

# SKBPC/SBR25A/35A SERIES

## SILICON /GLASS PASSIVATED THREE PHASE BRIDGE RECTIFIERS

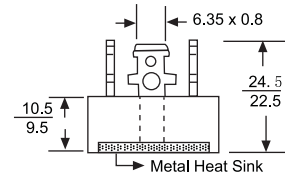
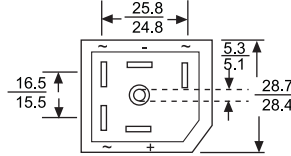
**Voltage Range**  
50 to 1600 Volts  
**Current**  
25/35 Amperes

### FEATURES

- Diffused Junction
- Low Forward Voltage Drop
- High Current Capability
- High Reliability
- High Surge Current Capability
- Ideal for Printed Circuit Boards

### 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: 20 grams (approx.)
- Mounting Position:  
Bolt Down on Heatsink With Silicone Thermal Compound Between Bridge and Mounting Surface for Maximum Heat Transfer Efficiency
- Mounting Torque: 20 in lbs. Max.
- Marking: Type Number



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25°C ambient temperature unless otherwise specified.  
Sine wave, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%

### VOLTAGE RATINGS

Type Number		-00	-01	-02	-04	-06	-08	-10	-12	-14	-16	UNITS
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V <sub>RRM</sub> V <sub>RWM</sub> V <sub>R</sub>	50	100	200	400	600	800	1000	1200	1400	1600	V
Peak Non-Repetitive Reverse Voltage	V <sub>RSM</sub>	75	150	275	500	725	900	1100	1300	1500	1700	V
RMS Reverse Voltage	V <sub>R(RMS)</sub>	35	70	140	280	420	560	700	840	980	1120	V

### FORWARD CONDUCTION

Type Number		SKBPC/SBR25	SKBPC/SBR35	UNITS
Maximum Average Forward Rectified Current @ T <sub>c</sub> = 100°C	I <sub>F(AV)</sub>	25	35	A
Non-Repetitive Peak Forward Surge Current (No Voltage Reapplid t=8.3ms at 60Hz) (No Voltage Reapplid t=10ms at 50Hz) (100% V <sub>RRM</sub> Reapplid t=8.3ms at 60Hz) (100% V <sub>RRM</sub> Reapplid t=10ms at 50Hz)	I <sub>FSM</sub>	375 360 314 300	500 475 420 400	A
I <sup>2</sup> t Rating for fusing (No Voltage Reapplid t=8.3ms at 60Hz) (No Voltage Reapplid t=10ms at 50Hz) (100% V <sub>RRM</sub> Reapplid t=8.3ms at 60Hz) (100% V <sub>RRM</sub> Reapplid t=10ms at 50Hz)	I <sup>2</sup> t	580 635 410 450	1030 1130 730 800	A <sup>2</sup> S
Forward Voltage (per element) @ T <sub>J</sub> = 25°C, @ I <sub>FM</sub> = 40A per single junction	V <sub>F</sub>	1.26	1.19	V
Peak Reverse Current (per leg) @ T <sub>J</sub> = 25°C At Rated DC Blocking Voltage @ T <sub>J</sub> = 125°C	I <sub>R</sub>		10 5.0	µA mA
RMS Isolation Voltage from Case to Lead	V <sub>ISO</sub>		2500	V

### THERMAL CHARACTERISTICS

Operating Temperature Range	T <sub>J</sub>	-40 to +125	°C
Storage Temperature Range	T <sub>STG</sub>	-40 to +150	°C
Thermal Resistance Junction to Case at DC Operation per Bridge	R <sub>θJC</sub>	1.42	K/W
Thermal Resistance Case to Heatsink Mounting Surface, Smooth, Flat and Greased	R <sub>θCS</sub>	0.2	K/W

