

**BTA16 800B****FOUR QUADRANT TRIIACS***Blocking voltage -800 Volts On-state RMS current -16 Ampere***FEATURES**

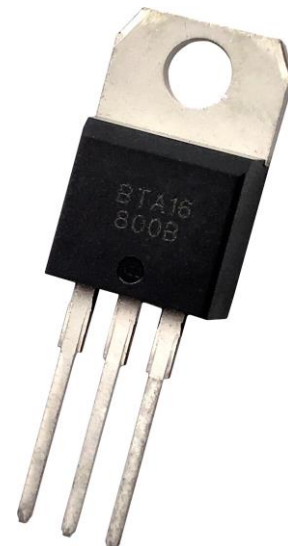
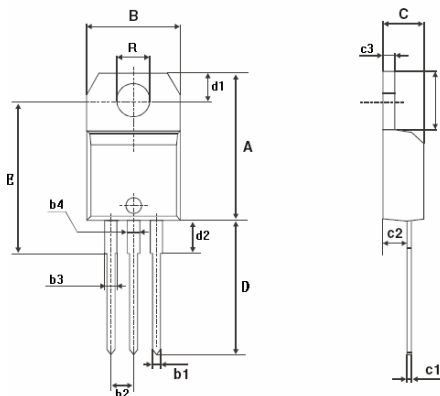
- Ultra low gate trigger current
- Low cost package.

(TO-220)

**APPLICATIONS**

Typical applications include motor control, industrial and domestic lighting, heating and static switching.

- Heating regulation
- Motor control
- Phase control



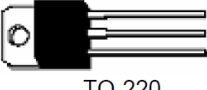

DIM	Inches			Millimeters		
	Min	Type	Max	Min	Type	Max
A	0.591	-	0.646	15.000	-	16.400
B	0.386	-	0.409	9.800	-	10.400
C	0.160	-	0.190	4.070	-	4.820
D	0.500	-	0.562	12.700	-	14.270
E	-	0.640	-	-	16.250	-
F	0.248	-	0.271	6.290	-	6.890
R	0.140	-	0.156	3.560	-	3.960
b1	0.030	-	0.037	0.750	-	0.950
b2	0.095	-	0.105	2.420	-	2.660
b3	0.046	-	0.054	1.170	-	1.370
b4	0.046	-	0.054	1.170	-	1.370
c1	0.017	-	0.023	0.420	-	0.580
c2	0.091	-	0.115	2.320	-	2.920
c3	0.045	-	0.055	1.150	-	1.390
d1	0.100	-	0.120	2.540	-	3.040
d2	0.125	-	0.155	3.180	-	3.930

## BTA16 800B

## FOUR QUADRANT TRIIACS

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## PINNING INFORMATION

PIN	Description	Simplified outline	Symbol
1	main terminal 1 ( T1 )	 TO-220	
2	main terminal 2 ( T2 )		
3	gate ( G )		

## QUICK REFERENCE DATA

SYMBOL	PARAMETER	MAX	UNIT
$V_{DRM}$ $V_{RRM}$	Repetitive peak off-state voltages	800	V
$I_{T(RMS)}$	RMS on-state current	16	A
$I_{TSM}$	Non-repetitive peak on-state current	120	A

## THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MA	UNIT
$R_{th j-mb}$	Thermal resistance junction to mounting base	full cycle	-	-	1.50	K/W
		half cycle	-	-	2.00	K/W
$R_{th j-a}$	Thermal resistance junction to ambient	in free air		60	-	K/W

## LIMITING VALUE

Limiting values in accordance with the Maximum System(IEC 134).

