



Ruttonsha International Rectifier Ltd.

50 AMPERE SINGLE PHASE BRIDGE

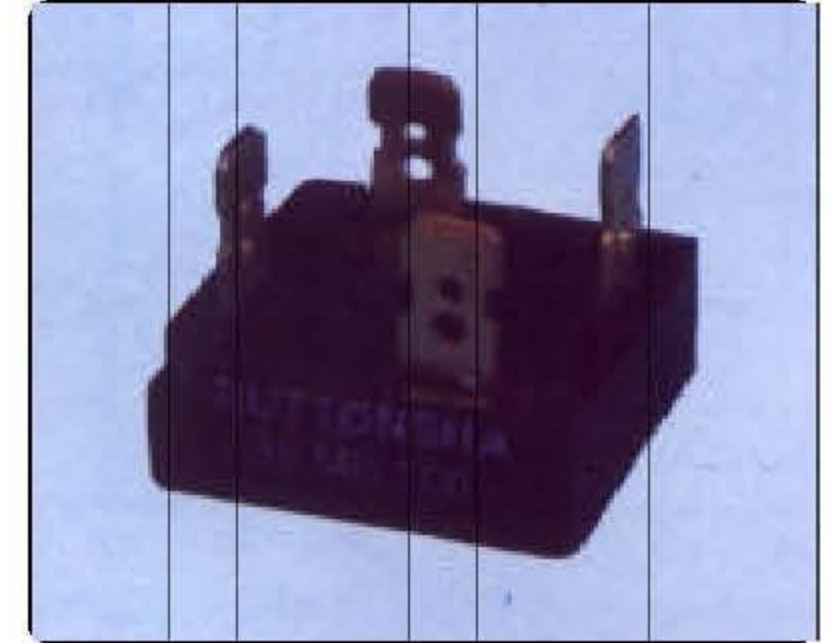
Type : 51MB5A - 51MB180A

FEATURES

- ❖ Universal, 3 way terminals; snap-on, wrap around or solder.
- ❖ High thermal conductivity, electrically insulated case.
- ❖ Central hole fixing.
- ❖ Excellent power / volume ratio.

