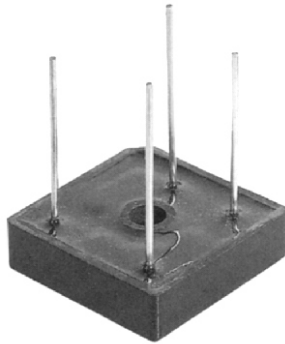# GBPC15,25,35/W SERIES

15/25/35 A GLASS PASSIVATED BRIDGE RECTIFIER
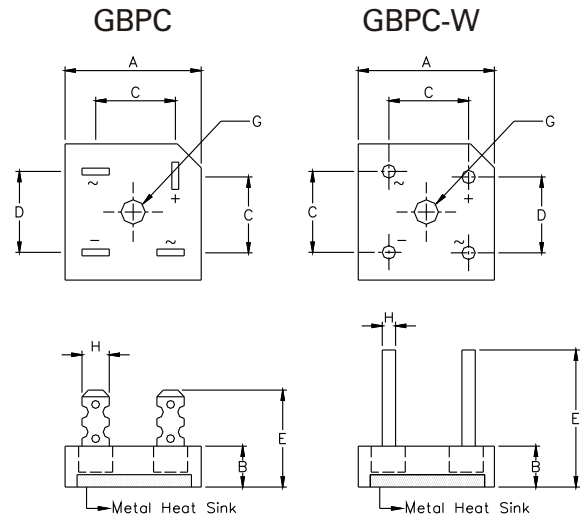
CHENG-YI ELECTRONIC

FEATURES

- Glass Passivated Die Construction
- Low Reverse Leakage Current
- Low Power Loss, High Efficiency
- Electrically Isolated Epoxy Case for Maximum Heat Dissipation
- Case to Terminal Isolation Voltage 2500V
- UL Recognized File #E157705

MECHANICAL DATA

- Cass: Epoxy Cass With Heat Sink Internally Mounted in Bridge Encapsulation
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: Symbols Marked on Case
- Mounting: Through Hole for #10 Screw
- Weight: GBPC   24 grams (approx.)
         GBPC-W   21 grams (approx.)
- Marking: Type Number

GBPC   GBPC-W

Dim	GBPC		GBPC-W	
	Min	Max	Min	Max
A	28.40	28.70	28.40	28.70
*B	7.30	7.90	7.30	7.90
C	15.70	16.70	17.10	19.10
D	17.50	18.50	10.90	11.90
E	22.86	25.40	30.50	–
G	Hole for #10 screw, 5.08∅ Nominal			
H	6.35 Typical		0.97∅	1.07∅
ALLDimension in mm				

"W" Suffix Designates Wire Leads
No Suffix Designates Faston Terminals
*ALL Models Available on Dim. B=7.9mm Max. Epoxy Case

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS @ T_A=25^{0}C unless otherwise specified

Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

Characteristics		Symbol	-00/W	-01/W	-02/W	-04/W	-06/W	-08/W	-10/W	UNITS
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage		V_{RRM} V_{RWM} V_R	50	100	200	400	600	800	1000	V
RMS Reverse Voltage		$V_{R(RMS)}$	35	70	140	280	420	560	700	V
Average Rectifier Output Current @ T_C=55^{0}C	GBPC15 GBPC25 GBPC35	I_O				15 25 35				A
Non-Repetitive Peak Forward Surge Current 8.3ms single half sine-wave Superimposed on rated load (JEDEC Mehtod)	GBPC15 GBPC25 GBPC35	I_{FSM}				300 300 400				A
Forward Voltage Drop (per element)	GBPC15 @I_F=7.5A GBPC25 @I_F=12.5A GBPC35 @I_F=17.5A	V_{FM}				1.1				V
Peark Reverse Current At Rated DC Blocking Voltage	@ T_C=25^{0}C @ T_C=125^{0}C	I_{RM}				5.0 500				μ A
I^2 t Rating for Fusing (t<8.3ms) (Note.1)	GBPC15 GBPC25 GBPC35	I^2t				375 375 660				A^2S

RATING AND CHARACTERISTICS CURVES
GBPC15,25,35/W SERIES

Fig. 1 Forward. Current Derating Curve

GBPC25

Mounted on a
220 x 220 x 50 mm
All plate heatsink

GBPC25

GBPC15

Resistive or
Inductive load

I$_F$, AVERAGE FORWARD CURRENT (A)

