5 Amp. Silicon Bridge Rectifiers in Plastic Case

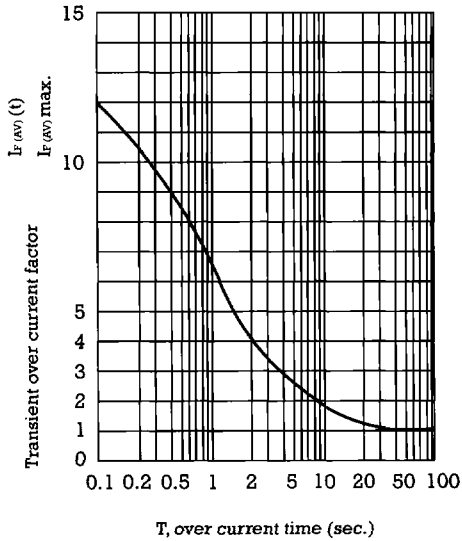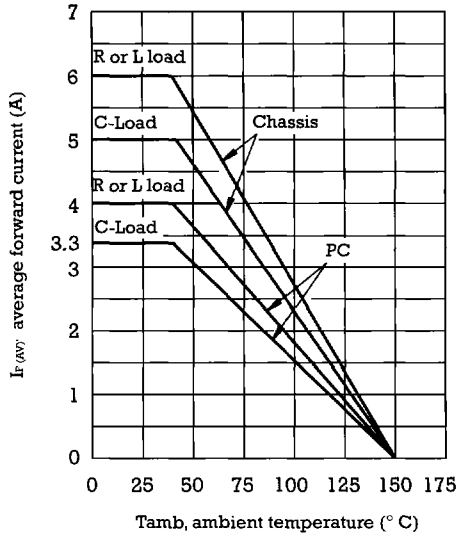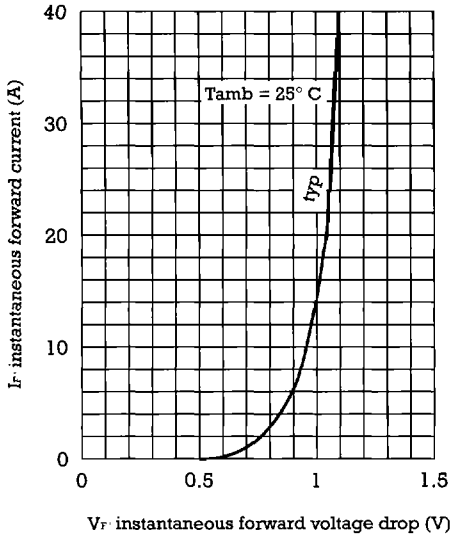| Dimensions in mm. Plastic Case	Voltage 100 to 1.000 V. Current 5.0 A.
	• In process of evaluation UL 1449 • Low Cost • Case: Epoxy encapsulation • Terminals: Radial in-line • Ideal for P.C.B. Lead and polarity identifications High surge current capability

Maximum Ratings, according to IEC publication No. 134

		B40	B80	B125	B250	B380	B500
		C5000/3300	C5000/3300	C5000/3300	C5000/3300	C5000/3300	C5000/3300
V_{RWM}	Max. peak working voltage (V)	100	200	300	600	900	1000
V_{RMS}	Recommended input voltage (V)	40	80	125	250	380	500

$I_{F(AV)}$	Forward current - PC mounted
	at Tamb = 45 °C R load
	     C load
	   - Chassis mounted
	     R load
	     C load
				4.0 A
				3.3 A
				
				6.0 A
				5.0 A			

I_{FRM}	Recurrent peak forward current			30 A			
I_{FSM}	10 ms. peak forward surge current			250 A			
I^2t	I^2t value for fusing (t = 10 ms)			300 A^2S			
T_j	Max. operating temperature			+ 150 °C			
T_{stg}	Storage temperature range			– 40 to + 150 °C			

Electrical Characteristics at Tamb = 25 °C

V_F	Max. forward voltage drop per element at I_F = 5 A	1.1 V
I_R	Max. reverse current per element at V_{RRM}	20 μA

Characteristic Curves

Graph 1 (top left): I_F instantaneous forward current (A) vs V_F instantaneous forward voltage drop (V)

- y-axis: I_F instantaneous forward current (A), values 0, 10, 20, 30, 40
- x-axis: V_F instantaneous forward voltage drop (V), values 0, 0.5, 1, 1.5
- Tamb = 25° C
- curve labeled *typ*

Graph 2 (top right): $I_{F(AV)}$ average forward current (A) vs Tamb, ambient temperature (° C)

- y-axis: $I_{F(AV)}$ average forward current (A), values 0, 1, 2, 3, 3.3, 4, 5, 6, 7
- x-axis: Tamb, ambient temperature (° C), values 0, 25, 50, 75, 100, 125, 150, 175
- Curves labeled: R or L load, C-Load, Chassis, R or L load, C-Load, PC

Graph 3 (bottom left): Transient over current factor $\frac{I_{F(AV)}(t)}{I_{F(AV)} \text{ max.}}$ vs T, over current time (sec.)

- y-axis values: 0, 1, 2, 3, 4, 5, 10, 15
- x-axis: T, over current time (sec.), values 0.1, 0.2, 0.5, 1, 2, 5, 10, 20, 50, 100

OPERATION WITH CAPACITIVE LOAD

Limit values of R_S and C_L for adequate protection against switching transients.

Recommended input voltage V_{RMS}	Min.RS Tol ± 10 % Ohms	Max. CL + 50 % Tol - 20 % μ F
40	0,5	10.000
80	1,0	5,000
125	1,5	2.500
250	3,0	1.200
380	5,0	800
500	6,0	600

Circuit diagram: V_N source, R_S resistor, bridge rectifier, C_L capacitor, R_l load