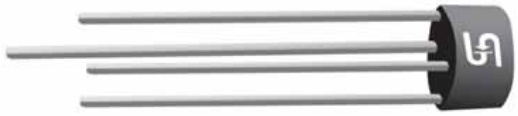
TAIWAN SEMICONDUCTOR

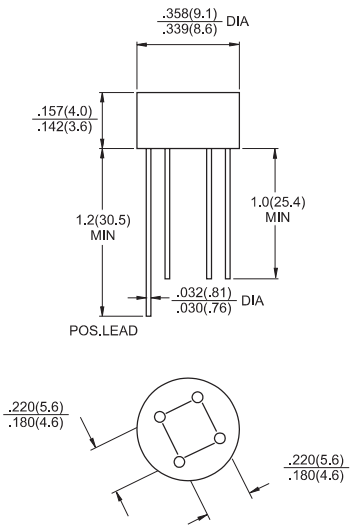
W005 - W10

Single Phase 1.5 AMPS. Silicon Bridge Rectifiers

RB-15

RoHS COMPLIANCE





Dimensions in inches and (millimeters)

Features

- ✧ UL Recognized File # E-96005
- ✧ Surge overload ratings to 40 amperes peak
- ✧ Ideal for printed circuit board
- ✧ Reliable low cost construction technique results in inexpensive product
- ✧ High temperature soldering guaranteed: 260 °C / 10 seconds / 0.375" (9.5mm) lead length at 5 lbs., (2.3 kg) tension

Mechanical Data

- ✧ Case: Molded plastic
- ✧ Lead: solder plated
- ✧ Polarity: As marked
- ✧ Weight: 1.07 grams

Maximum Ratings and Electrical Characteristics

Rating 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%

Type Number	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 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 Current @T_A = 50 °C	$I_{(AV)}$	1.5							A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	40							A
Maximum Instantaneous Forward Voltage @ 1.5A	V_F	1.0							V
Maximum DC Reverse Current @ T_A=25 °C at Rated DC Blocking Voltage @ T_A=125 °C	I_R	10 500							uA uA
Typical Thermal Resistance (Note)	$R_{\theta JA}$ $R_{\theta JL}$	36 13							°C/W
Operating Temperature Range	T_J	-55 to +125							°C
Storage Temperature Range	T_{STG}	-55 to +150							°C

Note: Thermal Resistance from Junction to Ambient and from Junction to Lead Mounted on P.C.B. With 0.4" x 0.4" (10mm x 10mm) Copper Pads.

Version: A06

RATINGS AND CHARACTERISTIC CURVES (W005 THRU W10)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

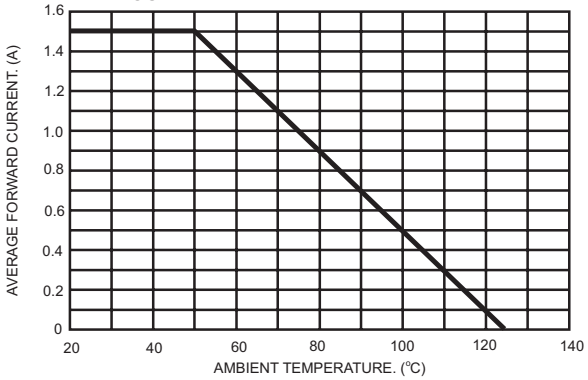


FIG.2- TYPICAL REVERSE CHARACTERISTICS PER BRIDGE ELEMENT

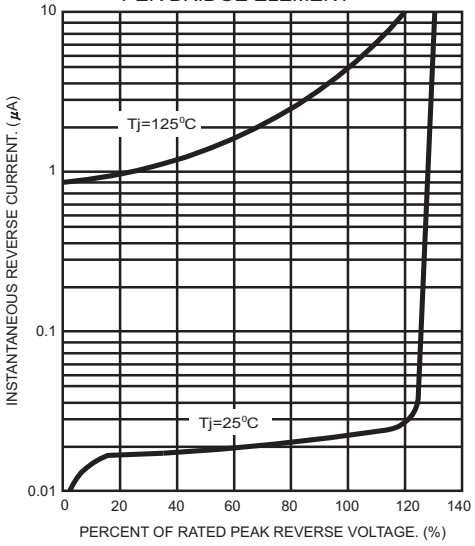


FIG.3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER BRIDGE ELEMENT

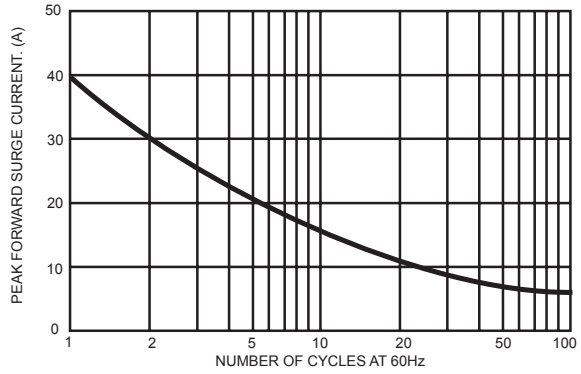


FIG.4- TYPICAL JUNCTION CAPACITANCE

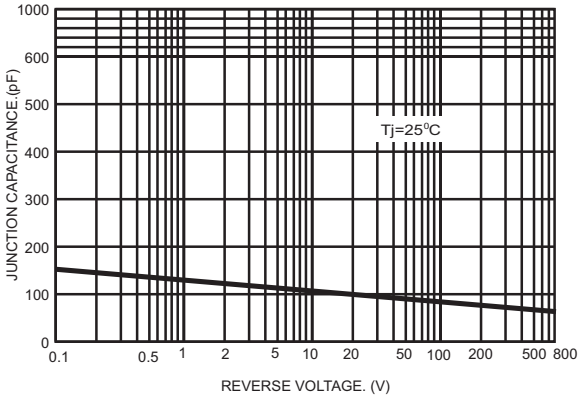


FIG.5- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER BRIDGE ELEMENT