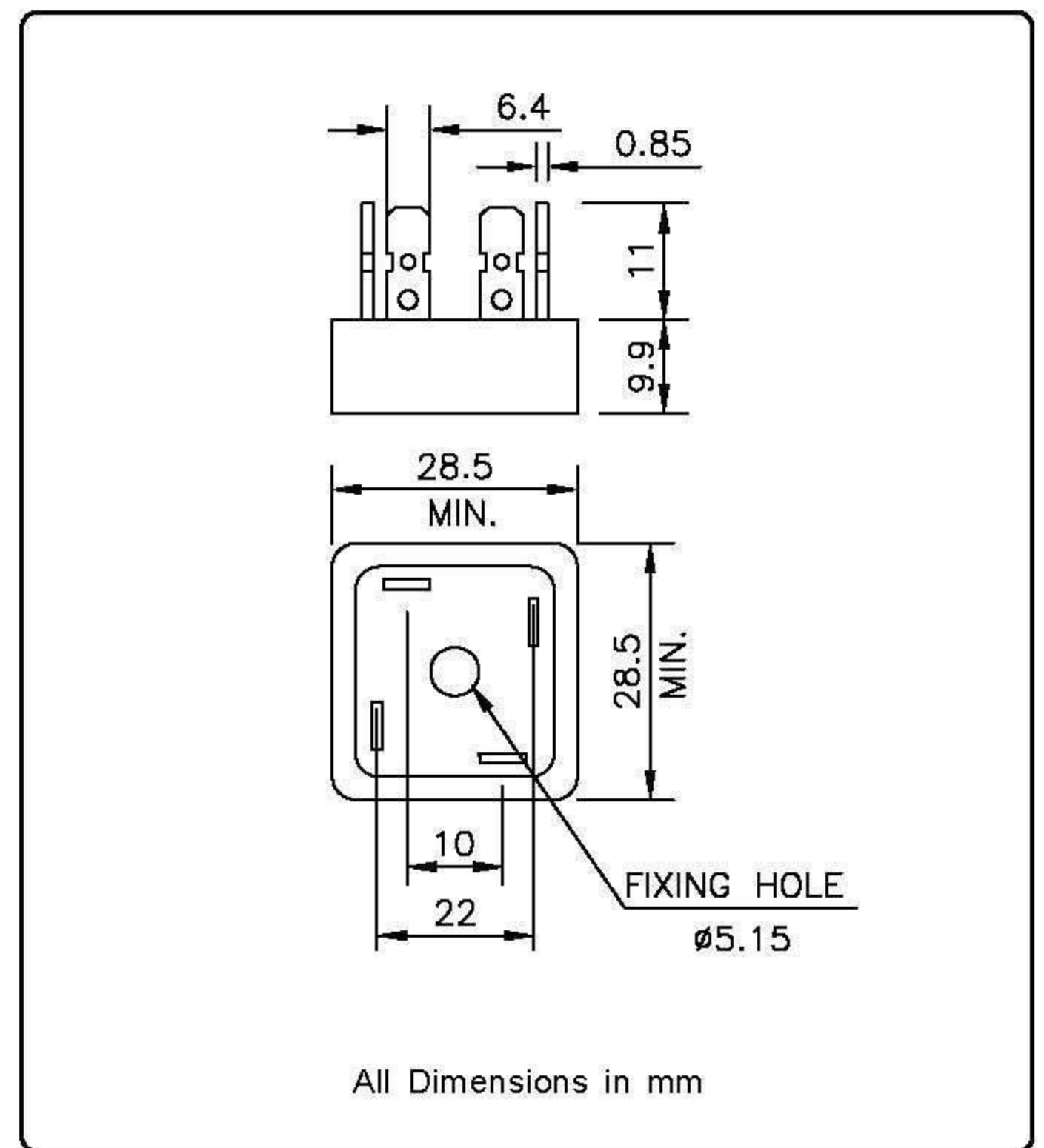
ELECTRICAL RATINGS & CHARACTERISTICS

$I_{O(AV)}$	Maximum average output current $T_C = 60^\circ\text{C}$; resistive, inductive load (R) capacitive load (C)	50 A 46 A
I_{FSM}	Maximum peak one cycle, non-repetitive forward current; 20ms	450 A
I^2t	Maximum I^2t for fuse selection; 10ms, 8.3ms	800 A ² s
V_{FM}	Maximum peak forward voltage drop per diode, $I_{O(peak)} = 55 \text{ A}$	1.1 V
I_{RM}	Maximum peak reverse current per diode at rated V_{RRM} $T_J = 25^\circ\text{C}$ $T_J = T_{Jmax}$	25 μA 2.0 mA
V_{INS}	RMS isolation voltage, circuit to base	2700 V



THERMAL & MECHANICAL DATA

T	Operating and storage temperature range	-40 to +150°C
R_{thjc}	Thermal impedance, junction to case	1.5 deg. C/W
R_{thcs}	Thermal resistance, case to sink (greased)	0.2 deg. C/W
f	Operating frequency range	40 to 1000 Hz
W	Approximate weight	20 gms.



VOLTAGE & APPLICATION DATA

TYPE NUMBER	51MB40A	51MB60A	51MB80A	51MB100A	51MB120A	51MB140A	51MB160A	51MB160A
V_{RRM}	400	600	800	1000	1200	1400	1600	1800
V_{RSM}	500	700	900	1100	1300	1500	1700	1900

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FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

