W005 THRU W10

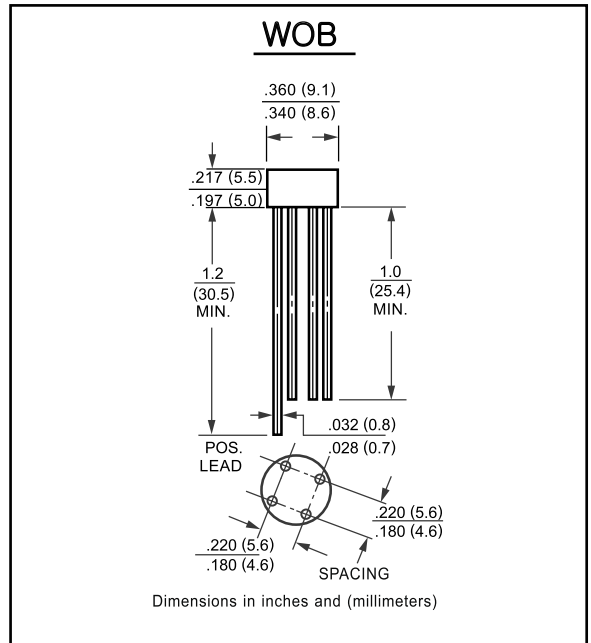## SINGLE PHASE SILICON BRIDGE RECTIFIER

Reverse Voltage - 50 to 1000 Volts   Forward Current - 1.5 Ampere

FEATURES

- Ideal for printed circuit board
- Surge overload rating: 50A peak
- High case dielectric strength

MECHANICAL DATA

- Case: UL-94 Class V-0 recognized Flame Retardant Epoxy
- Terminals: Plated leads solderable per
  MIL-STD 202E, method 208C
- Mounting Position: Any
- Weight: 1.10 g
- Marking: Type Number

RoHS Compliant

WOB

.360 (9.1)
.340 (8.6)

.217 (5.5)
.197 (5.0)

1.2 (30.5) MIN.

1.0 (25.4) MIN.

.032 (0.8)
.028 (0.7)

POS. LEAD

.220 (5.6)
.180 (4.6)

.220 (5.6)
.180 (4.6)

SPACING

Dimensions in inches and (millimeters)

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 current derate by 20%.

CHARACTERISTICS		SYMBOL	W005	W01	W02	W04	W06	W08	W10	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 Output Current at T_A = 25°C		I_O				1.5				A
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)		I_{FSM}				50				A
Maximum DC Forward Voltage Drop per Bridge Element at 1.5A DC		V_F				1.0				V
Maximum Reverse Current at rated	@T_A = 25°C	I_R				10.0				uA
DC Blocking Voltage per element	@T_A = 125°C					500				
I^2t Rating for Fusing (t<8.3ms)		I^2t				10				A^2Sec
Typical Junction Capacitance (Note1)		C_J				24				pF
Typical Thermal Resistance (Note 2)		$R{\theta}J A$				36				^{0}C/W
Operating and Storage Temperature Range		T_J, T_{STG}				-55 to + 150				^{0}C

NOTES : 1.Measured at 1 MHz and applied reverse voltage of 4.0 volts
2. Thermal Resistance from Junction to Ambient and from junction to lead mounted on P.C.B. with 0.5 x 0.5" (13x13mm) copper pads.

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RATINGS AND CHARACTERISTIC CURVES

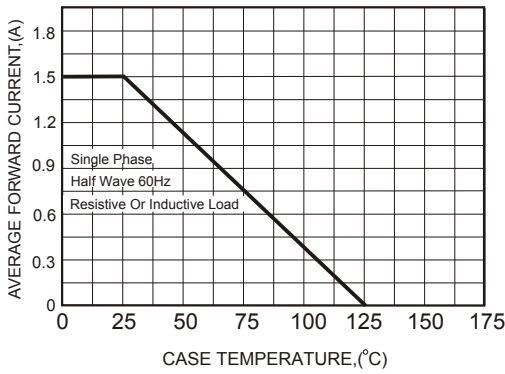FIG.1-TYPICAL FORWARD CURRENT
DERATING CURVE

AVERAGE FORWARD CURRENT,(A)

Single Phase
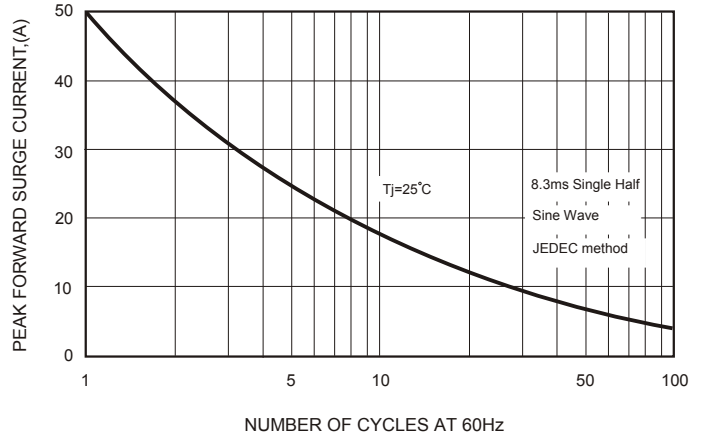Half Wave 60Hz
Resistive Or Inductive Load

CASE TEMPERATURE,($^{\circ}$C)

FIG.2-MAXIMUM NON-REPETITIVE FORWARD
SURGE CURRENT

PEAK FORWARD SURGE CURRENT,(A)

Tj=25°C

8.3ms Single Half
Sine Wave
JEDEC method

NUMBER OF CYCLES AT 60Hz

FIG.3-TYPICAL FORWARD
CHARACTERISTICS

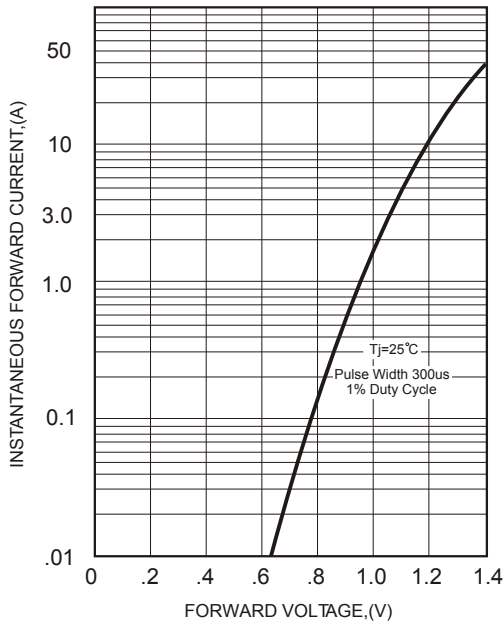INSTANTANEOUS FORWARD CURRENT,(A)

Tj=25°C
Pulse Width 300us
1% Duty Cycle

FORWARD VOLTAGE,(V)

FIG.4-TYPICAL REVERSE
CHARACTERISTICS

REVERSE LEAKAGE CURRENT, (μA)

Tj=25°C

PERCENT OF RATED PEAK REVERSE VOLTAGE, (%)