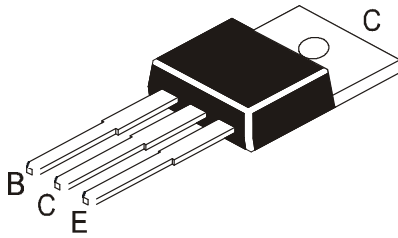


**NPN SILICON PLANAR POWER TRANSISTOR**

**BU508AT**

**TO-220  
Plastic Package**



**High Voltage, High-Speed Switching Transistor  
Intended for use in Horizontal Deflection Circuits of Colour Televisions**

**ABSOLUTE MAXIMUM RATINGS**

DESCRIPTION	SYMBOL	VALUE	UNIT
Collector Emitter Voltage	$V_{CES}$	1500	V
Collector Emitter Voltage	$V_{CEO}$	700	V
Collector Current (DC)	$I_C$	8	A
Collector Current (Peak)	$I_{CM}$	15	A
Base Current (DC)	$I_B$	4	A
Base Current (Peak)	$I_{BM}$	6	A
Reverse Base Current (DC or average over any 20 ms period)	$-I_{B(AV)}$	100	mA
Reverse Base Current (Peak Value)	$*-I_{BM}$	5	A
Power Dissipation upto $T_c=25^\circ\text{C}$	$P_{tot}$	60	W
Operating and Storage Junction Temperature Range	$T_j, T_{stg}$	- 65 to +150	$^\circ\text{C}$

\*Turn off Current

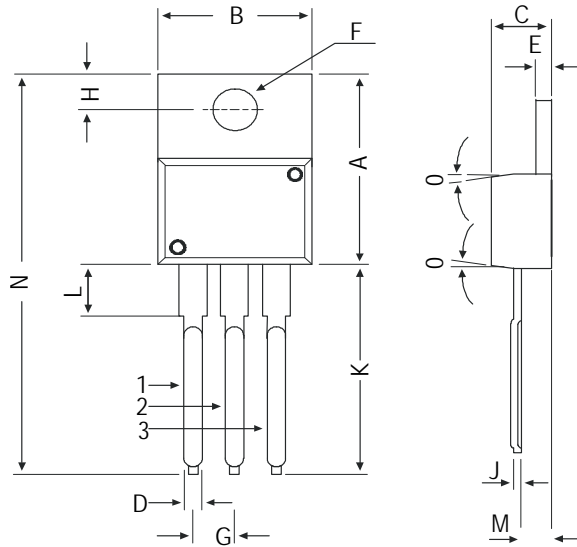
**ELECTRICAL CHARACTERISTICS ( $T_c=25^\circ\text{C}$  unless specified otherwise)**

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNIT
Collector Cut off Current	$**I_{CES}$	$V_{CE}=V_{CES} \text{ max}, V_{BE}=0$			1.0	mA
		$T_j=125^\circ\text{C}$			2.0	mA
Emitter Cut off Current	$I_{EBO}$	$V_{EB}=6\text{V}, I_C=0$			10	mA
Collector Emitter Sustaining Voltage	$*V_{CEO(sus)}$	$I_C=100\text{mA}, I_B=0, L=25\text{mH}$	700			V
DC Current Gain	$*h_{FE}$	$I_C=4.5\text{A}, V_{CE}=5\text{V}$	2.25			
Collector Emitter Saturation Voltage	$*V_{CE(sat)}$	$I_C=4.5\text{A}, I_B=2\text{A}$			1.0	V
Base Emitter Saturation Voltage	$*V_{BE(sat)}$	$I_C=4.5\text{A}, I_B=2\text{A}$			1.3	V
Transition Frequency	$f_T$	$I_C=0.1\text{A}, V_{CE}=5\text{V}, f=5\text{MHz}$		7		MHz
Collector Capacitance	$C_C$	$I_E=I_C=0, V_{CB}=10\text{V}, f=1\text{MHz}$		125		pF

\*\*Measured with half-sinewave Voltage (curve tracer)

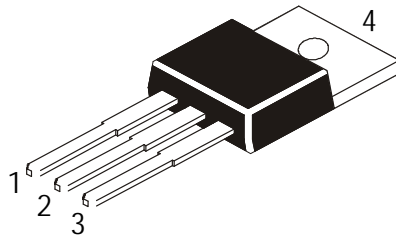
\*Pulse Test: Pulse Width=5ms, Duty Cycle $\leq$ 10%

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	

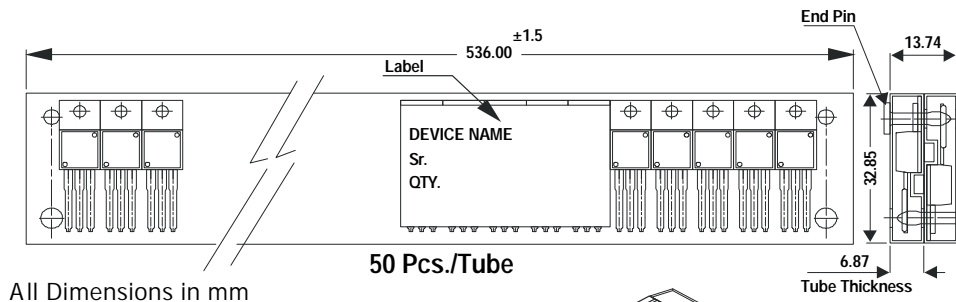
All diminsions in mm.



Pin Configuration

1. Base
2. Collector
3. Emitter
4. Collector

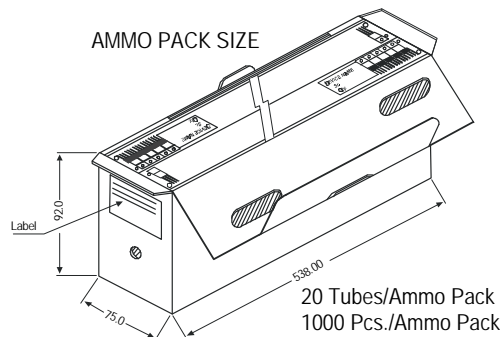
TO-220 Tube Packing



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 /FP	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

### Disclaimer

The product information and the selection guides facilitate selection of the CDIL's Discrete Semiconductor Device(s) best suited for application in your product(s) as per your requirement. It is recommended that you completely review our Data Sheet(s) so as to confirm that the Device(s) meet functionality parameters for your application. The information furnished in the Data Sheet and on the CDIL Web Site/CD are believed to be accurate and reliable. CDIL however, does not assume responsibility for inaccuracies or incomplete information. Furthermore, CDIL does not assume liability whatsoever, arising out of the application or use of any CDIL product; neither does it convey any license under its patent rights nor rights of others. These products are not designed for use in life saving/support appliances or systems. CDIL customers selling these products (either as individual Discrete Semiconductor Devices or incorporated in their end products), in any life saving/support appliances or systems or applications do so at their own risk and CDIL will not be responsible for any damages resulting from such sale(s).

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