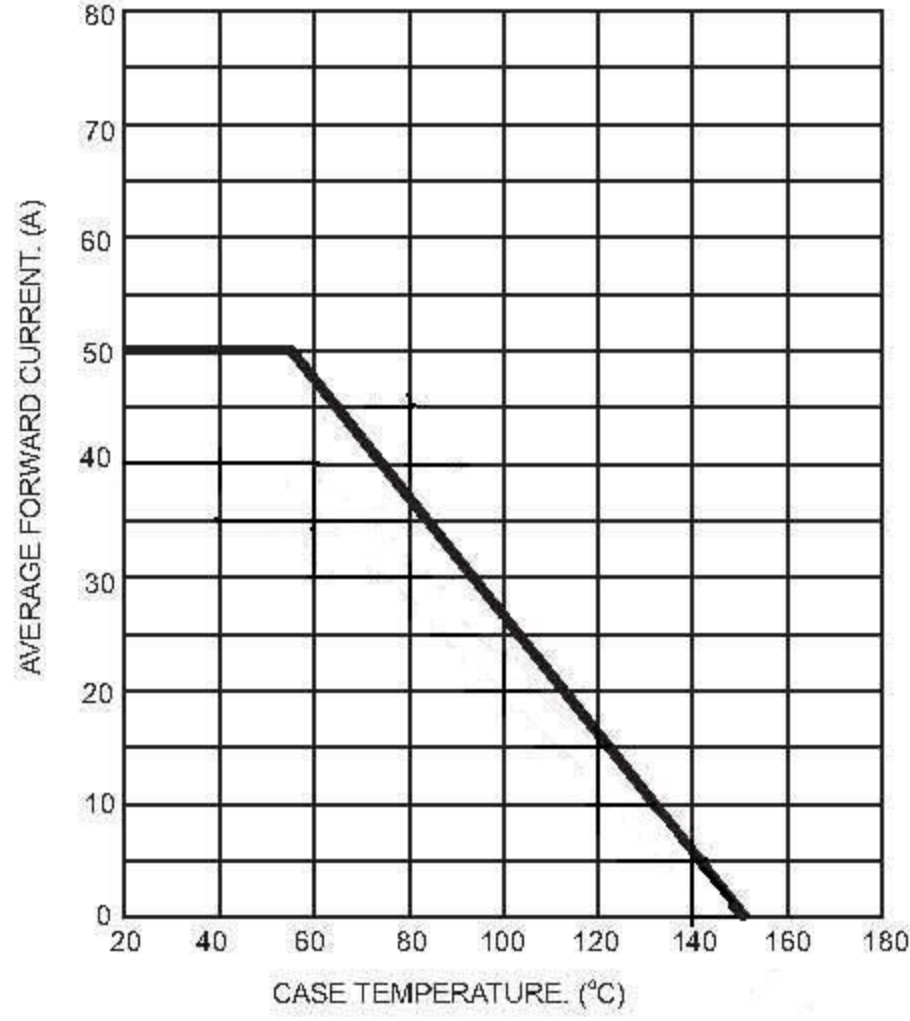


FIG.2- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

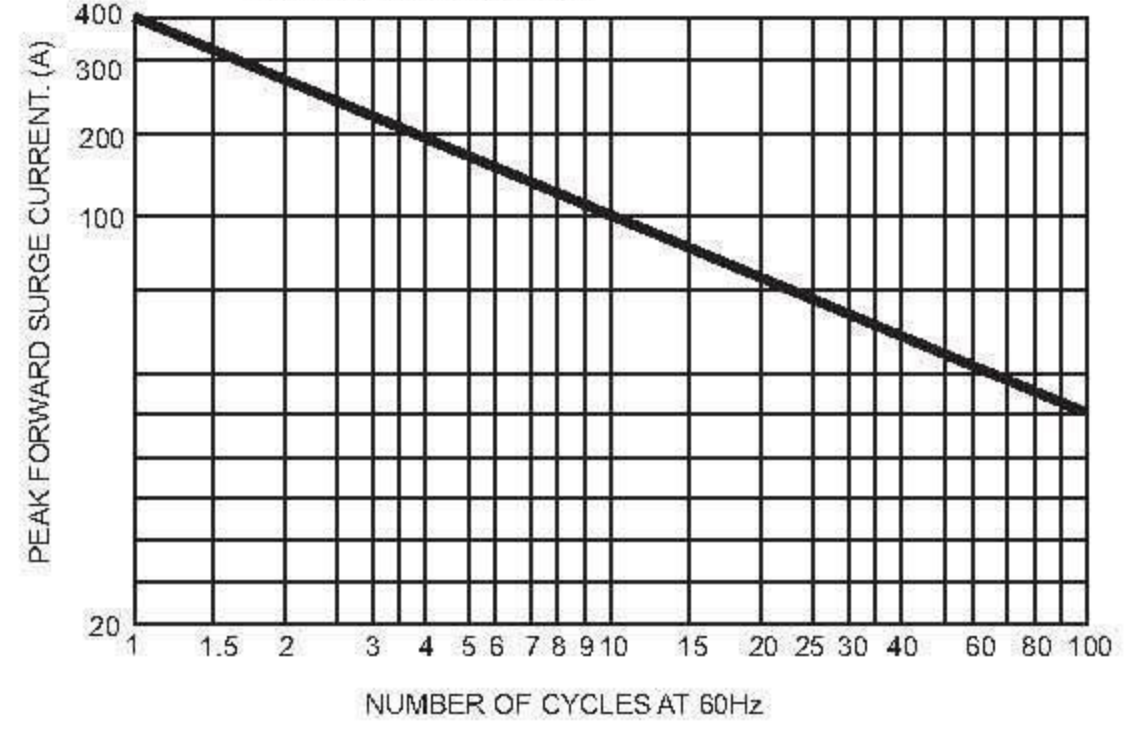


