RECTRON SEMICONDUCTOR
TECHNICAL SPECIFICATION

MP5005 THRU MP5010

SINGLE-PHASE GLASS PASSIVATED SILICON BRIDGE RECTIFIER

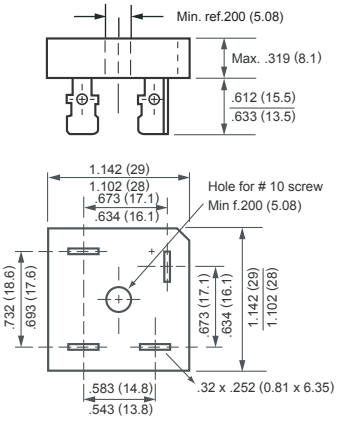
VOLTAGE RANGE 50 to 1000 Volts CURRENT 50 Amperes

FEATURES

* Superior thermal desing
* 400 amperes surge rating
* 1/4" universal faston terminal
* Hole thru for # 10 screw



MP-50



Dimensions in inches and (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 T_A = 25°C unless otherwise noted)

RATINGS	SYMBOL	MP5005	MP501	MP502	MP504	MP506	MP508	MP5010	UNITS
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	Volts
Maximum RMS Bridge Input Voltage	V_{RMS}	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Rectified Output Current at Tc = 55°C	I_O	50.0							Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	450							Amps
Typical Current Squarad Time	I^2t	840							A^2/Sec
RMS isolation voltage from case to lead	V_{ISO}	2500							Volts
Typical Thermal Resistance (from junction to case)	$R_{\theta JC}$	1.5							°C/W
Typical Thermal Resistance (from junction to ambient)	$R_{\theta JA}$	19							
Operating and Storage Temperature Range	T_J,T_{STG}	-55 to + 150							°C

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

CHARACTERISTICS		SYMBOL	MP5005	MP501	MP502	MP504	MP506	MP508	MP5010	UNITS
Maximum Forward Voltage Drop per element at 25A DC		V_F	1.1							Volts
Maximum Reverse Current at Rated	@T_A = 25°C	I_R	5.0							uAmps
DC Blocking Voltage per element	@T_A = 100°C		0.2							mAmps

NOTE: 1. Suffix "W" for wire type

2020-09
REV: B

RATING AND CHARACTERISTIC CURVES(MP5005 THRU MP5010)