T$_C$, CASE TEMPERATURE, (°C)
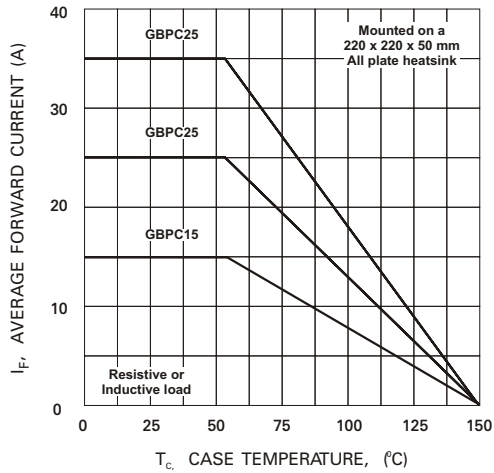
Fig. 2 Typical Forward Characteristics (per element)

GBPC15, 25

GBPC35

T$_J$ = 25°C
Pulse Width = 300 μ s

I$_F$, INSTANTANEOUS FORWARD CURRENT (A)

V$_F$, INSTANTANEOUS FORWARD VOLTAGE (V)
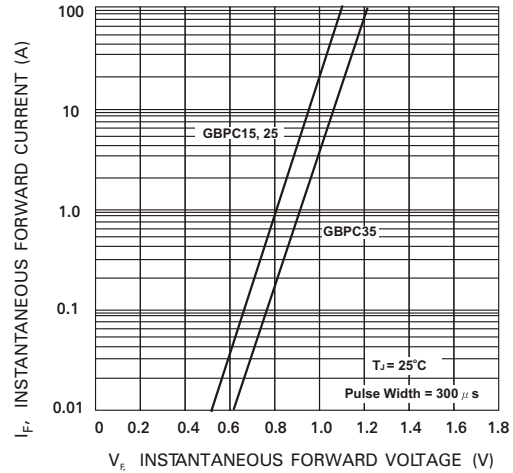
Fig. 3 Max Non-Repetitive Surge Current

Single Half-Sine Wave
(JEDEC Method)

GBPC35

GBPC15, 25

T$_J$ = 150°C

I$_{FSM}$, PEAK FWD. SURGE CURRENT (μ A)

NUMBER OF CYCLES AT 60 Hz
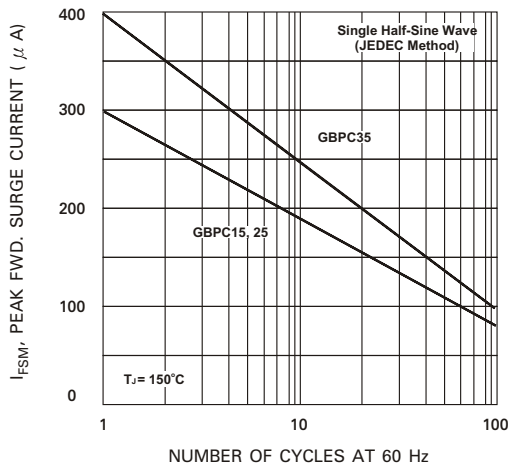
Fig. 4 Typical Junction Characteristics (per element)

f = 1 MHz
T$_J$ = 25°C

C$_J$, CAPACITANCE (pF)

V$_R$, REVERSE VOLTAGE (V)
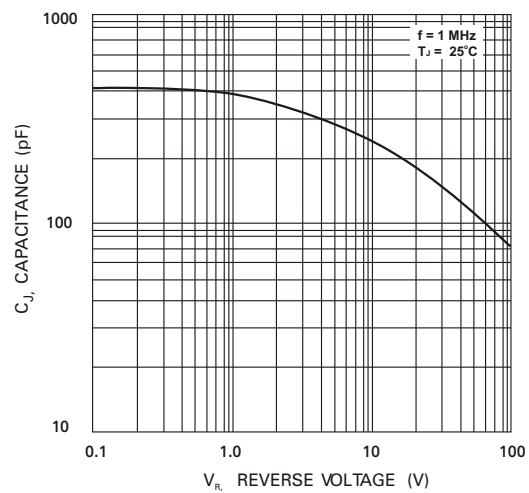
Fig. 5 Typical Reverse Characteristics (per element)

T$_J$ = 125°C

T$_J$ = 25°C

I$_R$, INSTANTANEOUS REVERSE CURRENT (A)

PERCENT OF RATED PEAK REVERSE VOLTAGE (%)