MB1005 thru MB1010 SERIES

SINGLE-PHASE SILICON BRIDGE

CHENG-YI ELECTRONIC

VOLTAGE RANGE
50 TO 1000 VOLTS
CURRENT
10.0 Amperes

HOLE FOR NO. 6 SCREW

.425±.020
(10.8±.51)

.600±.020
(15.2±.51)

.042(1.07)
.038(0.97)

.750
(19.1) MIN.

.250±.020
(6.35±.51)
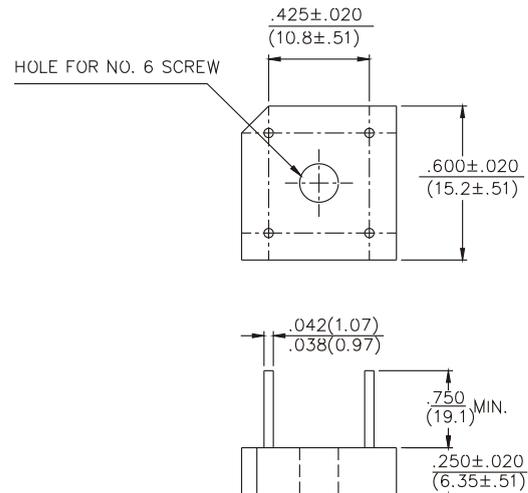
Polarity shown on side of case;
positive lead by beveled corner.

Dimensions in inches and (millimeters)

FEATURES

· UL recognized file #E149311
· Low forward voltage drop
· Surge overload rating-200 amperese peak
· Mounting position:Any
· Mounting:hole thru for #6 screw
· Electrically isolated base-1800Volts
· Weight:7.86 grams

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25^{0}C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

MAXIMUM RATINGS (At T$_A$=25^{0}C unless otherwise noted)

RATINGS		MB1005	MB101	MB102	MB104	MB106	MB108	MB1010	UNITS
Maximum Recurrent Peak Reverse Voltage	V$_{RRM}$	50	100	200	400	600	800	1000	V
Maximum RMS Bridge Input Voltage	V$_{RMS}$	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V$_{DC}$	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified OutputCurrent at: @ T$_A$=50°C	I$_O$	10.0							A
@ T$_C$=100°C		6.0							
@ T$_A$=50°C		6.0							
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC mehtod)	I$_{FSM}$	200							A
Operating Temperature Range	T$_J$	-55 to +125							^{0}C
Storage Temperature Range	T$_{STG}$	-55 to +150							^{0}C

ELECTRICAL CHARACTERISTICS (At T$_A$=25^{0}C unless otherwise noted)

CHARACTERISTICS		MB1005	MB101	MB102	MB104	MB106	MB108	MB1010	UNITS
Maximum Forward Voltage drop per element of 5.0A DC	V$_F$	1.1							V
Maximum Reverse Current at Rated DC Blocking Voltage per element @ T$_A$=25°C	I$_R$	5							μA
@ T$_A$=100°C		0.2							mA

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RATING AND CHARACTERISTICS CURVES
MB1005 THRU MB1010 SERIES

Fig.1 - MAXIMUM NUN-REPETITIVE
FORWARD SURGE CURRENT

8.3ms Single Half-Wave
JEDEC Method

PEAK FORWARD SURGE CURRENT.(A)

NUMBER OF CYCLES AT 60 Hz
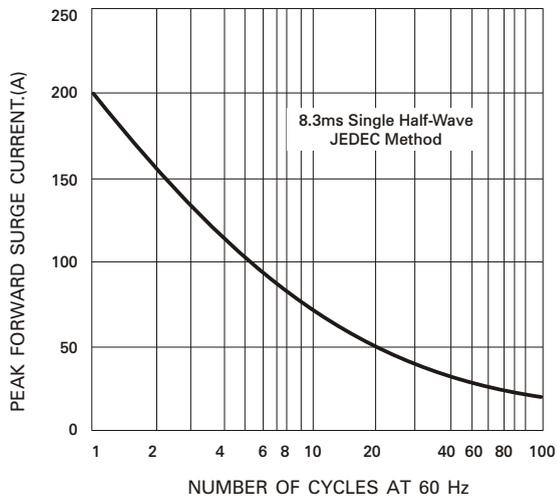
Fig.2 - TYPICAL FORWARD CURRENT
DERATING CURVE

Single Phase half Wave
60Hz Inductive or
Resistive Load

AVERAGE FORWARD CURRENT.(A)

CASE TEMPERATURE, (^{o}C)
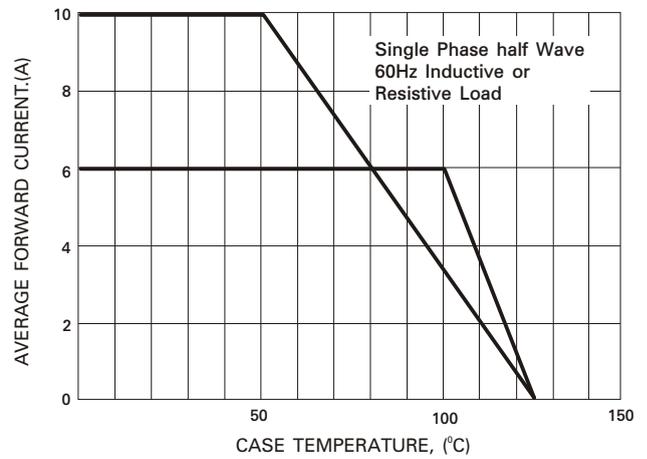
Fig.3 - TYPICAL INSTANTANEOUS FORWARD
CHARACTERISTICS

T_J=25°C
Pulse Width-300μs
1% Dety Cycle

INSTANTANEOUS FORWARD CURRENT. (A)

INSTANTANEOUS FORWARD VOLTAGE, (V)
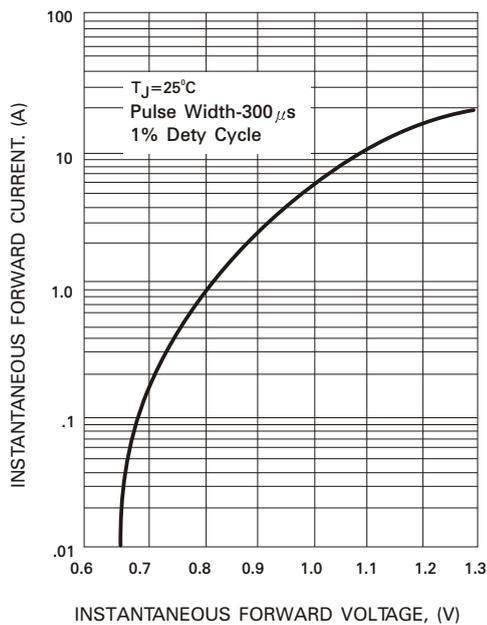
Fig.4 - TYPICAL REVERSE CHARACTERISTICS

INSTANTANEOUS REVERSE CURRENT, (μA)

T_J=25°C

PERCENT OF RATED PEAK
REVERSE VOLTAGE, (%)