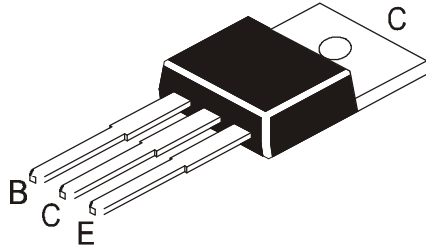


## PLASTIC POWER TRANSISTORS



TIP130	TIP135
TIP131	TIP136
TIP132	TIP137
NPN	PNP

TO-220  
Plastic Package

Intended for use in Linear and Switching Applications

### ABSOLUTE MAXIMUM RATINGS ( $T_a=25^\circ\text{C}$ )

DESCRIPTION	SYMBOL	TIP130/135	TIP131/136	TIP132/137	UNIT
Collector Emitter Voltage	$V_{CEO}$	60	80	100	V
Collector Base Voltage	$V_{CBO}$	60	80	100	V
Emitter Base Voltage	$V_{EBO}$	5.0			V
Collector Current Continuous	$I_C$	8.0			A
Collector Current Peak	$I_{CM}$	12			A
Base Current	$I_B$	0.3			A
Power Dissipation upto $T_c=25^\circ\text{C}$	$P_D$	70			W
Power Dissipation upto $T_a=25^\circ\text{C}$ Derate above $25^\circ\text{C}$	$P_D$	2.0 16			W mW/ $^\circ\text{C}$
Operating And Storage Junction Temperature	$T_j, T_{stg}$	- 65 to +150			$^\circ\text{C}$

### THERMAL RESISTANCE

Junction to Case	$R_{th(j-c)}$	1.78	$^\circ\text{C/W}$
Junction to Ambient in free air	$R_{th(j-a)}$	62.5	$^\circ\text{C/W}$

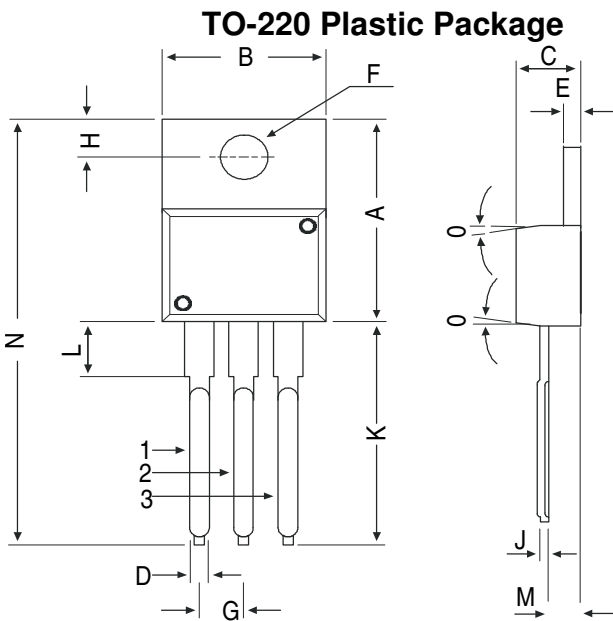
### ELECTRICAL CHARACTERISTICS ( $T_c=25^\circ\text{C}$ unless specified otherwise)

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	MAX	UNIT
Collector Cut off Current	$I_{CEO}$	$V_{CE} = \text{Half Rated } V_{CEO}$		0.5	mA
Collector Cut off Current	$I_{CBO}$	$V_{CB} = \text{Rated } V_{CBO}$		0.2	mA
Emitter Cut off Current	$I_{EBO}$	$V_{EB}=5V, I_C=0$		5.0	mA
Collector Emitter (sus) Voltage	$*V_{CEO(sus)}$	$I_C=30mA, I_B=0$			
		TIP130/135	60		V
		TIP131/136	80		V
		TIP132/137	100		V
Collector Emitter Saturation Voltage	$*V_{CE(sat)}$	$I_C=4A, I_B=16mA$ $I_C=6A, I_B=30mA$		2.0 3.0	V V
Base Emitter on Voltage	$*V_{BE(on)}$	$I_C=4A, V_{CE}=4V$		2.5	V
DC Current Gain	$*h_{FE}$	$I_C=1A, V_{CE}=4V$ $I_C=4A, V_{CE}=4V$	500 1,000	15,000	

\*Pulse Test : Pulse width  $\leq 300\mu\text{s}$ , Duty Cycle  $\leq 2\%$

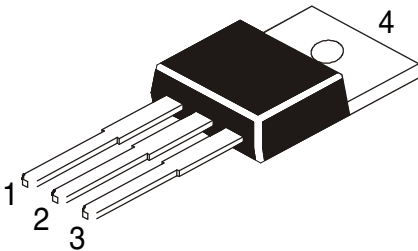
TIP130	TIP135
TIP131	TIP136
TIP132	TIP137
NPN	PNP

### TO-220 Plastic Package



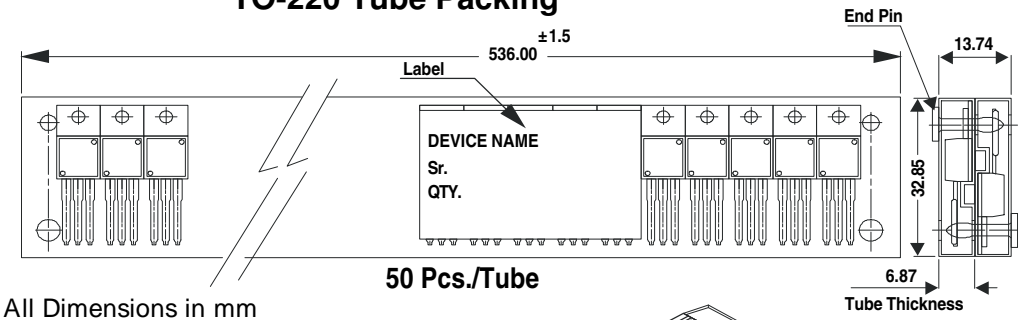
DIM	MIN	MAX
A	14.42	16.51
B	9.63	10.67
C	3.56	4.83
D	—	0.90
E	1.15	1.40
F	3.75	3.88
G	2.29	2.79
H	2.54	3.43
J	—	0.56
K	12.70	14.73
L	2.80	4.07
M	2.03	2.92
N	—	31.24
O	7 DEG	

All diminsions in mm.

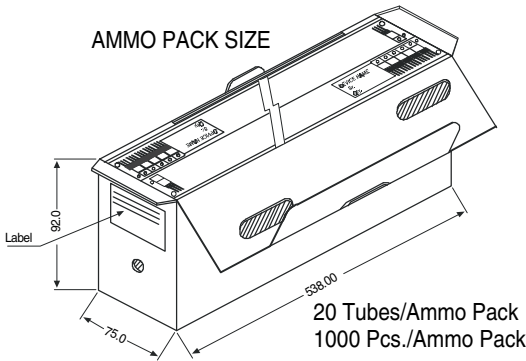


- Pin Configuration
1. Base
  2. Collector
  3. Emitter
  4. Collector

### TO-220 Tube Packing



AMMO PACK SIZE



### 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

### Disclaimer

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