



# Frontier Electronics Corp.

667 E. COCHRAN STREET, SIMI VALLEY, CA 93065

TEL: (805) 522-9998 FAX: (805) 522-9989

E-mail: [frontiersales@frontierusa.com](mailto:frontiersales@frontierusa.com)

Web: <http://www.frontierusa.com>

## 40A HIGH CURRENT BRIDGE RECTIFIERS

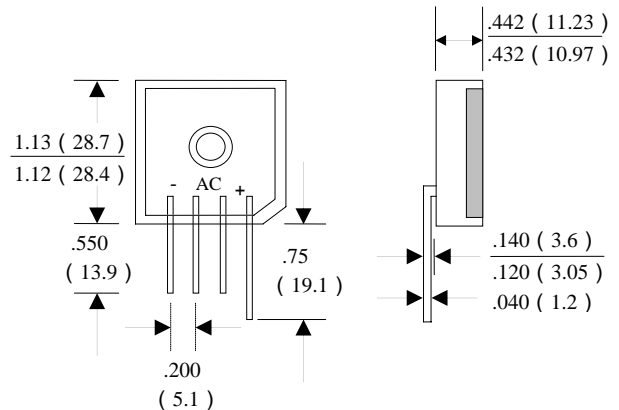
### BP40-005L THRU BP40-10L

#### FEATURES

- CURRENT RATING 40A
- REVERSE VOLTAGE RATING UP TO 1000V
- TYPICAL IR LESS THAN 1 $\mu$ A
- HIGH TEMPERATURE SOLDERING GUARANTEED:  
260°C /10 SECOND

#### MECHANICAL DATA

- CASE: METAL HEAT SINK CASE, ELECTRICALLY INSULATED
- TERMINALS: UNIVERSAL .25" (6.3mm) FAST ON
- DIMENSIONS IN INCHES AND (MILLIMETERS)
- MOUNTING METHOD: BOLT DOWN ON HEAT SINK WITH SILICON THERMAL COMPOUND BETWEEN BRIDGE AND MOUNTING SURFACE FOR MAXIMUM HEAT TRANSFER EFFICIENCY
- WEIGHT: 20 GRAMS



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%

RATINGS	SYMBOL	BP40-005L	BP40-01L	BP40-02L	BP40-04L	BP40-06L	BP40-08L	BP40-10L	UNITS
MAXIMUM RECURRENT PEAK REVERSE VOLTAGE	V <sub>RRM</sub>	50	100	200	400	600	800	1000	V
MAXIMUM RMS VOLTAGE	V <sub>RMS</sub>	35	70	140	280	420	560	700	V
MAXIMUM DC BLOCKING VOLTAGE	V <sub>DC</sub>	50	100	200	400	600	800	1000	V
MAXIMUM AVERAGE FORWARD RECTIFIED OUTPUT CURRENT AT TC=55°C	I <sub>O</sub>	40.0							A
PEAK FORWARD SURGE CURRENT SINGLE SINE-WAVE SUPERIMPOSED ON RATED LOAD	I <sub>FSM</sub>	500							A
STORAGE TEMPERATURE RANGE	T <sub>STG</sub>	- 55 TO + 175							°C
OPERATING TEMPERATURE RANGE	T <sub>OP</sub>	- 55 TO + 175							°C

#### ELECTRICAL CHARACTERISTICS (A<sub>T</sub> T<sub>A</sub> =25°C UNLESS OTHERWISE NOTED)

CHARACTERISTICS	SYMBOL	BP40-005L	BP40-01L	BP40-02L	BP40-04L	BP40-06L	BP40-08L	BP40-10L	UNITS
MAXIMUM INSTANTANEOUS FORWARD VOLTAGE PER BRIDGE ELEMENT AT SPECIFIED CURRENT	V <sub>F</sub>	1.1							V
MAXIMUM REVERSE DC CURRENT AT RATED DC BLOCKING VOLTAGE PER ELEMENT	I <sub>R</sub>	10							$\mu$ A

