



Inline bridge

One-Phase Si-Bridge Rectifiers

BI 6-005 ... BI 6-16

Forward Current: 6 A

Reverse Voltage: 50 to 1600 V

Publish Data

Features

- Max. solder temperature: 260 °C, max. 5s
- UL recognized, file No. E63532
- $V_{ISO} > 2500$ V
- In-line isolated metal case with wired connectors
- Blocking voltage to 1600V
- High surge current
- Input rectifier for variable frequency drivers
- Rectifier for DC motor field supplies
- Battery charger
- Recommended snubber network : RC 50Ω, 0.1μF

Mechanical Data

- Metal case, dimensions: 40 x 20 x 10 mm
- Weight approx. 35
- Terminals: plated terminals solderable per IEC 68-2-20
- Admissible torque for mounting (M 4): 2 (± 10 %) N
- Standard packing : bulk
- Heat sink mounting not on the marking side

Type	Alternating input voltage V_{RMS} V	Repetitive peak reverse voltage V_{RRM} V
BI 6-005	35	50
BI 6-01	70	100
BI 6-02	140	200
BI 6-04	280	400
BI 6-06	420	600
BI 6-08	560	800
BI 6-10	700	1000
BI 6-12	800	1200
BI 6-14	900	1400
BI 6-16	1000	1600

Absolute Maximum Ratings

$T_c = 25$ °C unless otherwise specified

Symbol	Conditions	Values	Units
I_{FRM}	Repetitive peak forward current; $f > 15$ Hz ¹⁾	30	A
I^2t	Rating for fusing, $t < 10$ ms	60	A ² s
I_{FSM}	Peak forward surge current, 50 Hz half sine-wave $T_A = 25$ °C	125	A
I_{FAV}	Max. averaged fwd. current, R-load, $T_A = 50$ °C ¹⁾	2,0	A
I_{FAV}	Max. averaged fwd. current, C-load, $T_A = 50$ °C ¹⁾	1,6	A
I_{FAV}	Max. current with cooling fin, R-load, $T_c = 100$ °C ²⁾	6	A
I_{FAV}	Max. current with cooling fin, C-load, $T_c = 100$ °C ²⁾	4,8	A
R_{thA}	Thermal resistance junction to ambient ¹⁾	8	K/W
R_{thC}	Thermal resistance junction to case ¹⁾	4,1	K/W
T_j	Operating junction temperature	- 50 ... + 150 °C	°C
T_s	Storage temperature	- 50 ... + 150 °C	°C

Characteristics

$T_c = 25$ °C unless otherwise specified

Symbol	Conditions	Values	Units
V_F	Maximum forward. voltage, $T_j = 25$ °C; $I_F = 3$ A	1,1	V
I_R	Maximum Leakage current, $T_j = 25$ °C; $V_R = V_{RRM}$	50	μA
C_j	Typical junction capacitance per leg at V, MHz		pF