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT	
$I_{T(RMS)}$	RMS on-state current	full sine wave; $T_{mb} \leq 102$ °C	-	16	A	
	Non-repetitive peak on-state current	full sine wave; $T_j = 25$ °C prior to surge	$t = 20$ ms	-	120	A
			$t = 16.7$ ms	-	140	A
$I^2t$	$I^2t$ for fusing	$t = 10$ ms	-	45	A <sup>2</sup> s	
$dI_T/dt$	Repetitive rate of rise of on-state current after triggering	$I_{TM} = 16$ A; $I_G = 0.2$ A; $dI_G/dt = 0.2$ A/s	T2+ G+	-	100	A/ $\mu$ s
			T2- G-	-	100	A/ $\mu$ s
$I_{GM}$	Peak gate current		-	2	A	
$V_{GM}$	Peak gate voltage		-	8	V	
$P_{GM}$	Peak gate power		-	16	W	
$P_{G(AV)}$	Average gate power	over any 20 ms period	-	0.35	W	
$T_{stg}$	Storage temperature		-40	150	°C	
$T_j$	Junction temperature		-40	125	°C	

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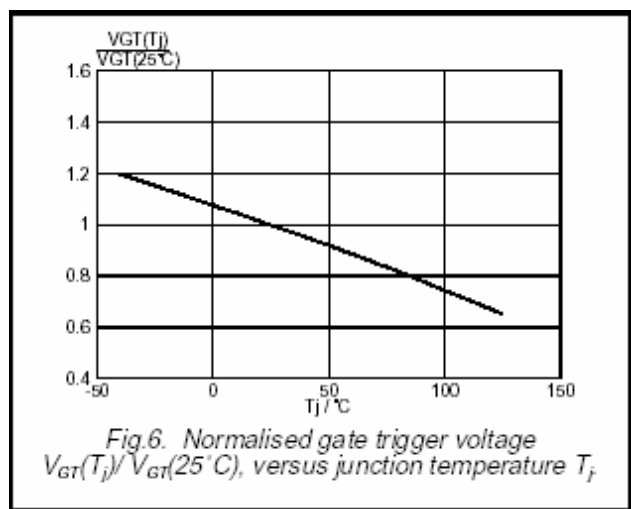
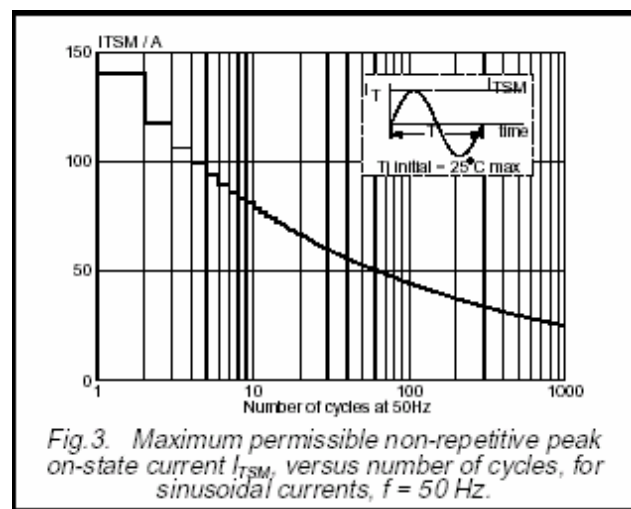
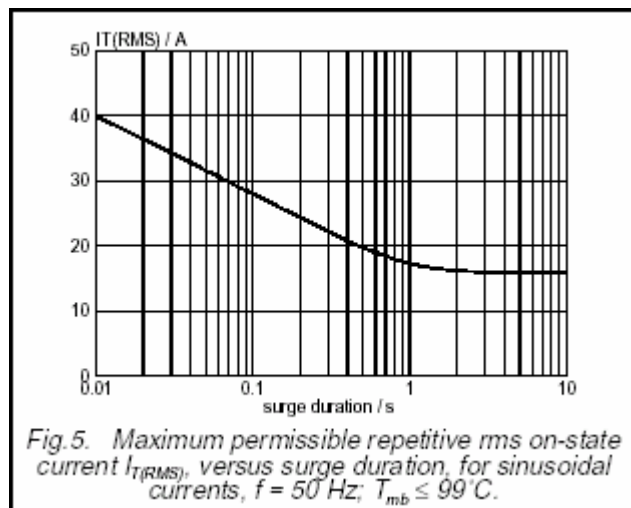
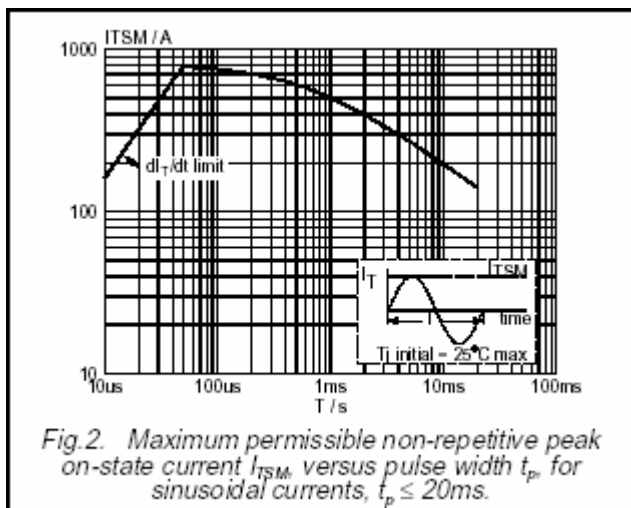
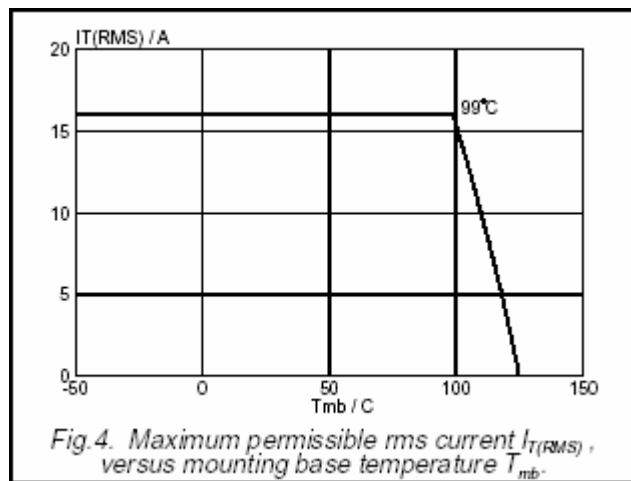
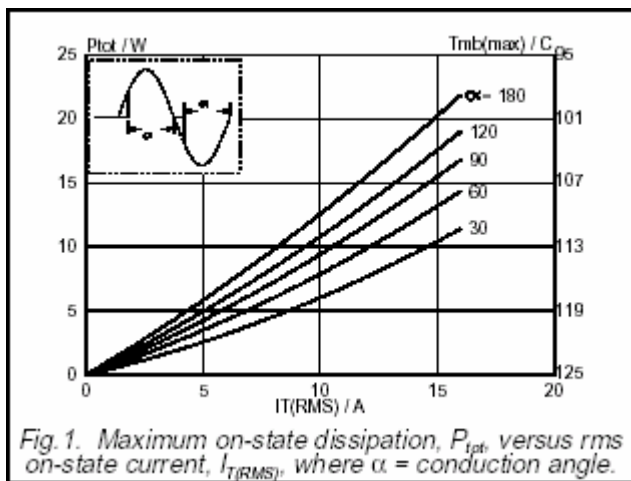
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**CHARACTERISTICS**T<sub>j</sub> = 25°C unless otherwise stated

