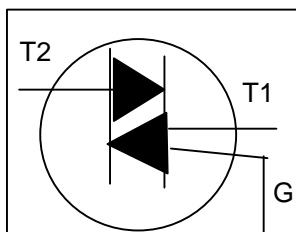
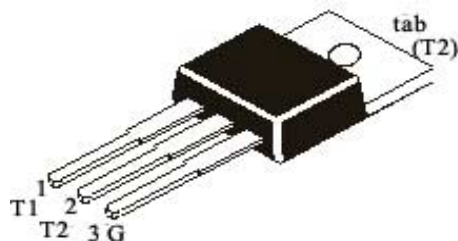


**TRIAC**

**BT136D**

**TO-220**

**Plastic Package**



**For use in General Purpose Bidirectional Switching and Phase Control Applications**

**ABSOLUTE MAXIMUM RATINGS**

PARAMETER	SYMBOL	TEST CONDITION	VALUE	UNIT
Repetitive Peak Off State Voltage	$V_{DRM}$		600	V
RMS on State Current	$I_T (RMS)$	full sine wave, $T_{mb} \leq 107^\circ C$	4.0	A
Non Repetitive Peak on State Current	$I_{TSM}$	full sine wave, $T_J = 25^\circ C$ prior to Surge $t = 20ms$ $t = 16.7ms$	25 27	A A
$I^2t$ for Fusing	$I^2t$	$t = 10ms$	3.1	$A^2s$
Repetitive Rate of Rise of on State Current After Triggering	$dI_T/dt$	$I_{TM} = 6A$ , $I_G = 0.2A$ , $dI_G/dt = 0.2A/\mu s$ T2+ G+ T2+ G- T2- G- T2- G+	50 50 50 10	$A/\mu s$ $A/\mu s$ $A/\mu s$ $A/\mu s$
Peak Gate Current	$I_{GM}$		2.0	A
Peak Gate Voltage	$V_{GM}$		5.0	V
Peak Gate Power	$P_{GM}$		5.0	W
Average Gate Power	$P_G (AV)$	Over any 20ms period	0.5	W
Storage Temperature	$T_{stg}$		- 40 to 150	$^\circ C$
Operating Junction Temperature	$T_J$		125	$^\circ C$

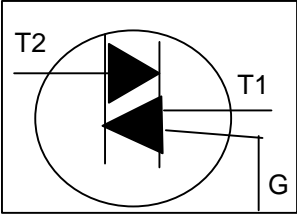
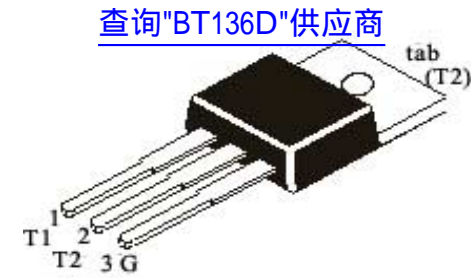
**THERMAL RESISTANCE**

Junction to Mounting Base	$R_{th (j-mb)}$	full cycle half cycle	3.0 max 3.7 max	K/W K/W
Junction to Ambient	$R_{th (j-a)}$	in free air	60 typ	K/W

**ELECTRICAL CHARACTERISTICS ( $T_J = 25^\circ C$  unless specified otherwise)**

PARAMETER	SYMBOL	TEST CONDITION	MIN	MAX	UNIT
Gate Trigger Current	$I_{GT}$	$V_D = 12V$ , $I_T = 0.1A$ T2+ G+ T2+ G- T2- G- T2- G+		5.0 5.0 5.0 10	mA mA mA mA

BT136DRev030205E



ELECTRICAL CHARACTERISTICS (T<sub>J</sub>=25°C unless specified otherwise)

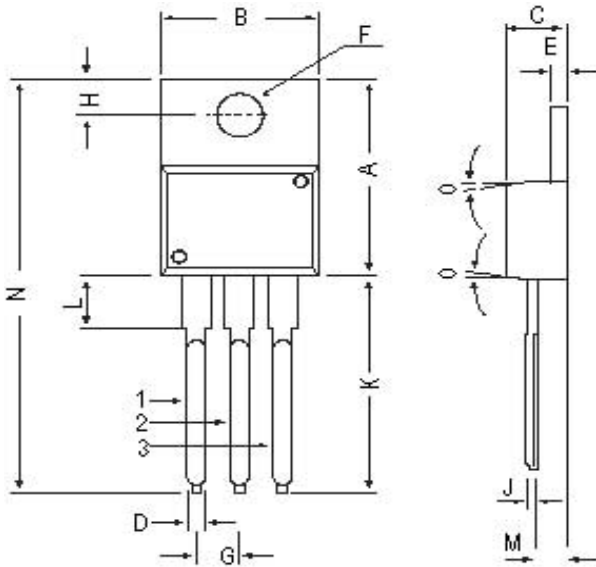
PARAMETER	SYMBOL	TEST CONDITION	MIN	MAX	UNIT
Latching Current	I <sub>L</sub>	V <sub>D</sub> =12V, I <sub>GT</sub> =0.1A			
		T2+ G+		10	mA
		T2+ G-		15	mA
		T2- G-		10	mA
		T2- G+		30	mA
Holding Current	I <sub>H</sub>	V <sub>D</sub> =12V, I <sub>GT</sub> =0.1A		10	mA
On State Voltage	V <sub>T</sub>	I <sub>T</sub> =5A		1.7	V
Gate Trigger Voltage	V <sub>GT</sub>	V <sub>D</sub> =12V, I <sub>T</sub> =0.1A		1.5	V
		V <sub>D</sub> =400V, I <sub>T</sub> =0.1A, T <sub>J</sub> =125°C	0.25		V
Off State Leakage Current	I <sub>D</sub>	V <sub>D</sub> = V <sub>DRM</sub> =max, T <sub>J</sub> =125°C		0.5	mA

