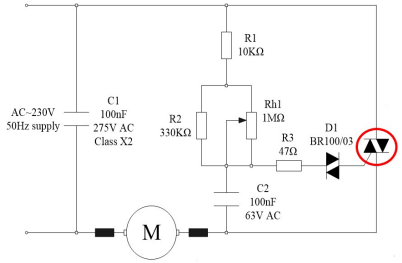
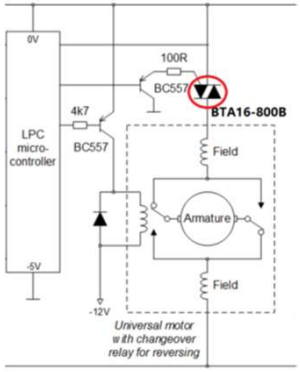
New Product Introduction Q3-2018

WeEn
WeEn Semiconductors

Standard (four quadrant): BTA16-600B, BTA16-800B

Applications





Power Tools / Home Appliances / Heating control

Key Features and Benefits

- Planar passivated 4Q triacs for voltage ruggedness and reliability
- Less sensitive gate design for high immunity to gate noise and false triggering
- Internally insulated package gives the best trade-off of voltage isolation & thermal dissipation capability
- High junction temperature $T_{j(max)}$ of 150°C

Key Parameters

Parameters	Value
I_{TRMS}	16A @ T_{mb} 112°C
V_{DRM}	600V / 800V
I_{GT}	Q I/II/III: 10mA-50mA; Q IV: 10mA-70mA
I_{TSM}	160A @ 20ms
$T_{j(max)}$	150°C
$V_{isol(RMS)}$	2500V

Product

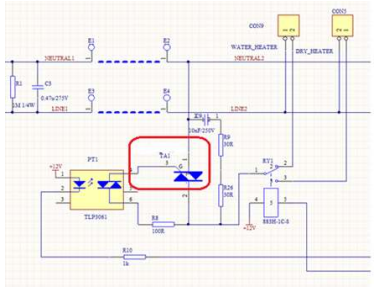
Product	Package
BTA16-600B	IITO220
BTA16-800B	IITO220

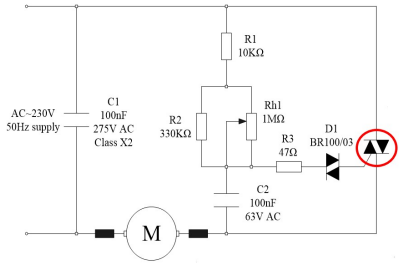
Cross Reference

WeEn	Competitor
BTA16-600B	BTA16-600BRG
BTA16-800B	BTA16-800BRG

Hi-Com (three quadrant): BTA316Y-800BT, BTA316Y-800CT

Applications





Power Tools / Home Appliances / Heating control/ Lighting control

Key Features and Benefits

- Planar passivated 3Q triacs for voltage ruggedness and reliability
- 3Q Hi-Com^{TM} design; no need for RC snubber for triac protection
- High commutation + very high immunity to false turn-on by dV/dt
- Internally insulated package gives the best trade-off of voltage isolation & thermal dissipation capability
- High junction temperature $T_{j(max)}$ of 150°C

Key Parameters

Parameters	Value
I_{TRMS}	16A @ T_{mb} 112°C
V_{DRM}	800V
I_{GT}	35mA / 50mA
I_{TSM}	160A @ 20ms
$T_{j(max)}$	150 °C
$V_{isol(RMS)}$	2500V

Product

Product	Package
BTA316Y-800BT	IITO220
BTA316Y-800CT	IITO220

Cross Reference

WeEn	Competitor
BTA316Y-800BT	BTA16-800BWRG
BTA316Y-800CT	BTA16-800CWRG

BTA440Z-800BT

3Q Hi-Com Triac

20 July 2017 Product data sheet

1. General description

Planar passivated high commutation three quadrant triac in a SOT1292 (IITO3P) package intended for use in circuits where high static and dynamic dV/dt and high dI/dt can occur. This "series BT" triac will commutate the full RMS current at the maximum rated junction temperature ($T_{j(max)}$ = 150 °C) without the aid of a snubber. It is used in applications where "high junction operating temperature capability" is required.

2. Features and benefits

- High current TRIAC
- 3Q technology for improved noise immunity
- High commutation capability with maximum false trigger immunity
- High immunity to false turn-on by dV/dt
- High junction operating temperature capability ($T_{j(max)}$ = 150 °C)
- High voltage capability
- Least sensitive gate for highest noise immunity
- Low thermal resistance
- Planar passivated for voltage ruggedness and reliability
- Triggering in three quadrants only
- Insulated tab rated at 2500 V rms

3. Applications

- Applications subject to high temperature ($T_{j(max)}$ = 150 °C)
- High current / high surge applications
- High power / industrial controls - e.g. heating, motors, lighting

4. Quick reference data

Table 1. Quick reference data

Symbol	Parameter	Conditions		Min	Typ	Max	Unit
V_{DRM}	repetitive peak off-state voltage			-	-	800	V
$I_{T(RMS)}$	RMS on-state current	full sine wave; $T_{mb} \leq$ 110 °C; Fig. 1; Fig. 2; Fig. 3		-	-	40	A
I_{TSM}	non-repetitive peak on-state current	full sine wave; $T_{j(init)}$ = 25 °C; t_p = 20 ms; Fig. 4; Fig. 5		-	-	400	A
		full sine wave; $T_{j(init)}$ = 25 °C; t_p = 16.7 ms		-	-	440	A
T_j	junction temperature			-	-	150	°C
Static characteristics							

BTA/BTB26 TO3P alternatives

➢ WeEn Semi Benefits:

*Planar Passivated **3Q***
8/10 Wks Lead Time
Tjmax150℃

Higher It(RMS), Vdrm, Tj

BTA41-800B

4Q Triac

10 July 2017 Product data sheet

1. General description

Planar passivated four quadrant triac in a SOT1292 (IITO3P) package intended for use in circuits where high static and dynamic dV/dt and high dI/dt can occur. This triac will commutate the full RMS current at the maximum rated junction temperature ($T_{j(max)}$ = 150 °C). It is used in applications where "high junction operating temperature capability" is required.

2. Features and benefits

- High current TRIAC
- Low thermal resistance
- High junction operating temperature capability ($T_{j(max)}$ = 150 °C)
- High voltage capability
- Planar passivated for voltage ruggedness and reliability
- Insulated tab rated at 2500 V rms

3. Applications

- High current / high surge applications
- High power / industrial controls -- e.g. heating, motors, lighting

4. Quick reference data

Table 1. Quick reference data

Symbol	Parameter	Conditions	Values	Unit
Absolute maximum rating				
V_{DRM}	repetitive peak off-state voltage		800	V
$I_{T(RMS)}$	RMS on-state current	full sine wave; $T_{mb} \leq 105$ °C; Fig. 1; Fig. 2; Fig. 3	40	A
I_{TSM}	non-repetitive peak on-state current	full sine wave; t_p = 20 ms; $T_{j(init)}$ = 25 °C; Fig. 4; Fig. 5	400	A
		full sine wave; t_p = 16.7 ms; $T_{j(init)}$ = 25 °C;	440	A
T_j	junction temperature		150	°C

BTA/BTB26 TO3P alternatives

➢ WeEn Semi Benefits:

*Planar Passivated **4Q***

8/10 Wks Lead Time

Tjmax150℃

Higher It(RMS), Vdrm, Tj

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