

## Power Bridge Rectifiers

### DBI 25

#### Features

- Isolated metal case with in-line wire leads
- Ideal for printed circuit boards
- Allow easy heatsink mounting
- Solder temperature: 260°C max. (max. 5 s)
- Blocking voltage up to 1600 V
- High surge current
- UL recognized, file no. E63532
- Lead-Free tinned terminals
- Standard packing: 54 pieces box

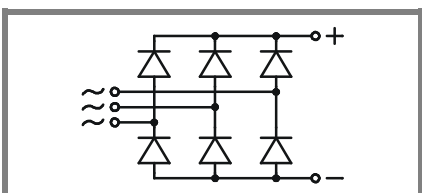
#### Typical Applications\*

- 3 phase rectifier for power supplies
- Input rectifier for variable frequency drives
- Rectifier for DC motor field supplies
- Battery charger rectifiers
- Recommended snubber network: RC: 50 Ω, 0.1 μF (P<sub>R</sub> = 1 W)

- 1) Mounted on a 50 x 75 mm p.c.b.
- 2) Mounted on a painted metal sheet of min. 250 x 250 x 1 mm
- 3) Recommended V<sub>VRMS</sub> values:  
V<sub>VRMS</sub> = V<sub>R<sub>RM</sub></sub> / 2,83

V <sub>RSM</sub> , V <sub>R<sub>RM</sub></sub> V	V <sub>VRMS</sub> V	I <sub>D</sub> = 25 A (T <sub>c</sub> = 32 °C) Types	C <sub>max</sub> μF	R <sub>min</sub> Ω
400	280	DBI 25-04		0,3
800	560	DBI 25-08		0,7
1200	800	DBI 25-12		1
1600	1000	DBI 25-16		1,5
1800	1250	DBI 25-18		1,8

Symbol	Conditions	Values	Units
I <sub>D</sub>	T <sub>a</sub> = 46 °C, P1/120, natural cooling T <sub>a</sub> = 46 °C, chassis <sup>2)</sup>	17 11	A A
I <sub>DCL</sub>	T <sub>a</sub> = 46 °C, P1/120, natural cooling T <sub>a</sub> = 46 °C, chassis <sup>2)</sup> T <sub>a</sub> = 45 °C, isolated <sup>1)</sup>	17 11 2,9	A A A
I <sub>FSM</sub>	T <sub>vi</sub> = 25 °C, 10 ms T <sub>vi</sub> = 150 °C, 10 ms	370 310	A A
i <sup>2</sup> t	T <sub>vi</sub> = 25 °C, 8,3 ... 10 ms T <sub>vi</sub> = 150 °C, 8,3 ... 10 ms	680 480	A <sup>2</sup> s A <sup>2</sup> s
V <sub>F</sub> V <sub>(TO)</sub> r <sub>T</sub> I <sub>RD</sub> I <sub>RD</sub> t <sub>rr</sub> f <sub>G</sub>	T <sub>vi</sub> = 25 °C, I <sub>F</sub> = 150 A T <sub>vi</sub> = 150 °C T <sub>vi</sub> = 150 °C T <sub>vi</sub> = 25 °C, V <sub>RD</sub> = V <sub>R<sub>RM</sub></sub> T <sub>vi</sub> = 150 °C, V <sub>RD</sub> = V <sub>R<sub>RM</sub></sub> T <sub>vi</sub> = 25 °C	max. 2,2 max. 0,85 max. 9 50 5 10 2000	V V mΩ μA mA μs Hz
R <sub>th(j-a)</sub> R <sub>th(i-c)</sub> R <sub>th(c-s)</sub> T <sub>vi</sub> T <sub>stg</sub>	isolated <sup>1)</sup> chassis <sup>2)</sup> total (from chips to bridge back side) total	21 5 2,2 0,15	K/W K/W K/W °C °C
V <sub>isol</sub> M <sub>s</sub> M <sub>t</sub> a w	a.c. 50...60 Hz; r.m.s.; 1s / 1 min. torque for mounting (M4 screw) approx.	3000 / 2500 2 ± 15% 21	V~ Nm Nm m/s <sup>2</sup> g
Fu			A
Case	40 x 20 x 10 mm plus leads = 20 mm	DBI	