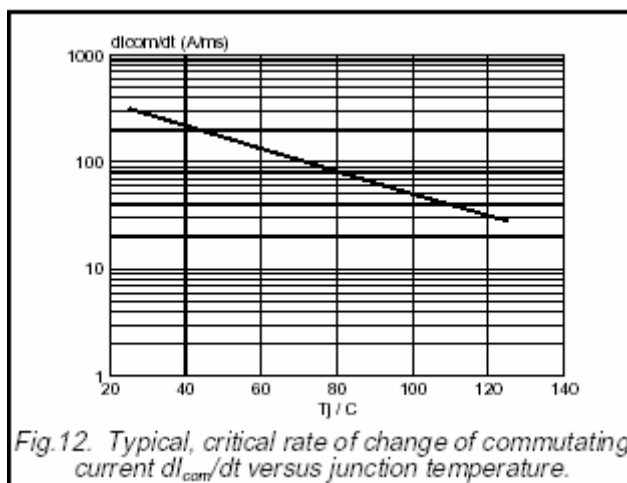
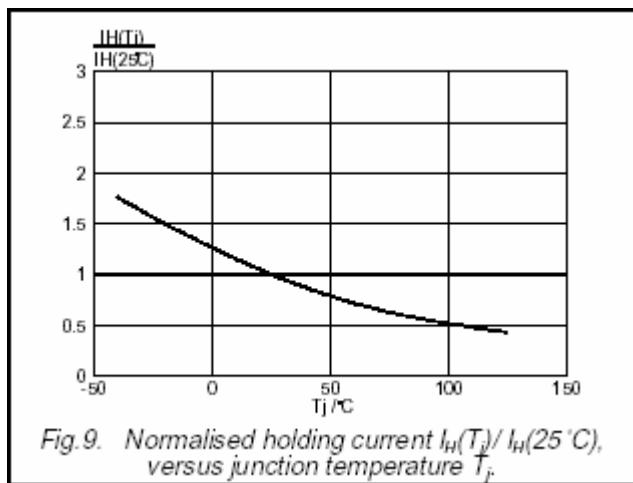
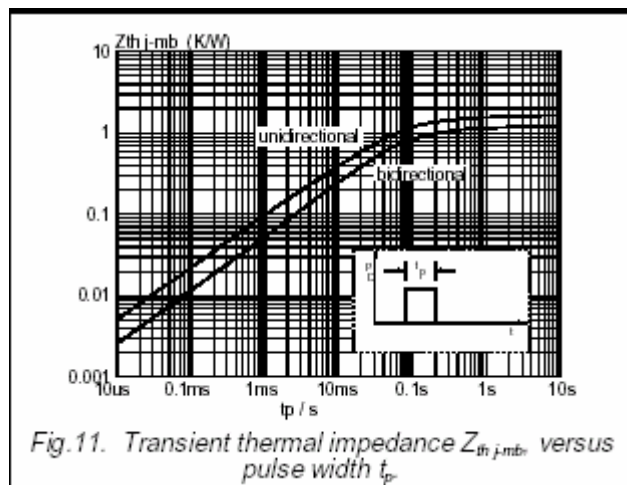
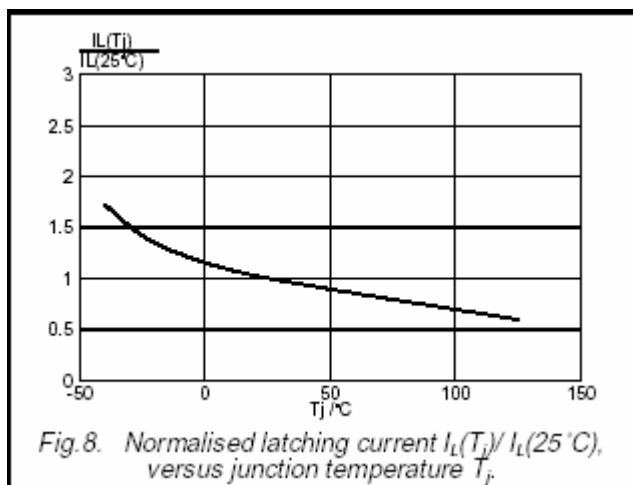
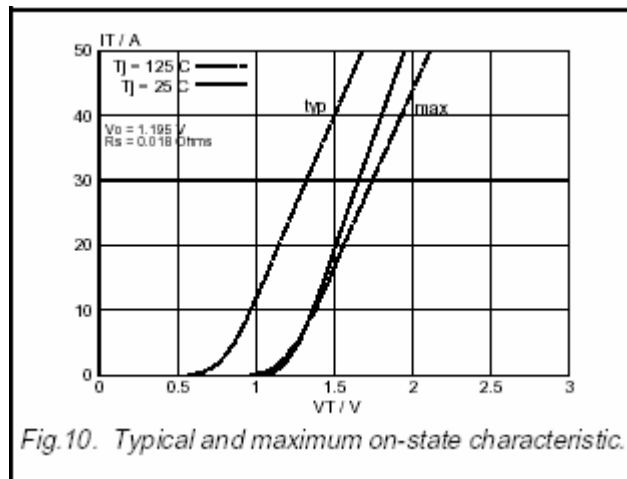
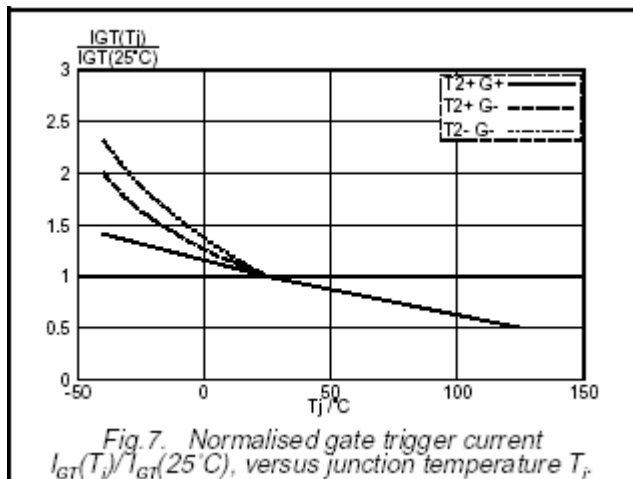
SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT	
<b>Static characteristics</b>							
I <sub>GT</sub>	Gate trigger current	V <sub>D</sub> = 12 V; I <sub>T</sub> = 0.1A	T2+ G+	10	25	mA	
			T2+ G-	15	25	mA	
			T2- G-	15	25	mA	
			T2- G+	30	50	mA	
I <sub>L</sub>	Latching current	V <sub>D</sub> = 12 V; I <sub>GT</sub> = 0.1A	T2+ G+	-	20	50	mA
			T2+ G-	-	30	80	mA
			T2- G-	-	20	50	mA
			T2- G+		20	50	mA
I <sub>H</sub>	Holding current	V <sub>D</sub> = 12 V; I <sub>GT</sub> = 0.15A	-	20	40	mA	
V <sub>T</sub>	On-state voltage	I <sub>T</sub> = 20A	-	-	1.85	V	
V <sub>GT</sub>	Gate trigger voltage	V <sub>D</sub> = 12 V; I <sub>T</sub> = 0.1A	T2+ G+	0.5	0.78	1.5	V
			T2+ G-	0.5	0.70	1.5	VV
			T2- G-	0.5	0.71	1.5	
			T2- G+	0.5	0.81	2.0	V
<b>Dynamic Characteristics</b>							
dV <sub>D</sub> /dt	Critical rate of rise of off-state voltage	V <sub>DM</sub> = 67% V <sub>DRM(max)</sub> ; T <sub>j</sub> = 125 °C; Exponential wave form; gate open circuit	250	500	-	V/μs	
dI <sub>com</sub> /dt	Critical rate of change of commutating current	V <sub>D</sub> = 400 V; T <sub>j</sub> = 125 °C I <sub>T(RMS)</sub> = 4.4A; Commutating dv/dt = 18 V/ s, Without snubber; gate open circuit	6.5	-	-	A/ms	
dI/dt	Repetitive Critical Rate of Rise of On-State Current	I <sub>PK</sub> = 50 A; PW = 40sec; di <sub>G</sub> /dt = 200 mA/ sec; f = 60 Hz	-	-	10	A/μs	

RATINGS AND CHARACTERISTIC CURVES BTA16 800B



Note: Specification are subject to change without notice. For more detail and update, please visit our website.

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