DYNAMIC CHARACTERISTICS

PARAMETER	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNIT
Critical Rate of Rise of off State Voltage	dV <sub>D</sub> /dt	V <sub>DM</sub> =67% V <sub>DRM</sub> =max, T <sub>J</sub> =125°C, exponential waveform, gate open circuit, R <sub>GK</sub> =1KΩ		5		V/μs
Gate Controlled turn on time	t <sub>gt</sub>	I <sub>TM</sub> =6A, V <sub>D</sub> =V <sub>DRM</sub> max, I <sub>G</sub> =0.1A, dI <sub>G</sub> /dt=5A/μs		2		μs

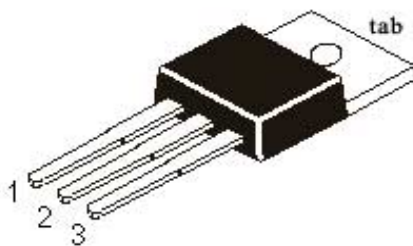
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## TO-220 Plastic Package



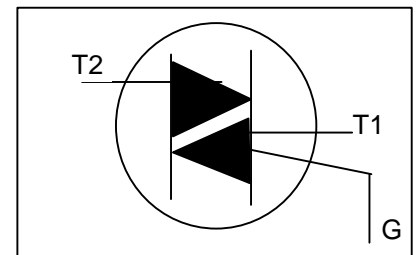
DIM	MIN	MAX
A	14.42	16.51
B	9.63	10.67
C	3.56	4.83
D	—	0.90
E	1.15	1.40
F	3.75	3.88
G	2.29	2.79
H	2.54	3.43
J	—	0.56
K	12.70	14.73
L	2.80	4.07
M	2.03	2.92
N	—	31.24
O	7 DEG	

All dimensions in mm.

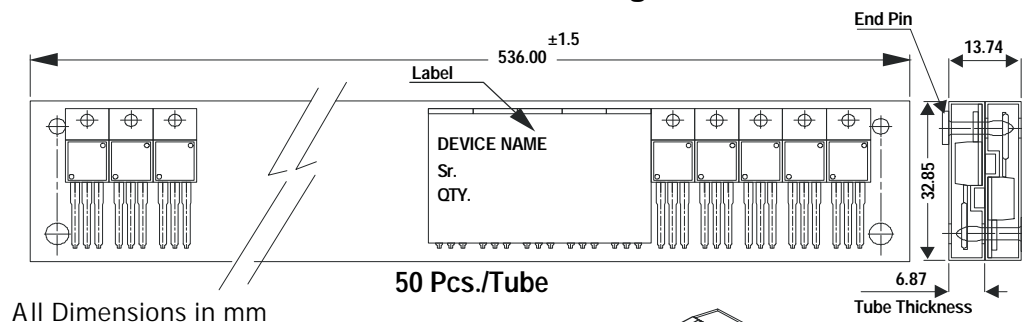


### Pin Configuration

1. Main Terminal 1
  2. Main Terminal 2
  3. Gate
- tab Main Terminal 2



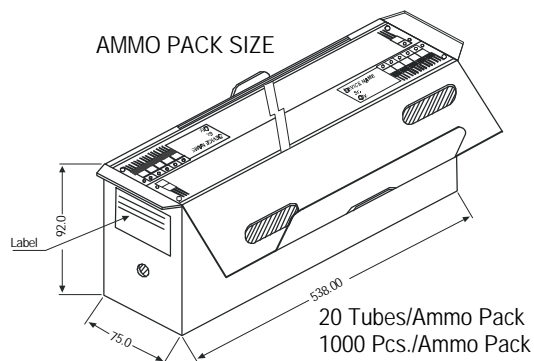
## TO-220 Tube Packing



All Dimensions in mm

50 Pcs./Tube

AMMO PACK SIZE

20 Tubes/Ammo Pack  
1000 Pcs./Ammo Pack

## Packing Detail

PACKAGE	STANDARD PACK		INNER CARTON BOX		OUTER CARTON BOX		
	Details	Net Weight/Qty	Size	Qty	Size	Qty	Gr Wt
TO-220	200 pcs/polybag	396 gm/200 pcs	3" x 7.5" x 7.5"	1.0K	17" x 15" x 13.5"	16.0K	36 kgs
	50 pcs/tube	120 gm/50 pcs	3.5" x 3.7" x 21.5"	1.0K	19" x 19" x 19"	10.0K	29 kgs

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