DB (B6U)

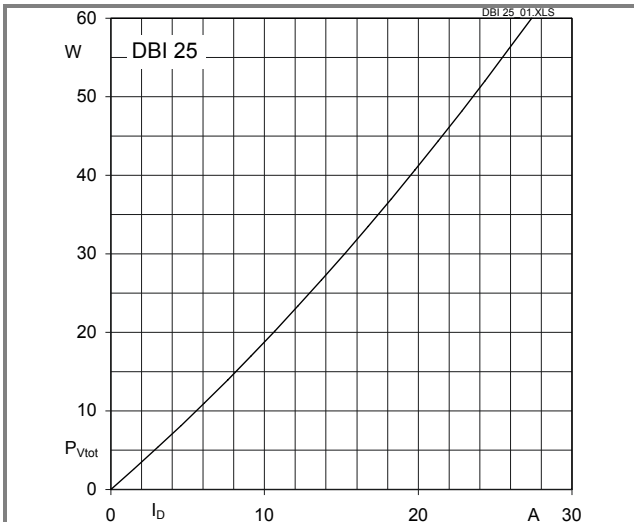


Fig. 3L Power dissipation vs. output current

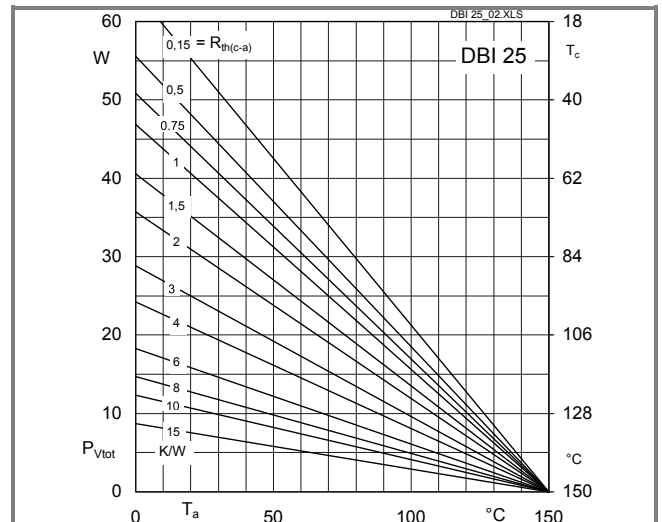


Fig. 3R Power dissipation vs. case temperature

