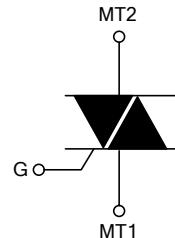


BTA04_BTB04 Triac

■ DESCRIPTION

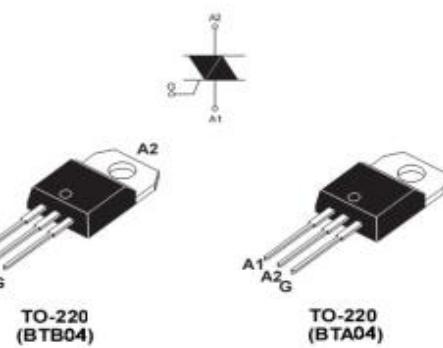
The BTA04_BTB04 is a silicon bidirectional device with NPNPN five-layer structure; Single-sided grooving technology with independent intellectual property rights, countertop glass passivation process; Multilayer metallized electrode on the back; It has high blocking voltage and high temperature stability;

The BTA04_BTB04 is widely used in dimming, temperature regulation, speed regulation, and electric vehicles Tools, solid state relays, vacuum cleaners, motor controls system and other fields, strong anti-interference ability.



■ FEATURES

- * Low gate trigger current
- * Low holding current



TO-126

1. Emitter

2. Collector

3. Base



TO-252



TO-251



TO-220F

■ ABSOLUTE MAXIMUM RATINGS

SYMBOL	PARAMETER			RATINGS	UNIT
$I_{T(RMS)}$	RMS On-State Current	BTA BTB	$T_c=80^\circ\text{C}$ $T_c=90^\circ\text{C}$	4	A
I_{TSM}	Non Repetitive Surge Peak On-State Current	F=50HZ	t=20ms	40	A
I^2t	I^2t Value		tp=10ms	8	A^2s
di/dt	Critical Rate of Rise of On-State Current		$T_j=125^\circ\text{C}$	50	$\text{A}/\mu\text{s}$
V_{DRM}/V_{RRM}	Repetitive Peak Off-State Voltage		$T_j=25^\circ\text{C}$	600/800	V

I _{GM}	Peak Gate Current	t _p =20us	T _j =125°C	4	A
P _{G(AV)}	Average Gate Power Dissipation		T _j =125°C	0.5	W
T _{stg} T _j	Storage Junction Temperature Operating Junction Temperature			−40 to +150 −40 to +125	°C

Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged.

Absolute maximum ratings are stress ratings only and functional device operation is not implied.

■ Electrical characteristics (three quadrants)

PARAMETER	SYMBOL	TEST CONDITIONS	Quadrants		RATINGS	UNIT	
Gate Trigger Current	I _{GT}	V _D =12V (DC) R _L =100Ω	I II III	MAX	≤35	mA	
Gate Trigger Voltage	V _{GT}			MAX	1.5	V	
Gate Non-Trigger Voltage	V _{GD}			MIN	0.2	V	
Holding Current (Note 1)	I _H	I _T =0.5A		MAX	20	mA	
Latching Current	I _L	I _G =1.2I _{GT}		MAX	5	mA	
Critical Rate of Rise of Off-State Voltage (Note 1)	dv/dt	V _D =2/3V _{DRM} T _j =125°C			30		
Critical Rate of Rise of Off-State Voltage at Commutation (Note 1)	(dv/dt) _c	T _j =125°C		MIN	10	V/us	

■ Electrical characteristics (four quadrants)

PARAMETER	SYMBOL	TEST CONDITIONS	Quadrants		RATINGS			UNIT		
Gate Trigger Current	I _{GT}	V _D =12V R _L =100 Ω	I	MAX	I	II	III	mA		
Gate Trigger Voltage	V _{GT}		II		≤35		≤80			
Gate Non-Trigger Voltage	V _{GD}		III	MAX	1.5			V		
Holding Current (Note 1)	I _H		IV		MIN	0.2		V		
Latching Current	I _L	I _G =1.2I _{GT}		MAX	60			mA		
Critical Rate of Rise of Off-State Voltage (Note 1)	dv/dt	V _D =2/3V _{DRM} T _j =125°C			100					
Critical Rate of Rise of Off-State Voltage at Commutation (Note 1)	(dv/dt)c	T _j =125°C		MIN	500			V/us		
					10			V/us		

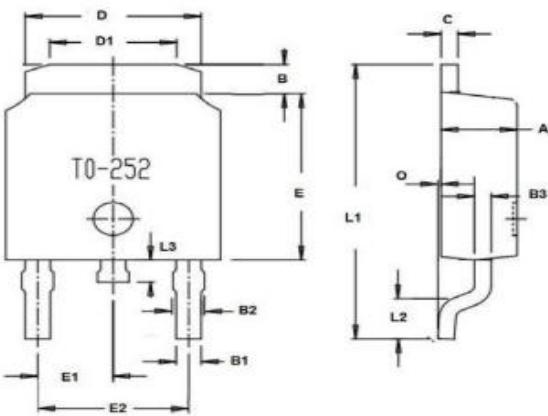
■ Static parameters

SYMBOL	PARAMETER			RATINGS	UNIT
V _{TM}	Peak On-State Voltage (Note 1)	T _j =25°C ITM=8A	MAX	1.50	V
V _{T0}	Threshold voltage	T _j =125°C	MAX	0.92	V
R _d	Resistance	T _j =125°C	MAX	36.6	mΩ
I _{DRM} I _{RRM}	Repetitive Peak Off-State Current		T _j =25°C T _j =125°C	5	uA
				0.5	mA
R _{th(j-c)}	Junction to Case (DC)		BTA	2.05	°C/W
			BTB	1.25	