# RATING AND CHARACTERISTIC CURVES SKBPC/SBR 25A SERIES

FIG.1 - Current Rating Characteristics

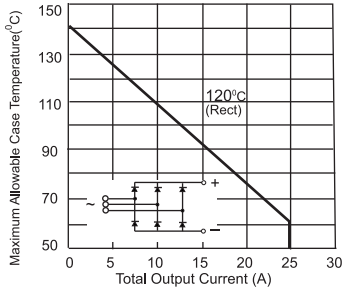


FIG.2 - Forward Voltage Drop Characteristics

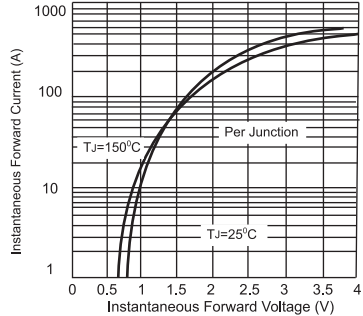


FIG.3 - Total Power Loss Characteristics

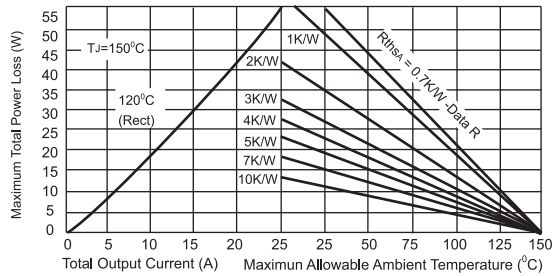


FIG.4 - Maximum Non-Repetitive Surge Current

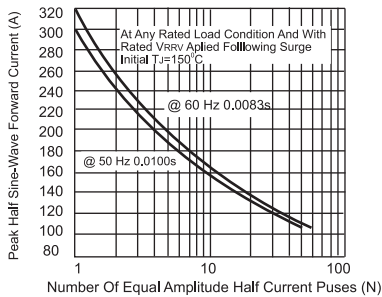
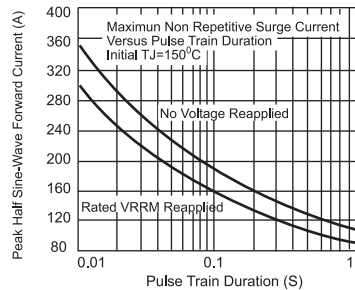
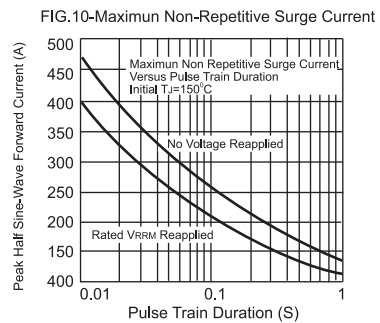
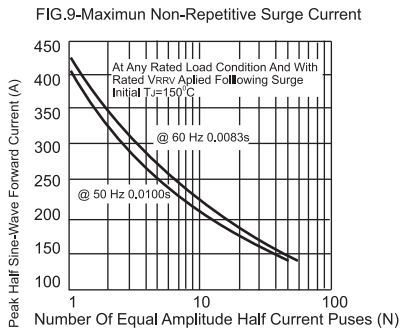
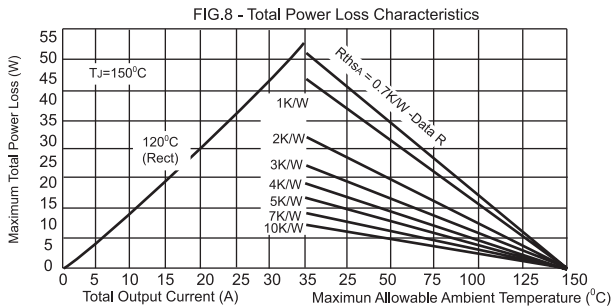
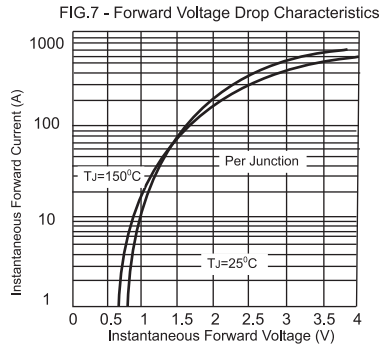
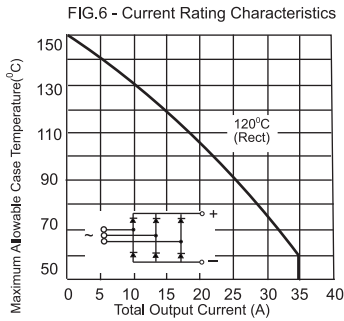


FIG.5 - Maximum Non-Repetitive Surge Current



# RATING AND CHARACTERISTIC CURVES SKBPC/SBR 35A SERIES



# RATING AND CHARACTERISTIC CURVES

## SKBPC/SBR 25A/35A SERIES

FIG.11 - Thermal Impedance  $Z_{thJC}$  Characteristics

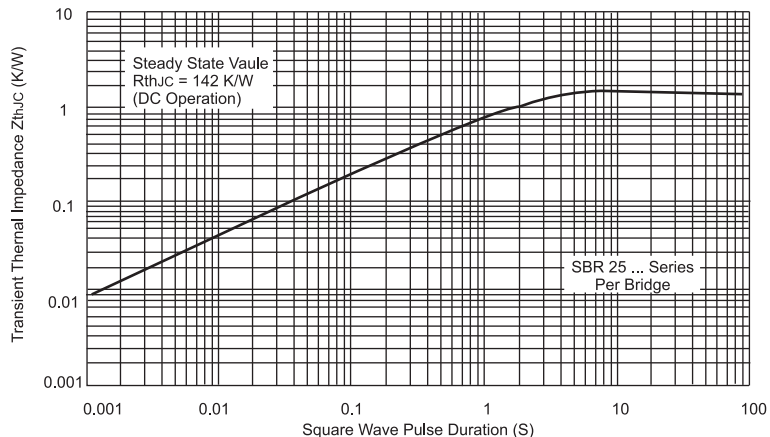


FIG.12 - Thermal Impedance  $Z_{thJC}$  Characteristics

