

## Power Bridge Rectifiers

### BI 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 1800 V
- High surge current
- Standard packing: 54 pieces box

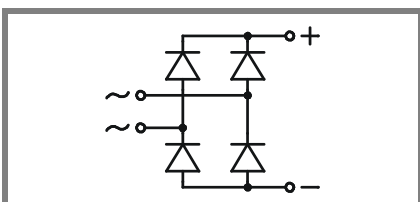
#### Typical Applications\*

- Rectifier for power supplies
- Input rectifier for variable frequency drives
- Rectifier for DC motor field supplies
- Battery charger rectifiers
- Recommended snubber network: RC: 0.1  $\mu$ F, 50  $\Omega$  ( $P_R = 1$  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  $V_{VRMS}$  values:  
 $V_{VRMS} = V_{RRM} / 2,83$

$V_{RSM}, V_{RRM}$ V	$V_{VRMS}$ V	$I_D = 25$ A ( $T_c = 26$ °C) Types	$C_{max}$ $\mu$ F	$R_{min}$ $\Omega$
400	280	BI 25-04 P		0,75
800	560	BI 25-08 P		1,8
1200	800	BI 25-12 P		2,7
1600	1000	BI 25-16 P		3,9
1800	1250	BI 25-18 P		4,4

Symbol	Conditions	Values	Units
$I_D$	$T_a = 45$ °C, P5A/100, natural cooling $T_a = 45$ °C, chassis <sup>2)</sup>	16,5 11	A A
$I_{DCL}$	$T_a = 45$ °C, P5A/100, natural cooling $T_a = 45$ °C, chassis <sup>2)</sup> $T_a = 45$ °C, isolated <sup>1)</sup>	14 9,5 2,7	A A A
$I_{FSM}$	$T_{vj} = 25$ °C, 10 ms $T_{vj} = 150$ °C, 10 ms	370 310	A A
$i^2t$	$T_{vj} = 25$ °C, 8,3 ... 10 ms $T_{vj} = 150$ °C, 8,3 ... 10 ms	680 480	$A^2s$ $A^2s$
$V_F$	$T_{vj} = 25$ °C, $I_F = 12,5$ A	max. 1,05	V
$V_{(TO)}$	$T_{vj} = 150$ °C	max. 0,85	V
$r_T$	$T_{vj} = 150$ °C	max. 9	m $\Omega$
$I_{RD}$	$T_{vj} = 25$ °C, $V_{RD} = V_{RRM}$ $T_{vj} = \text{°C}$ , $V_{RD} = V_{RRM} \geq V$	50	$\mu$ A $\mu$ A
$I_{RD}$	$T_{vj} = 150$ °C, $V_{RD} = V_{RRM}$ $T_{vj} = \text{°C}$ , $V_{RD} = V_{RRM} \geq V$	5	mA mA
$t_{rr}$	$T_{vj} = 25$ °C	10	$\mu$ s
$f_G$		2000	Hz
$R_{th(j-a)}$	isolated <sup>1)</sup> chassis <sup>2)</sup>	21 5	K/W K/W
$R_{th(j-c)}$	total (from chips to bridge back side)	2,2	K/W
$R_{th(c-s)}$	total	0,15	K/W
$T_{vj}$		-40...+150	°C
$T_{stg}$		-55...+130	°C
$V_{isol}$	a.c. 50...60 Hz; r.m.s.; 1s / 1 min.	3000 / 2500	V~
$M_s$	torque for mounting (M4 screw)	$2 \pm 15\%$	Nm
$M_t$			Nm
$a$			m/s <sup>2</sup>
$w$	approx.	20	g
$F_u$			A
Case	40 x 20 x 10 mm plus 20 mm leads	BI	



B (B2U)