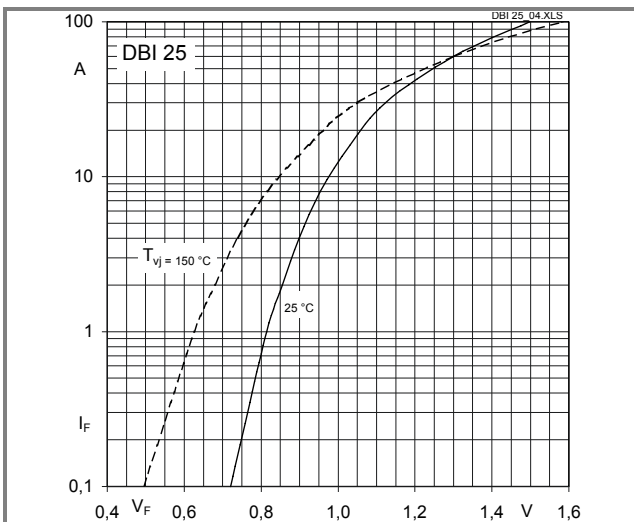
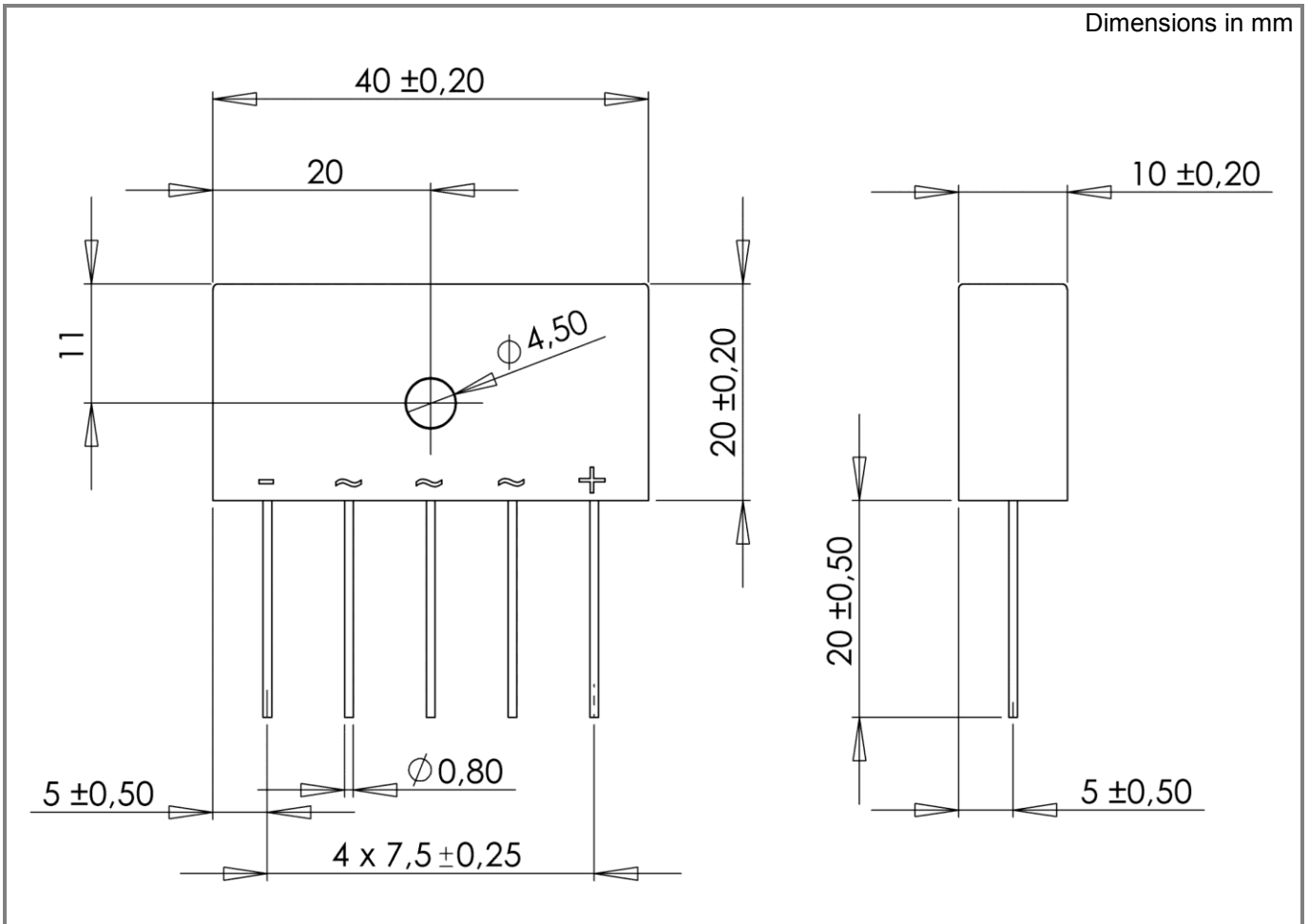


Fig. 9 Forward characteristics of a diode arm (typical)



Case DBI

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