New Jersey Semi-Conductor Products, Inc.

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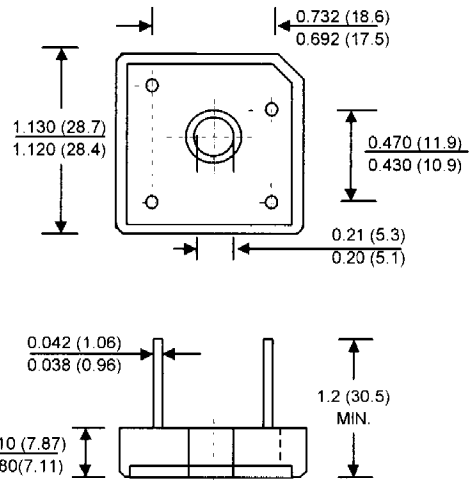
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BR5000W - BR5010W

SILICON BRIDGE RECTIFIERS

PRV : 50 - 1000 Volts
Io : 50 Amperes

BR50W



Dimensions in inches and (millimeters)

FEATURES :

* High current capability
* High surge current capability
* High reliability
* Low reverse current
* Low forward voltage drop
* High case dielectric strength
* Pb / RoHS Free

MECHANICAL DATA :

* Case : Molded plastic with heatsink integrally mounted in the bridge encapsulation
* Epoxy : UL94V-O rate flame retardant
* Terminals : Plated lead solderable per MIL-STD-202, Method 208 guaranteed
* Polarity : Polarity symbols marked on case
* Mounting position : Bolt down on heat-sink with silicone thermal compound between bridge and mounting surface for maximum heat transfer efficiency
* Weight : 15.95 grams

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

RATING	SYMBOL	BR 5000W	BR 5001W	BR 5002W	BR 5004W	BR 5006W	BR 5008W	BR 5010W	UNIT
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	V
Maximum Average Forward Current Tc=55°C	$I_{F(AV)}$	50							A
Peak Forward Surge Current Single half sine wave Superimposed on rated load (JEDEC Method)	I_{FSM}	400							A
Current Squared Time at t < 8.3 ms.	I^2t	664							A^2S
Maximum Forward Voltage per Diode at I_F = 25 A	V_F	1.1							V
Maximum DC Reverse Current Ta = 25 °C	I_R	10							μA
at Rated DC Blocking Voltage Ta = 100 °C	$I_{R(H)}$	200							μA
Typical Thermal Resistance at Junction to Case (Note 1)	RθJC	1.0							°C/W
Operating Junction Temperature Range	T_J	- 40 to + 150							°C
Storage Temperature Range	T_{STG}	- 40 to + 150							°C

Notes :

1) Thermal resistance from Junction to Case with units mounted on heat sink.

Quality Semi-Conductors

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RATING AND CHARACTERISTIC CURVES (BR5000W - BR5010W)

FIG.1 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

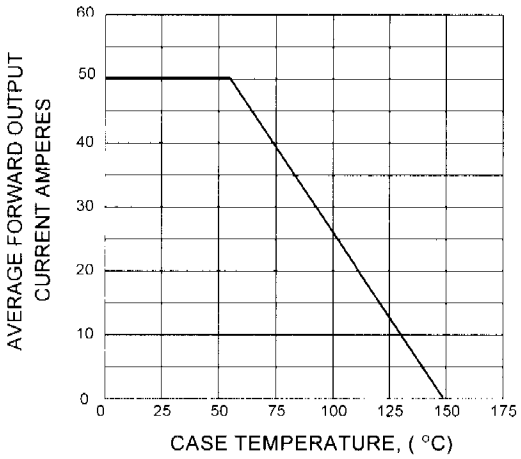


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

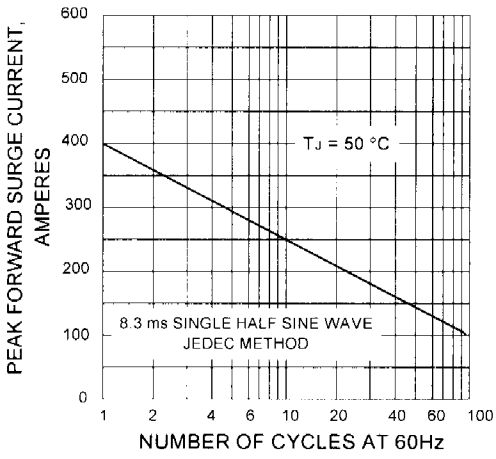


FIG.3 - TYPICAL FORWARD CHARACTERISTICS PER DIODE

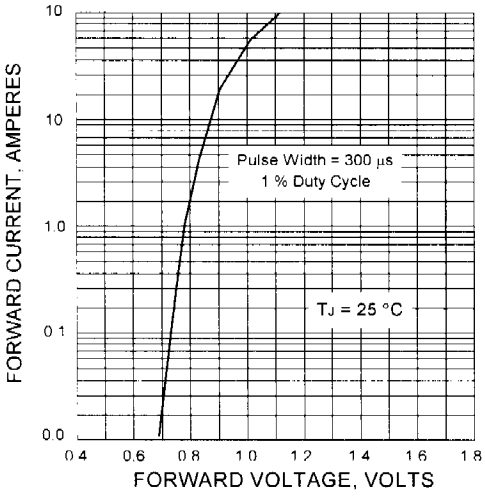
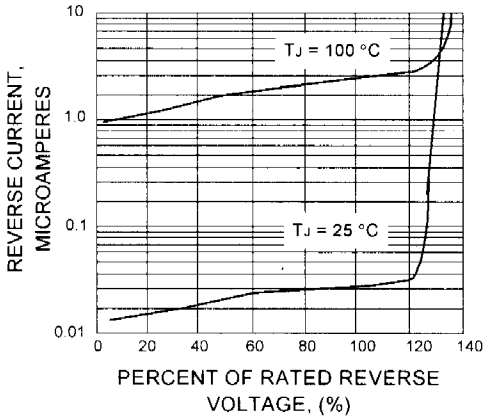


FIG.4 - TYPICAL REVERSE CHARACTERISTICS PER DIODE



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