GeneSiC SEMICONDUCTOR

KBP206 thru KBP210

Silicon Bridge Rectifier

V_{RRM} = 50 V - 1000 V
I_F = 2 A

Features

- Types up to 1000 V V_{RRM}
- Ideal for printed circuit board
- Built-in printed circuit board stand-offs
- High temperature soldering guaranteed 265°C/ 10 seconds
- High case dielectric strength
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0

KBP Package

Mechanical Data

Case: Reliable low cost construction
Weight: 0.065 oz, 2.2 g
Mounting position: Any
Terminals: Plated leads, solderable per MIL-STD-202, Method 208

Maximum ratings, at T_j = 25 °C, unless otherwise specified

Parameter	Symbol	Conditions	KBP206	KBP208	KBP210	Unit
Repetitive peak reverse voltage	V_{RRM}		600	800	1000	V
RMS reverse voltage	V_{RMS}		420	560	700	V
DC blocking voltage	V_{DC}		600	800	1000	V
Continuous forward current	I_F	$T_C \leq 50$ °C	2	2	2	A
Surge non-repetitive forward current, Half Sine Wave	$I_{F,SM}$	T_C = 25 °C, t_p = 8.3 ms	60	60	60	A
Operating temperature	T_j		-50 to 150	-50 to 150	-50 to 150	°C
Storage temperature	T_{stg}		-50 to 150	-50 to 150	-50 to 150	°C

Electrical characteristics, at Tj = 25 °C, unless otherwise specified

Parameter	Symbol	Conditions	KBP206	KBP208	KBP210	Unit
Diode forward voltage	V_F	I_F = 2 A, T_j = 25 °C	1.1	1.1	1.1	V
Reverse current	I_R	V_R = 50 V, T_j = 25 °C	10	10	10	µA
		V_R = 50 V, T_j = 100 °C	200	200	200	
Thermal characteristics						
Thermal resistance, junction - case	R_{thJL}		25.0	25.0	25.0	°C/W