● TO-252 外形尺寸图：

单位： mm(±0.1)

TO-252



Technical drawing showing the top view and side cross-section of the TO-252 package. The top view indicates lead spacing (D), lead width (D1), height (E), and lead thickness (E1, E2). The side view shows lead length (L1), body height (L2), and lead thickness (L3). Lead labels include A, B, C, D, E, B1, B2, B3, L1, L2, L3, O, and c.

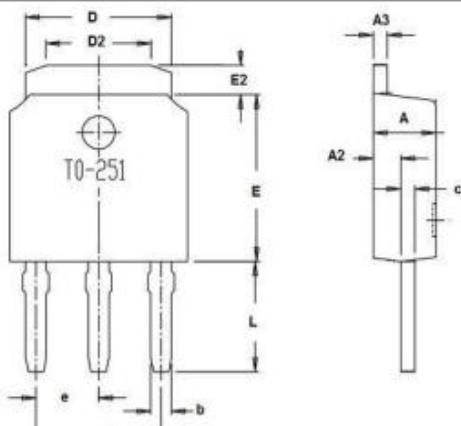
DIM	Min.	Max.
A	2.1	2.5
B	0.95	1.55
C	0.4	0.6
D	6.4	6.7
D1	5.1	5.8
E	5.8	6.4
E1	Typ 2.3	
E2	Typ 4.6	
B1	0.6	0.8
B2	0.75	0.95
O	--	0.15
L1	9.0	11.0
L2	1.3	1.7
L3	0.7	0.95

All Dimensions in millimeter

● TO-251 外形尺寸

图： 单位： mm(±0.1)

TO-251



Technical drawing showing the top view and side cross-section of the TO-251 package. The top view indicates lead spacing (D), lead width (D2), height (E), and lead thickness (e, e1). The side view shows lead length (L) and lead thickness (b, c). Lead labels include A, A2, A3, b, c, D, D2, E, E2, e, e1, and L.

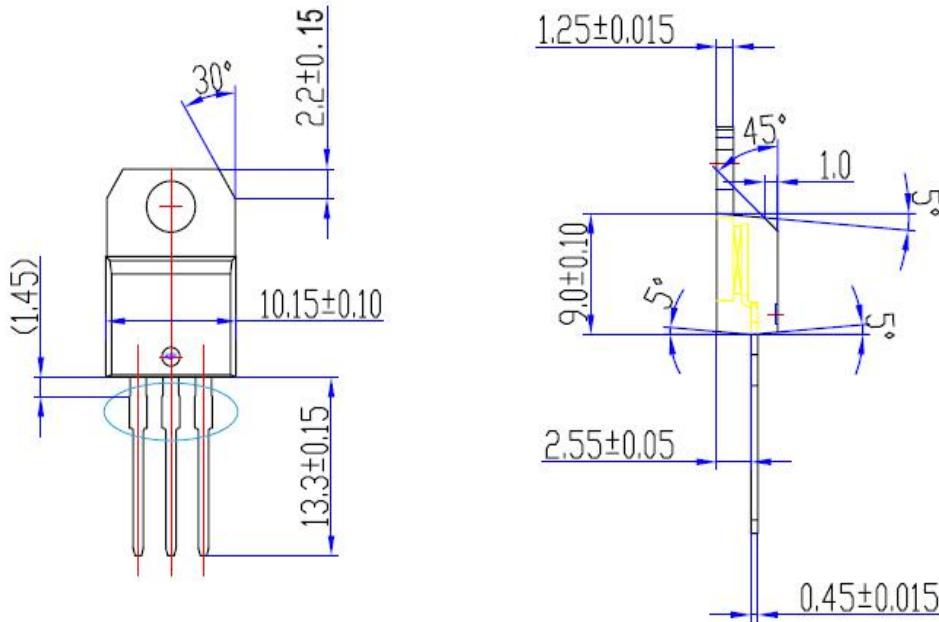
DIM	Min.	Max.
A	2.1	2.5
A2	0.9	1.1
A3	Typ 0.5	
b	0.74	0.86
c	0.9	1.1
D	5.33	5.53
D2	3.65	4.05
E	6.0	6.2
E2	0.91	1.36
e	Typ 2.3	
e1	Typ 4.6	
L	3.7	4.3

