America Semiconductor

BR1005 thru BR104

Silicon Bridge Rectifier

V_{RRM} = 50 V - 1000 V

I_F =10 A

Features

- Types up to 1000 V V_{RRM}
- Low forward voltage drop
- Low leakage current

BR-10 Package

Mechanical Data

Case: Molded plastic body

Polarity: Marked on body

Mounting position: Any

Mounting: Hole for number 6 screw

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

Parameter	Symbol	Conditions	BR1005	BR101	BR102	BR104	Unit
Repetitive peak reverse voltage	V_{RRM}		50	100	200	400	V
RMS reverse voltage	V_{RMS}		35	70	140	280	V
DC blocking voltage	V_{DC}		50	100	200	400	V
Continuous forward current	I_F	$T_C \leq 50$ °C	10	10	10	10	A
Surge non-repetitive forward current, Half Sine Wave	$I_{F,SM}$	T_C = 25 °C, t_p = 8.3 ms	150	150	150	150	A
Operating temperature	T_j		-65 to 150	-65 to 150	-65 to 150	-65 to 150	°C
Storage temperature	T_{stg}		-65 to 150	-65 to 150	-65 to 150	-65 to 150	°C

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

Parameter	Symbol	Conditions	BR1005	BR101	BR102	BR104	Unit
Diode forward voltage	V_F	I_F = 5 A, T_j = 25 °C	1.1	1.1	1.1	1.1	V
Reverse current	I_R	V_R = 50 V, T_j = 25 °C V_R = 50 V, T_j = 100 °C	10 1000	10 1000	10 1000	10 1000	µA

Thermal characteristics

Parameter	Symbol	Conditions	BR1005	BR101	BR102	BR104	Unit
Thermal resistance, junction - case	R_{thJC}		9.40	9.40	9.40	9.40	°C/W

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

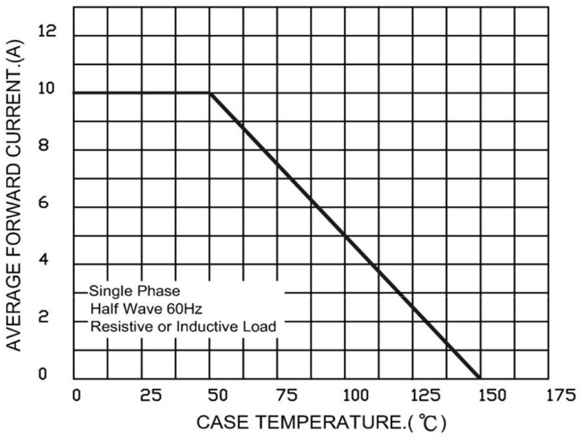

FIG.2-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

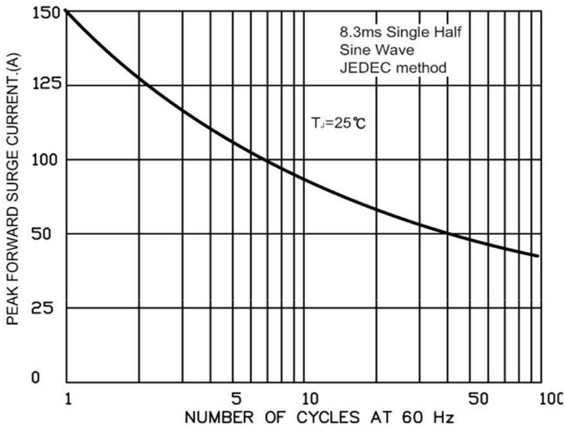

FIG.3-TYPICAL FORWARD CHARACTERISTICS

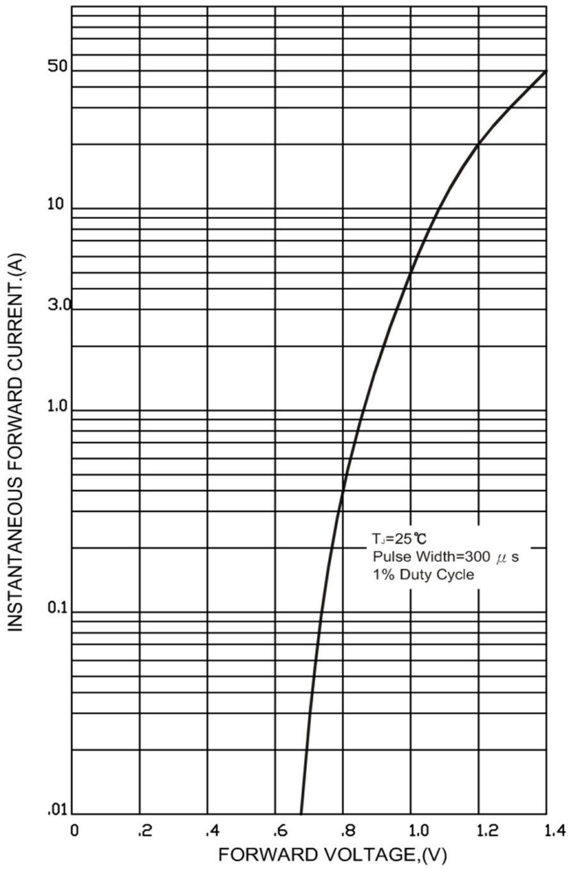

FIG.4-TYPICAL REVERSE CHARACTERISTICS