SENSITRON SEMICONDUCTOR

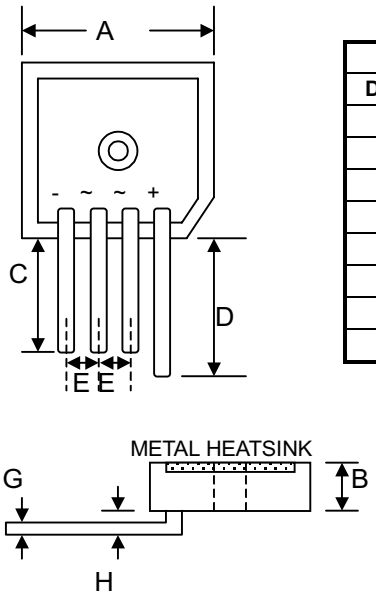
KBPC15, 25, 35GS SERIES

15, 25, 35A GLASS PASSIVATED IN-LINE BRIDGE RECTIFIER

Data Sheet 1339 Rev.—

Features

- Glass Passivated Die Construction
- Low Forward Voltage Drop
- High Current Capability
- High Reliability
- High Surge Current Capability
- Ideal for Printed Circuit Boards
- Designed for Saving Mounting Space



KBPC-S		
Dim	**Min**	**Max**
A	28.40	28.70
B	10.97	11.23
C	13.90	—
D	19.10	—
E	5.10	—
G	1.20 Ø Typical	
H	3.05	3.60
All Dimensions in mm		

Mechanical Data

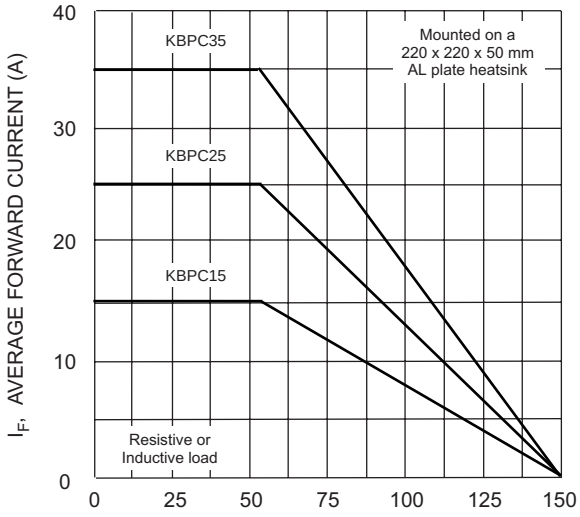
- Case: Epoxy Case with Heat Sink Internally Mounted in the Bridge Encapsulation
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: As Marked on Body
- Weight: 30 grams (approx.)
- Mounting Position: Any
- Marking: Type Number

Maximum Ratings and Electrical Characteristics @T_A=25°C unless otherwise specified

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

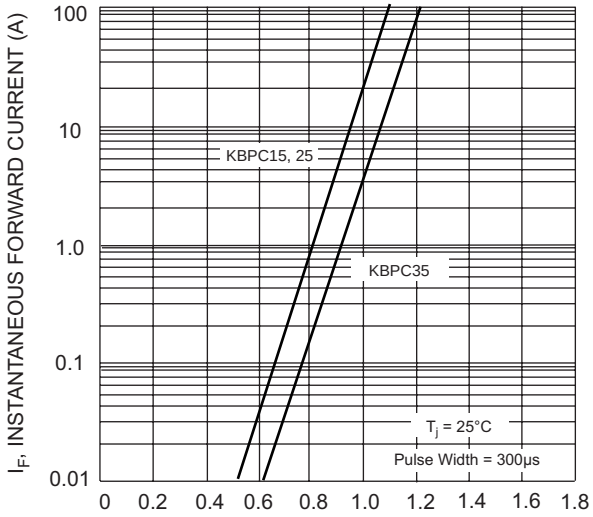
Characteristics	Symbol	-00GS	-01GS	-02GS	-04GS	-06GS	-08GS	-10GS	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	50	100	200	400	600	800	1000	V
RMS Reverse Voltage	$V_{R(RMS)}$	35	70	140	280	420	560	700	V
Average Rectified Output Current @T_C = 55°C KBPC15 KBPC25 KBPC35	I_O	15 25 35							A
Non-Repetitive Peak Forward Surge Current, 8.3ms Single Half-sine-wave Superimposed on Rated Load (JEDEC Method) KBPC15 KBPC25 KBPC35	I_{FSM}	300 300 400							A
Forward Voltage Drop (per element) KBPC15 @I_F = 7.5A KBPC25 @I_F = 12.5A KBPC35 @I_F = 17.5A	V_{FM}	1.1							V
Peak Reverse Current at Rated DC Blocking Voltage (per element) @T_C = 25°C @T_C = 125°C	I_R	5.0 500							μA
I^2t Rating for Fusing (t < 8.3ms) (Note 1) KBPC15 KBPC25 KBPC35	I^2t	374 374 664							A^2s
Typical Thermal Resistance (per element) (Note 2)	$R_{\theta JC}$	2.0							K/W
RMS Isolation Voltage from Case to Lead	V_{ISO}	2500							V
Operating and Storage Temperature Range	T_j, T_{STG}	-65 to +150							°C