All Dimensions in millimeter

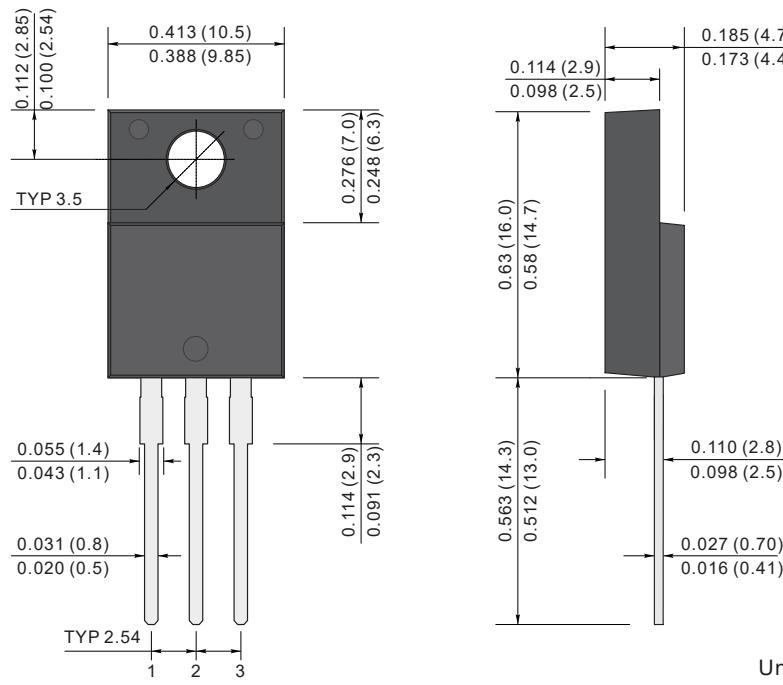
PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

TO-220

 ● 单位: mm(± 0.1)

PACKAGE OUTLINE

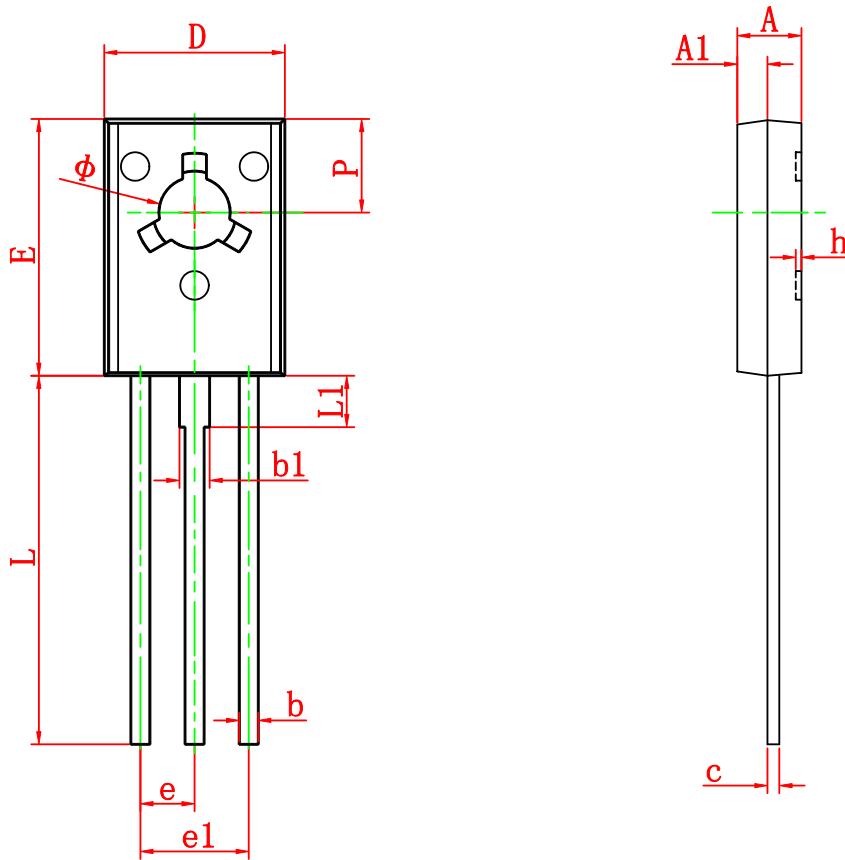
Plastic surface mounted package; 2 leads

TO-220F


Unit:inch (mm)

● TO-126 外形尺寸图:

单位: mm(±0.1)



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	2.500	2.900	0.098	0.114
A1	1.100	1.500	0.043	0.059
b	0.660	0.860	0.026	0.034
b1	1.170	1.370	0.046	0.054
c	0.450	0.600	0.018	0.024
D	7.400	7.800	0.291	0.307
E	10.600	11.000	0.417	0.433
e	2.290 TYP		0.090 TYP	
e1	4.480	4.680	0.176	0.184
h	0.000	0.300	0.000	0.012
L	15.300	15.700	0.602	0.618
L1	2.100	2.300	0.083	0.091
P	3.900	4.100	0.154	0.161
Φ	3.000	3.200	0.118	0.126