



# Frontier Electronics Corp.

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## 40A HIGH CURRENT SILICON BRIDGE RECTIFIERS

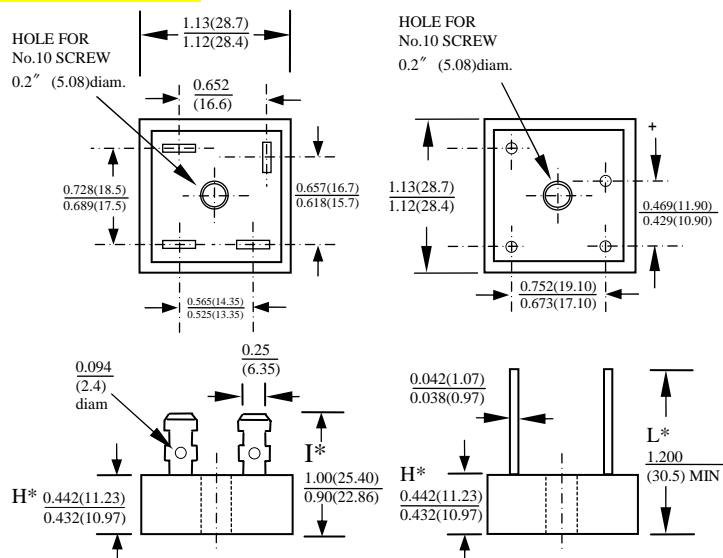
### BP40-005 THRU BP40-10

#### 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
- DIMENSIONS IN INCHES AND (MILLIMETERS)
- TERMINALS: UNIVERSAL .25" (6.35mm) FAST ON
- MOUNTING METHOD: BOLT DOWN ON HEAT SINK WITH SILICON THERMAL COMPOUND BETWEEN BRIDGE AND MOUNTING SURFACE FOR MAXIMUM HEAT TRANSFER EFFICIENCY
- WEIGHT: 20 GRAMS



DIM	MIN	MAX	REMARK
H*	0.295(7.5)	0.311(7.9)	SUFFIX "S" THIN CASE
DIMENSIONS	0.74(18.80)	0.84(21.30)	SUFFIX "S" THIN CASE
L*	1.09(27.89)	-	SUFFIX "S" THIN CASE

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	BP40-005	BP40-01	BP40-02	BP40-04	BP40-06	BP40-08	BP40-10	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 OUTPUT CURRENT AT TC=55°C	$I_O$	40.0							A
PEAK FORWARD SURGE CURRENT SINGLE SINE-WAVE SUPERIMPOSED ON RATED LOAD	$I_{FSM}$	400							A
STORAGE TEMPERATURE RANGE	$T_{STG}$	- 55 TO + 175							°C
OPERATING TEMPERATURE RANGE	$T_{OP}$	- 55 TO + 175							°C

#### ELECTRICAL CHARACTERISTICS ( $A_T T_A = 25^\circ\text{C}$ UNLESS OTHERWISE NOTED)

CHARACTERISTICS	SYMBOL	BP40-005	BP40-01	BP40-02	BP40-04	BP40-06	BP40-08	BP40-10	UNITS
MAXIMUM INSTANTANEOUS FORWARD VOLTAGE PER BRIDGE ELEMENT AT SPECIFIED CURRENT	$V_F$	1.1							V
MAXIMUM REVERSE DC CURRENT AT RATE DC BLOCKING VOLTAGE PER ELEMENT	$I_R$	10							$\mu$ A

NOTE: Suffix No. Versus Different Cases and Terminals

TERMINAL	CASE				
	SUFFIX No	NORMAL METAL CASE	THIN METAL CASE	NORMAL PLASTIC CASE ALUMINUM BASE	THIN PLASTIC CASE ALUMINUM BASE
FAST ON TERMINALS		NO SUFFIX	S	P	PS
WIRE LEAD TERMINALS		W	WS	PW	PWS
IN LINE PIN CONFIGURATION		-	-	L	LS

