SYNSEMI SEMICONDUCTOR

BR2500 - BR2510

SILICON BRIDGE RECTIFIERS

PRV : 50 - 1000 Volts

Io : 25 Amperes

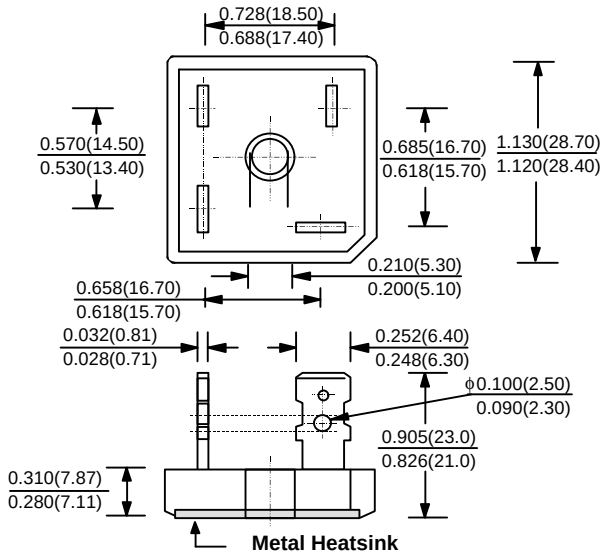
FEATURES :

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

MECHANICAL DATA :

* Case : Molded plastic with heatsink integrally mounted in the bridge encapsulation
* Epoxy : UL94V-O rate flame retardant
* Terminals : plated .25" (6.35 mm). Faston
* 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 : 17.1 grams

BR50



Dimensions in inches and (millimeters)

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	BR2500	BR2501	BR2502	BR2504	BR2506	BR2508	BR2510	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	$I_{F(AV)}$	25							A
Peak Forward Surge Current Single half sine wave Superimposed on rated load (JEDEC Method)	I_{FSM}	300							A
Current Squared Time at t < 8.3 ms.	I^2t	375							A^2S
Maximum Forward Voltage per Diode at I_F = 12.5 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 (Note 1)	RθJC	1.45							°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 a 5" x 6" x 4.9" (12.8cm.x 15.2cm.x 12.4cm.) Al.-Finned Plate

RATING AND CHARACTERISTIC CURVES (BR2500 - BR2510)

FIG.1 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

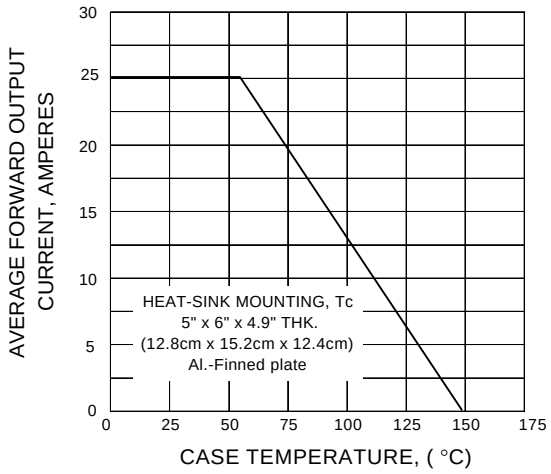


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

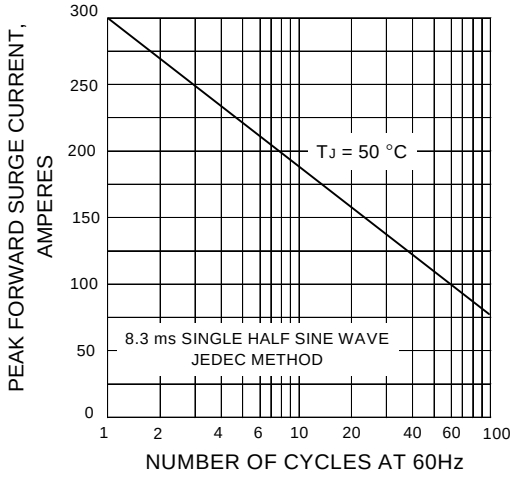


FIG.3 - TYPICAL FORWARD CHARACTERISTICS PER DIODE

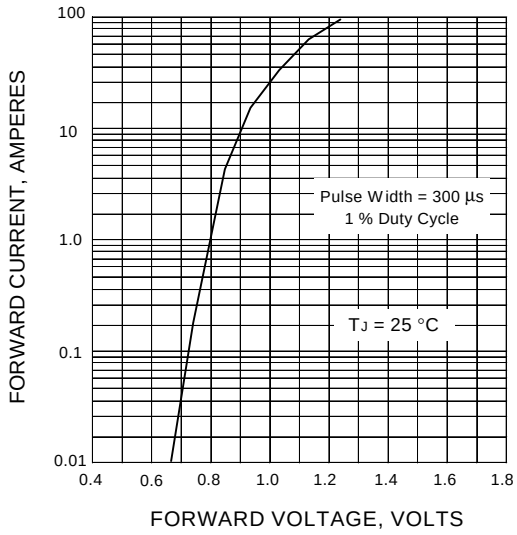


FIG.4 - TYPICAL REVERSE CHARACTERISTICS PER DIODE

