DC}$	5000	8000	10000	12000	Volts
Maximum Average Forward Rectified Current, 0.375" (9.5mm) Lead length at $T_A=50^\circ\text{C}$	$I_{(AV)}$	350				mAmps
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	40				Amps
Maximum Instantaneous Forward Voltage Drop at .05A/0.2A	$V_F$	3.5	7.0	9.0	9.5	Volts
Maximum DC Reverse Current at rated DC blocking voltage at	$T_A=25^\circ\text{C}$	5.0				$\mu\text{Amps}$
	$T_A=100^\circ\text{C}$	100				
Maximum Full Load Reverse Current ,full cycle average 0.375" (9.5mm) lead length at $T_1=75^\circ\text{C}$	$I_R(AV)$	75				$\mu\text{A}$
Operating and Storage Temperature Range	$T_J, T_{STG}$	-65 to +150				$^\circ\text{C}$

#### NOTES:



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### RATINGS AND CHARACTERISTIC CURVES:

#### RATINGS AND CHARACTERISTIC CURVES HVM5000THRU HVM12000

