

TO-220-3L Plastic-Encapsulate Thyristors

BTB06 TRIAC

MAIN FEATURES

Symbol	value	unit
$I_{T(RMS)}$	6	A
V_{DRM}/V_{RRM}	600	V
$I_{GT(Q1)}$	5 to 50	mA

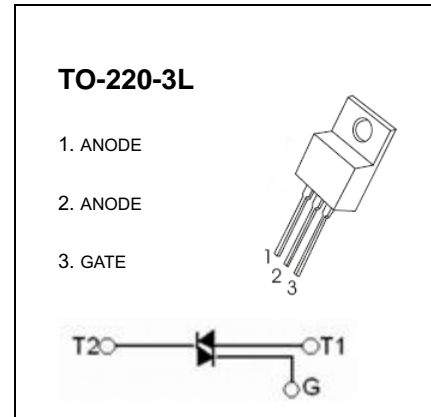
DESCRIPTION

Suitable for AC switching operations, the BTB06 series can be used as an ON/OFF function in applications such as static relays, heating regulation, induction motor starting circuits... or for phase control in light dimmers, motor speed controllers,...

The snubberless versions are specially recommended for use on inductive loads, thanks to their high commutation performances. Logic level versions are designed to interface directly with low power drivers such as microcontrollers.

ABSOLUTE MAXIMUM RATINGS

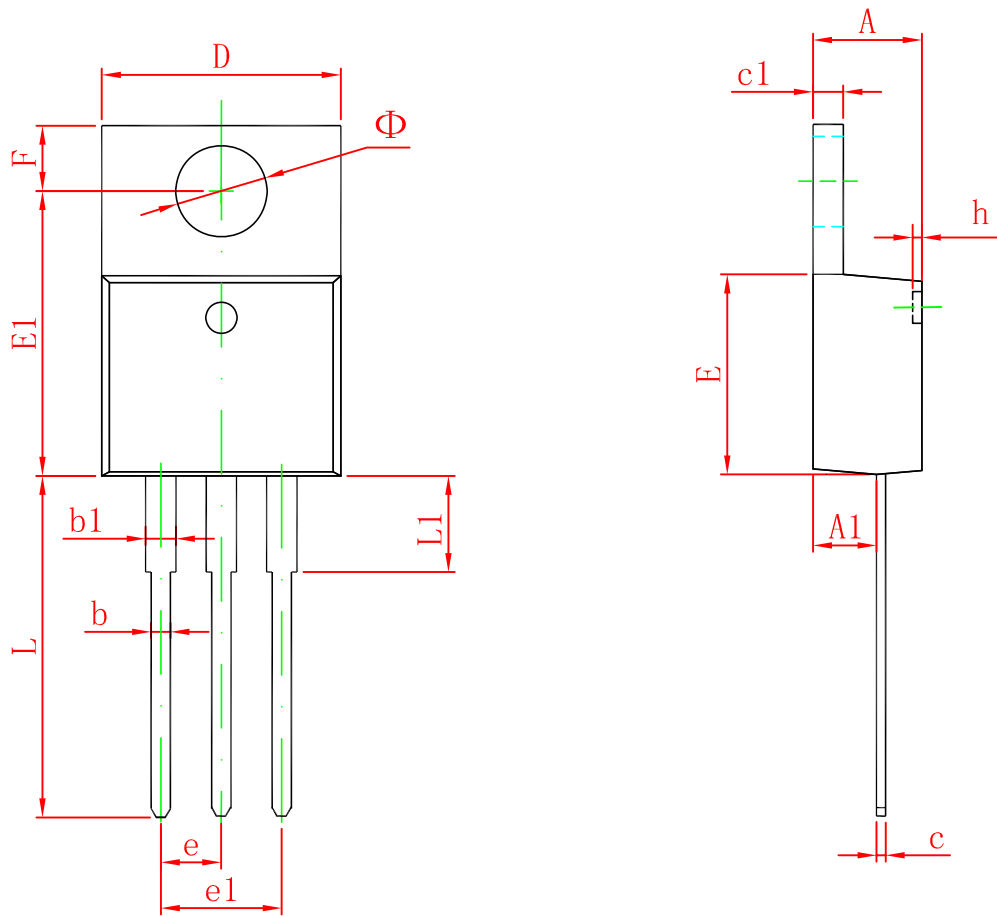
symbol	parameter	value	unit	
$I_{T(RMS)}$	RMS on-state current(full sine wave)	D ² PAK/TO-220AB $T_C=110^{\circ}C$	6	A
		TO-220 ins. $T_C=105^{\circ}C$		
I_{TSM}	Non repetitive surge peak on-state current (full cycle, T_j initial= $25^{\circ}C$)	F=50Hz t=20ms	60	A
		F=60Hz t=16.7ms		
I_{GM}	Peak gate current	tp=20us $T_j=125^{\circ}C$	4	A
$P_{G(AV)}$	Average gate power dissipation	$T_j=125^{\circ}C$	1	W
T_{stg}	Storage junction temperature range		-40 to +150	$^{\circ}C$
T_j	Operating junction temperature range		-40 to +125	



ELECTRICAL CHARACTERISTICS ($T_a=25^{\circ}C$ unless otherwise specified)

Parameter		Symbol	Test conditions	Min	Max	Unit
Rated repetitive peak off-state/reverse voltage		V_{DRM}, V_{RRM}	$I_D=10 \mu A$	600		V
Rated repetitive peak off-state current		I_{DRM}, I_{RRM}	$V_D=520V$		10	μA
On-state voltage		V_{TM}	$I_T=8A$		1.7	V
Gate trigger current	I	I_{GT}	$T_2(+), G(+)$	$V_D=12V$ $R_L=100 \Omega$	25	mA
	II		$T_2(+), G(-)$		25	mA
	III		$T_2(-), G(-)$		25	mA
	IV		$T_2(-), G(+)$		-	mA
Gate trigger voltage	I	V_{GT}	$T_2(+), G(+)$	$V_D=12V$ $R_L=100 \Omega$	1.45	V
	II		$T_2(+), G(-)$		1.45	V
	III		$T_2(-), G(-)$		1.45	V
	IV		$T_2(-), G(+)$		-	V
Holding current		I_H	$I_T=500mA$ $I_G=50mA$		50	mA

TO-220-3L Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	4.470	4.670	0.176	0.184
A1	2.520	2.820	0.099	0.111
b	0.710	0.910	0.028	0.036
b1	1.170	1.370	0.046	0.054
c	0.310	0.530	0.012	0.021
c1	1.170	1.370	0.046	0.054
D	10.010	10.310	0.394	0.406
E	8.500	8.900	0.335	0.350
E1	12.060	12.460	0.475	0.491
e	2.540 TYP		0.100 TYP	
e1	4.980	5.180	0.196	0.204
F	2.590	2.890	0.102	0.114
h	0.000	0.300	0.000	0.012
L	13.400	13.800	0.528	0.543
L1	3.560	3.960	0.140	0.156
Φ	3.735	3.935	0.147	0.155