NOTE: SUFFIX NO. VERSUS DIFFERENT CASES AND TERMINALS

# RATINGS AND CHARACTERISTIC CURVES BP40-005L THRU BP40-10L

FIG. 1 - MAXIMUM OUTPUT RECTIFIED CURRENT

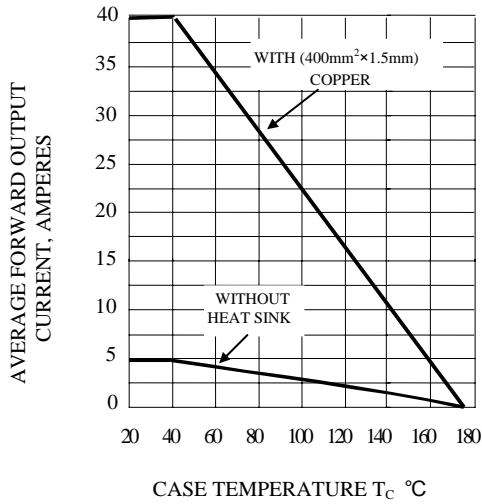


FIG. 4 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

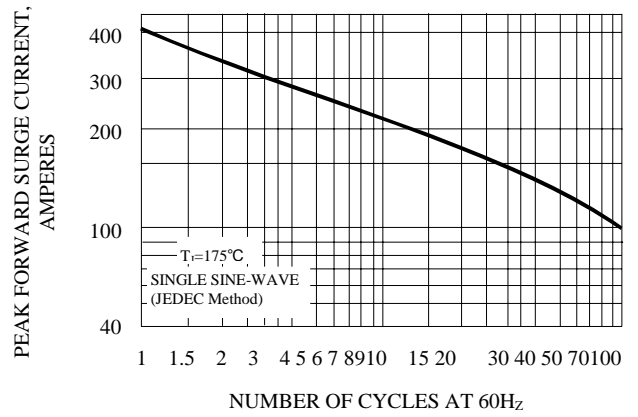


FIG. 2 - TYPICAL REVERSE CHARACTERISTICS AT  $T_j=25^\circ\text{C}$

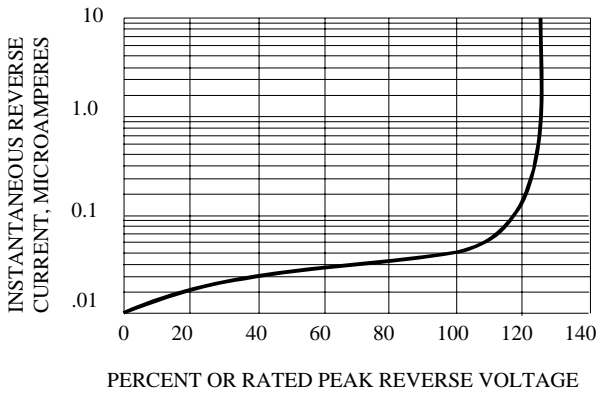


FIG. 5 - TYPICAL JUNCTION CAPACITANCE PER BRIDGE ELEMENT

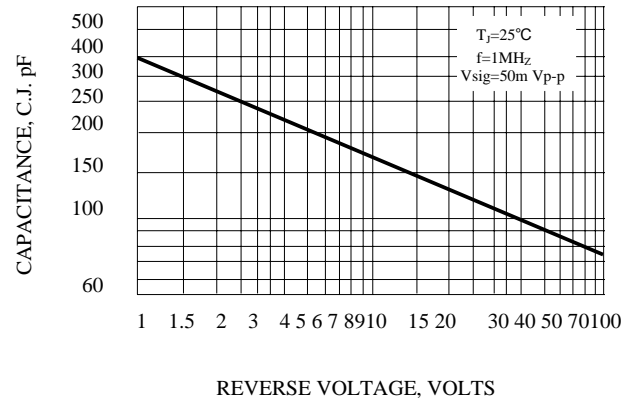
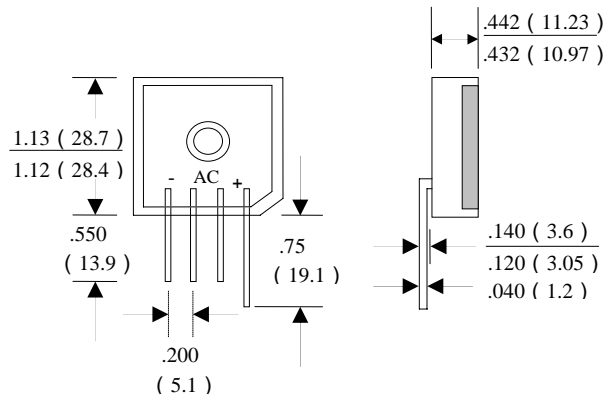
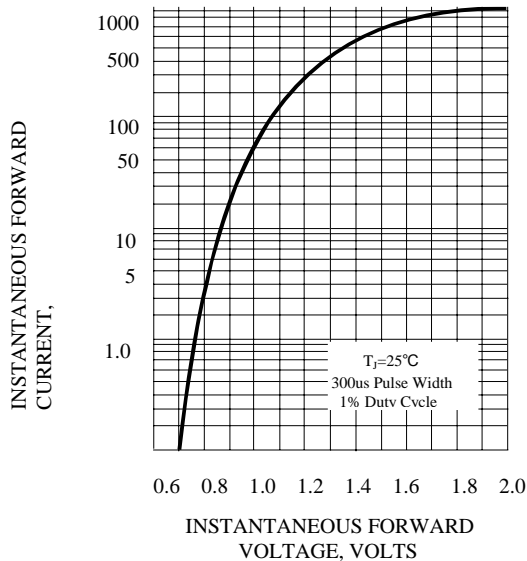


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



BP40-L IN LINE PIN CONFIGURATION (PLASTIC CASE)