FIG.1-DERATING CURVE FOR OUTPUT RECTIFIER CURRENT

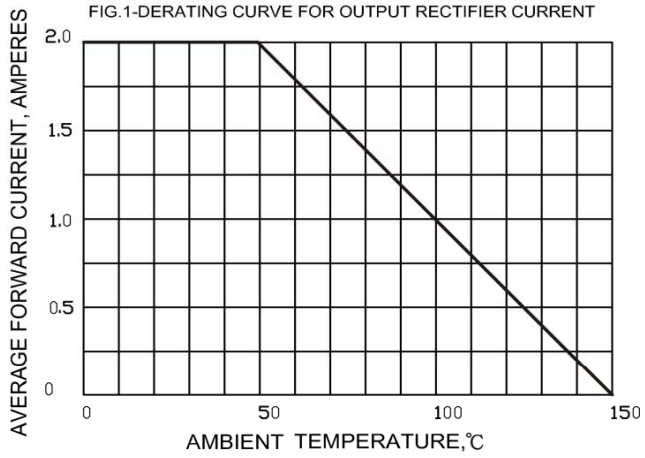

FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

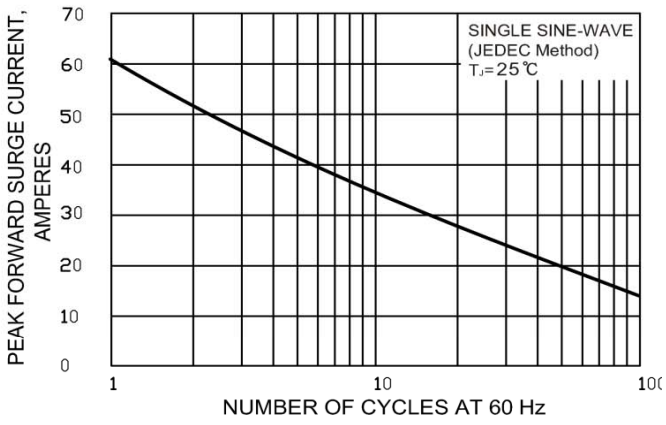

FIG.3-TYPICAL REVERSE LEAKAGE CHARACTERISTICS
PER BRIDGE ELEMENT

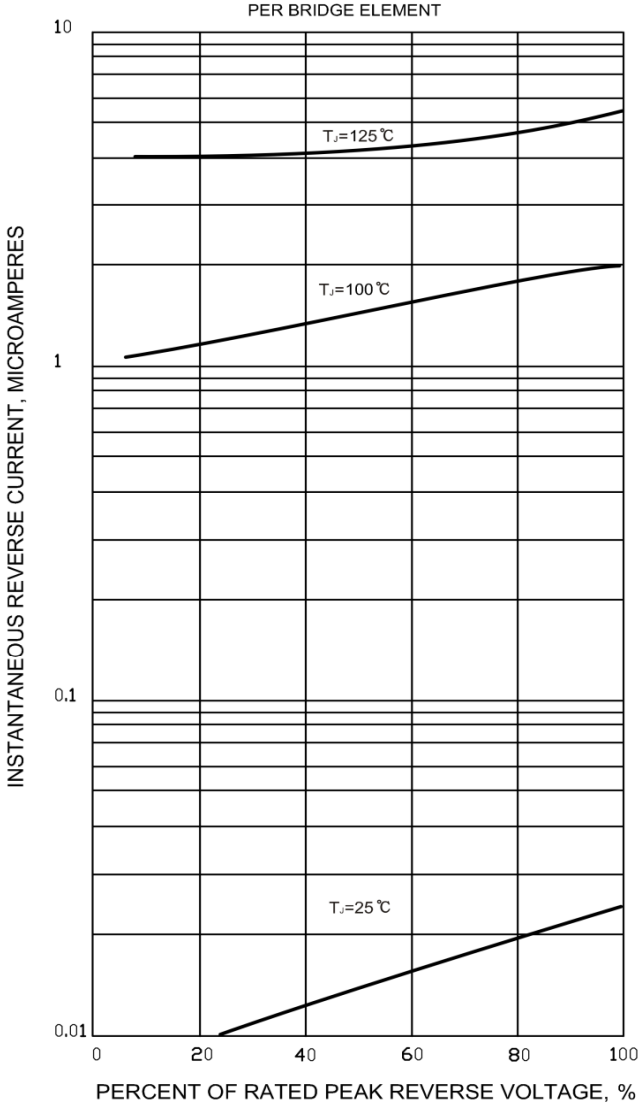

FIG.4-TYPICAL FORWARD CHARACTERISTICS
PER BRIDGE ELEMENT

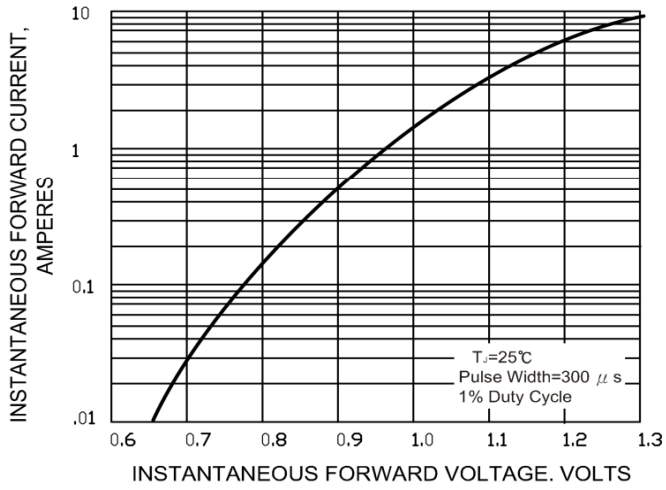

FIG.5-TYPICAL JUNCTION CAPACITANCE PER BRIDGE ELEMENT