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

FIG. 1 - MAXIMUM OUTPUT RECTIFIED CURRENT

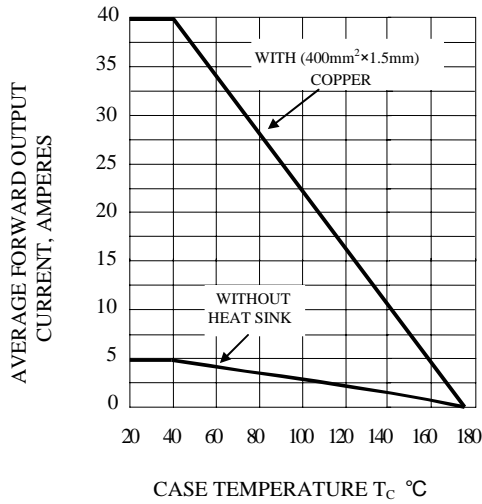


FIG. 4 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

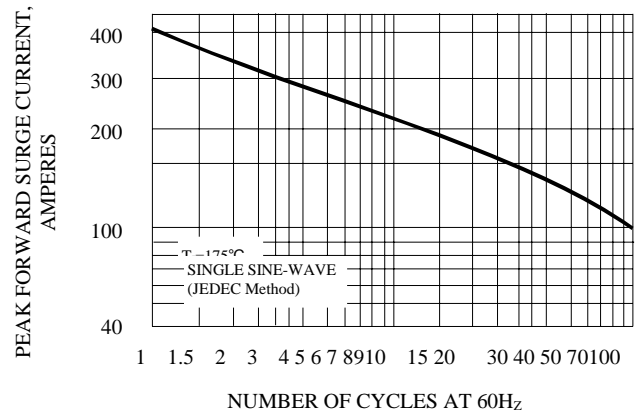


FIG. 2 - TYPICAL REVERSE CHARACTERISTICS AT  $T_j = 25^\circ\text{C}$

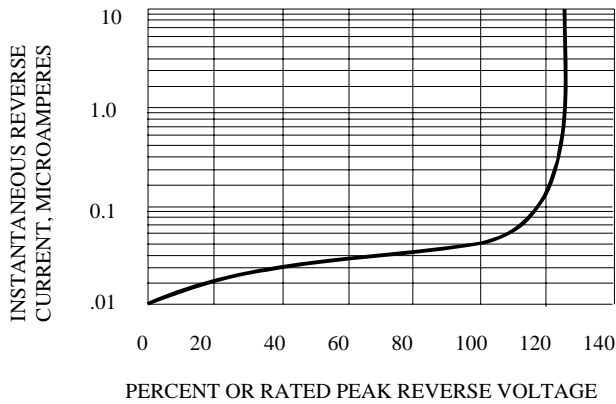


FIG. 5 - TYPICAL JUNCTION CAPACITANCE PER BRIDGE ELEMENT

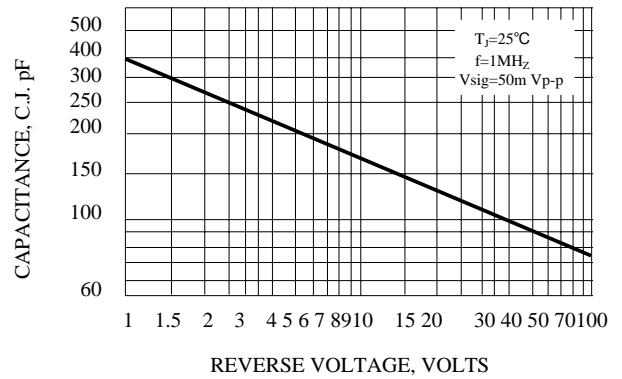
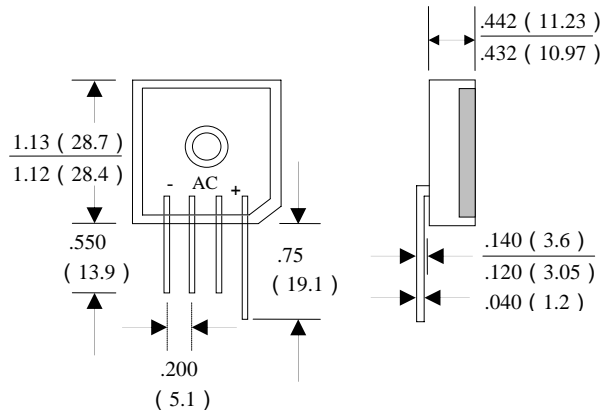
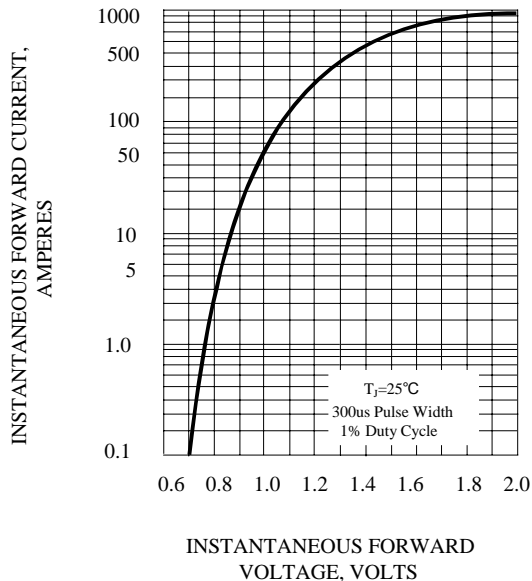


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



BP40-L IN LINE PIN CONFIGURATION (PLASTIC CASE)