Note: 1. Non-repetitive for t > 1ms and < 8.3ms.
2. Thermal resistance junction to case per element mounted on 220 x 220 x 50mm thick AL plate.



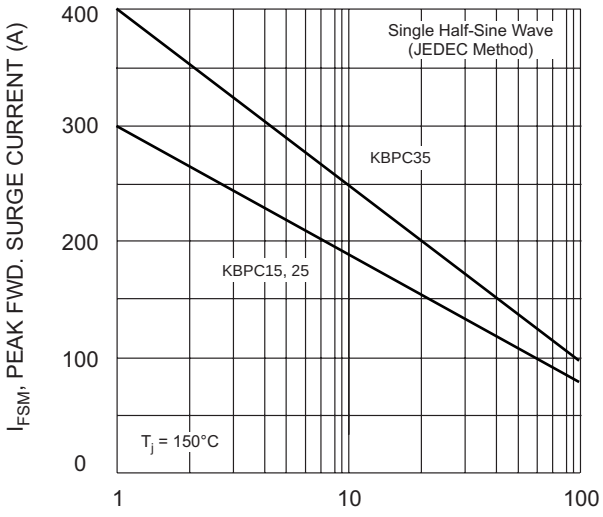
T_C, CASE TEMPERATURE (°C)

Fig. 1 Forward. Current Derating Curve



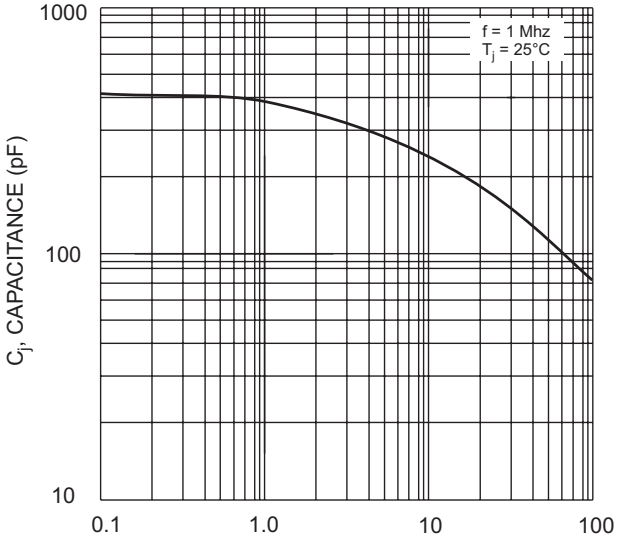
V_F, INSTANTANEOUS FORWARD VOLTAGE (V)

Fig. 2 Typical Forward Characteristics (per element)



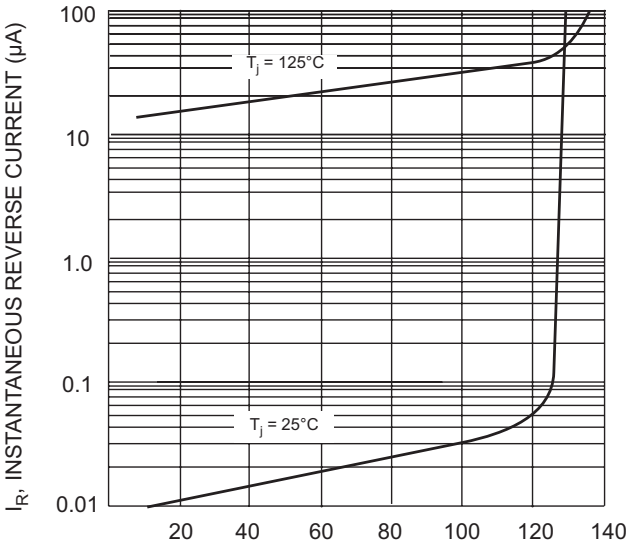
NUMBER OF CYCLES AT 60 Hz

Fig. 3 Max Non-Repetitive Surge Current



V_R, REVERSE VOLTAGE (V)

Fig. 4 Typical Junction Capacitance (per element)



PERCENT OF RATED PEAK REVERSE VOLTAGE (%)

Fig. 5 Typical Reverse Characteristics (per element)