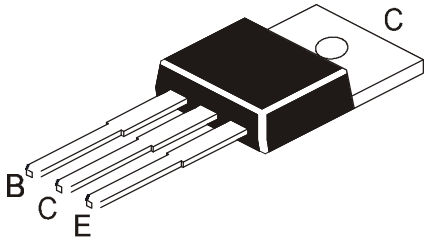


NPN PLASTIC POWER TRANSISTOR

CJE13007

**TO-220
Plastic Package**



Used in Energy Saving Lights and Power Switching Circuits

ABSOLUTE MAXIMUM RATINGS

DESCRIPTION	SYMBOL	VALUE	UNIT
Collector Base Voltage	V_{CBO}	700	V
Collector Emitter Voltage	V_{CEO}	400	V
Emitter Base Voltage	V_{EBO}	9	V
Collector Current Continuous	I_C	8	A
Power Dissipation upto $T_a=25^\circ\text{C}$	P_D	2	W
Power Dissipation upto $T_c=25^\circ\text{C}$	P_D	80	W
Operating and Storage Junction Temperature Range	T_j, T_{stg}	- 55 to +150	$^\circ\text{C}$

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

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNIT
Collector Cut Off Current	I_{CBO}	$V_{CB}=700\text{V}, I_E=0$			1.0	mA
Emitter Cut Off Current	I_{EBO}	$V_{EB}=9\text{V}, I_C=0$			1.0	mA
DC Current Gain	$*h_{FE}$	$I_C=2\text{A}, V_{CE}=5\text{V}$	8		40	
Ratio Between h_{FE1} of Low Current and h_{FE2} of High Current	h_{FE1}/h_{FE2}	$h_{FE1} I_C=5\text{mA}, V_{CE}=5\text{V}$ $h_{FE2} I_C=2\text{A}, V_{CE}=5\text{V}$	0.75			
Collector Emitter Saturation Voltage	$*V_{CE(sat)}$	$I_C=5\text{A}, I_B=1\text{A}$			1.5	V
Base Emitter Saturation Voltage	$*V_{BE(sat)}$	$I_C=5\text{A}, I_B=1\text{A}$			1.5	V
Transition Frequency	f_T	$V_{CE}=10\text{V}, I_C=500\text{mA}, f=1\text{MHz}$	4			MHz

Switching Time

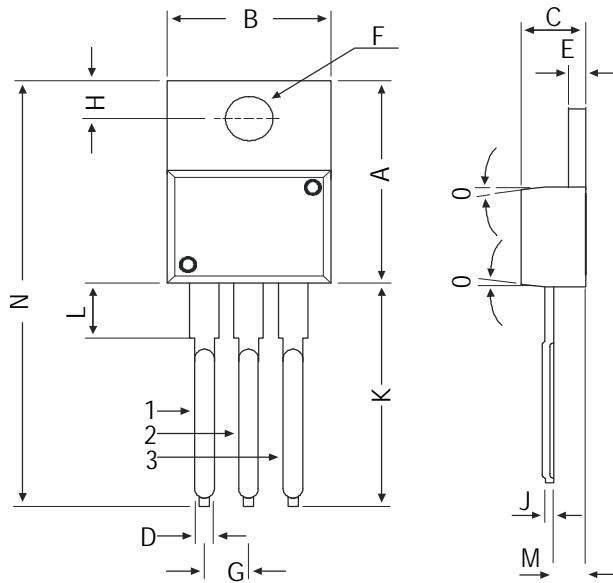
DESCRIPTION	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNIT
Fall Time	t_f	$I_C=2\text{A}, I_{B1}=-I_{B2}=0.4\text{A}$			0.8	μs
Storage Time	t_s	$V_{CC}=120\text{V}$			3.6	μs

$*h_{FE}$ Classification	A : 08 - 25	B : 20 - 40
	CJE 13007A XX	CJE 13007B XX

*Pulse test $t_p \leq 300\text{ms}$, duty cycle $\leq 2\%$

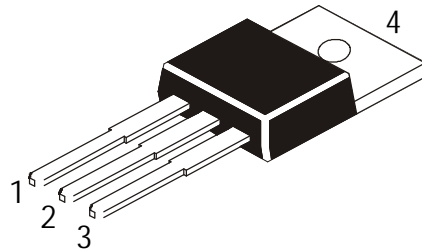
CJE13007Rev_1 110306E

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	

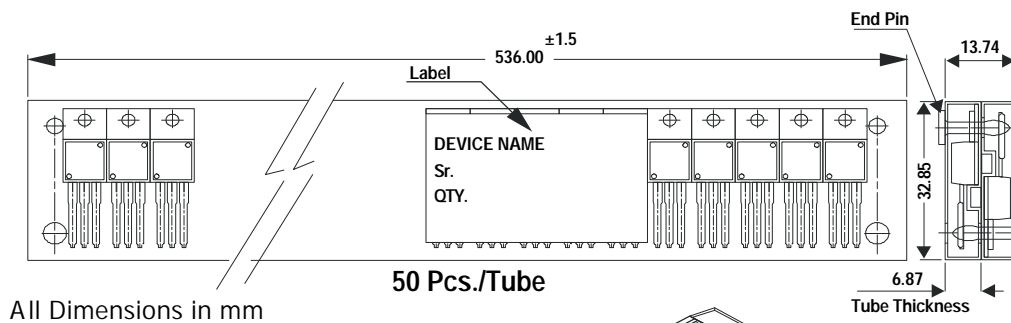
All diminsions in mm.



Pin Configuration

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

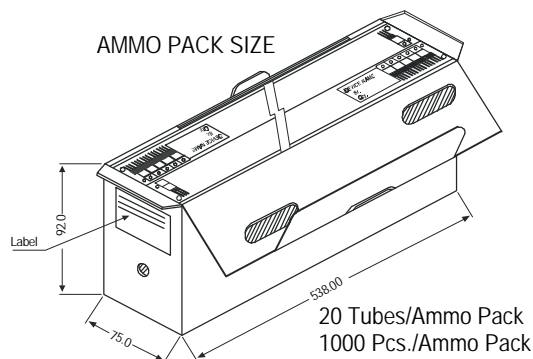
TO-220 Tube Packing



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	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

Component Disposal Instructions

1. CDIL Semiconductor Devices are RoHS compliant, customers are requested to please dispose as per prevailing Environmental Legislation of their Country.
2. In Europe, please dispose as per EU Directive 2002/96/EC on Waste Electrical and Electronic Equipment (WEEE).

Disclaimer

The product information and the selection guides facilitate selection of the CDIL's 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 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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