FIG. 1 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

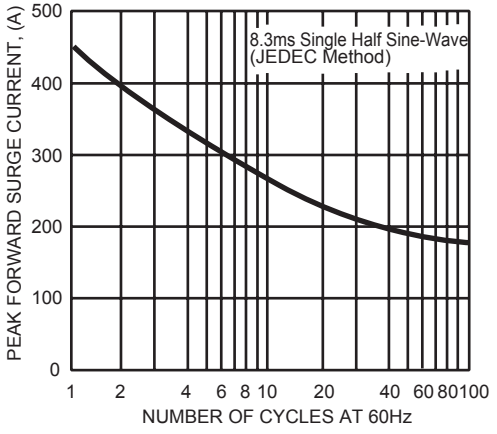


FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE

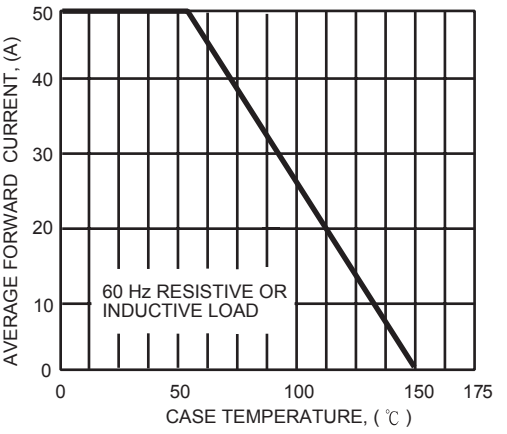


FIG. 3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

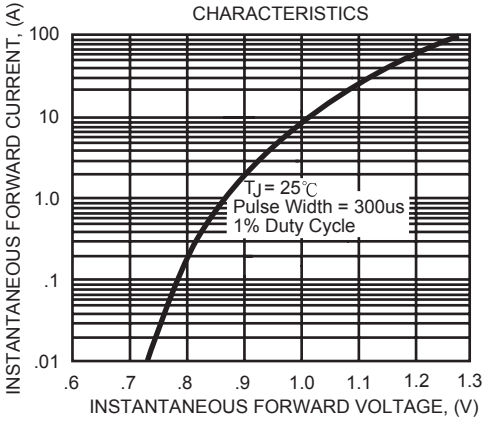
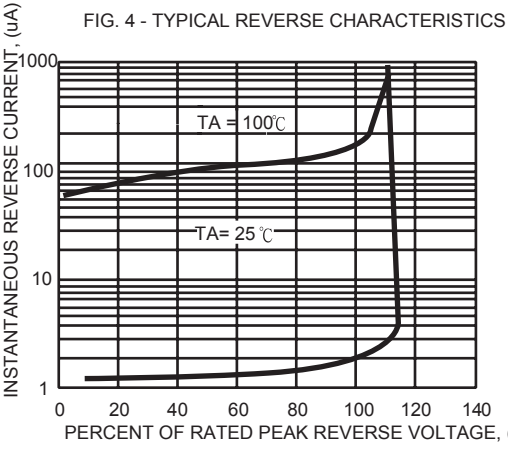


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS



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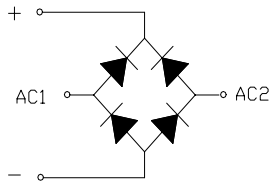
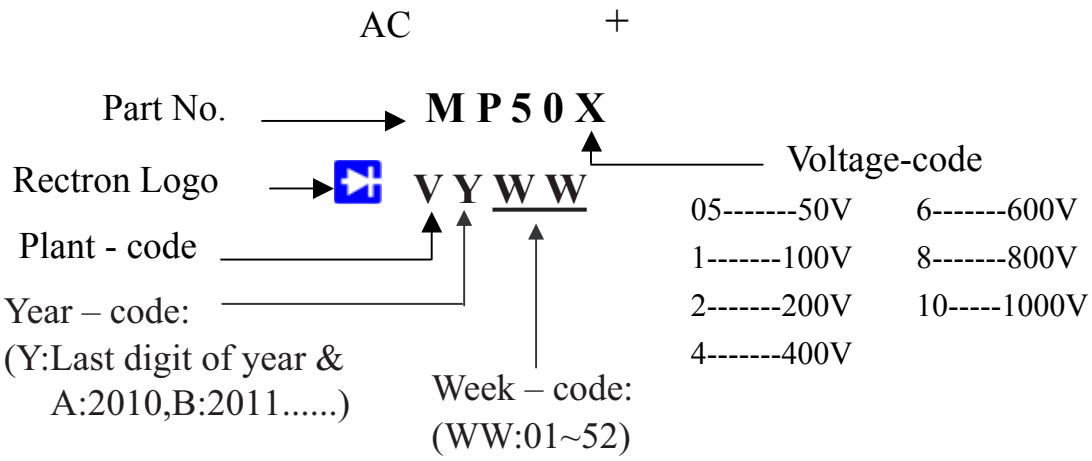
Attachment information about MP50X

1. Internal Circuit



2. Marking on the body



3. Items marked on the inner box and carton

3.1 On the box (for –B)

CUSTOMER
TYPE
LOT NO.
QUANTITY
Q.A.
DATE

3.2 On the carton

CUSTOMER
TYPE
QUANTITY
LOT NO.
REMARK

PACKAGING OF DIODE AND BRIDGE RECTIFIERS

BULK PACK

PACKAGE	PACKING CODE	EA PER BOX	INNER BOX SIZE (mm)	CARTON SIZE (mm)	EA PER CARTON	GROSS WEIGHT(Kg)
MP-40/-50	-B	50	206*208*45.5	450*220*255	500	9.6

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