FIG.3- TYPICAL REVERSE CHARACTERISTICS PER BRIDGE ELEMENT

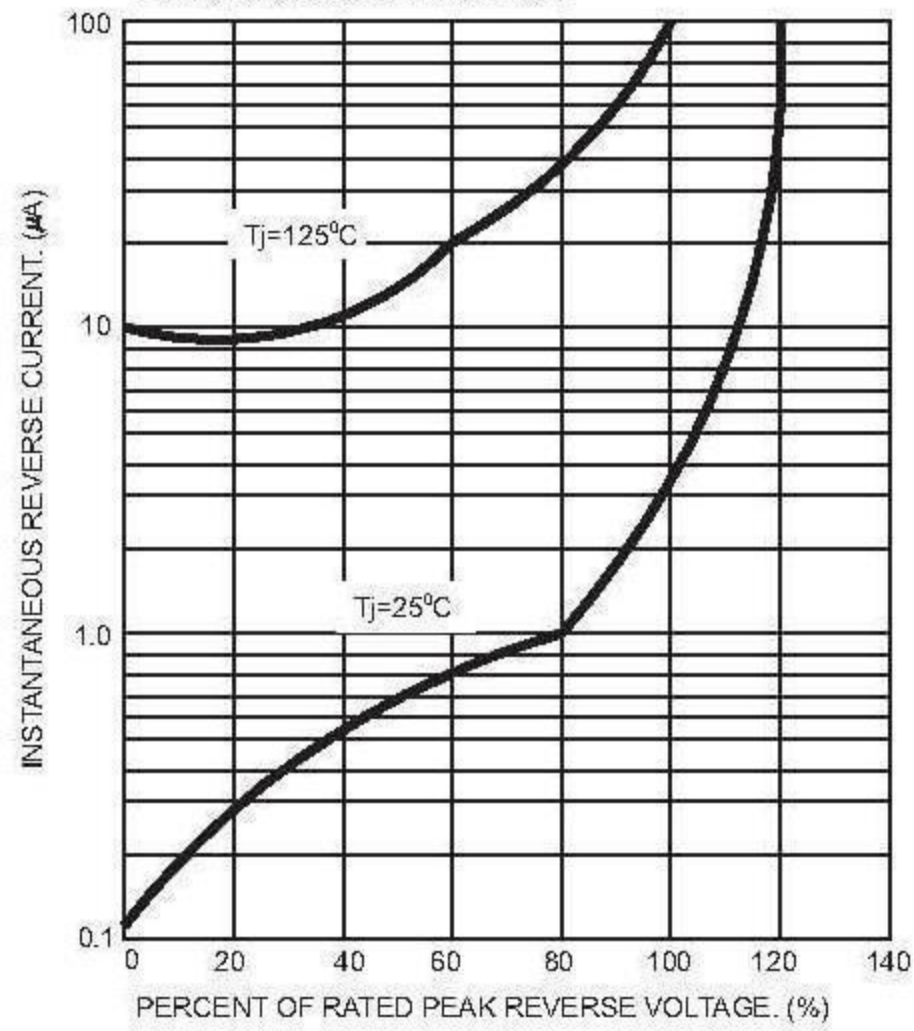


FIG.4- TYPICAL FORWARD CHARACTERISTICS PER BRIDGE ELEMENT

