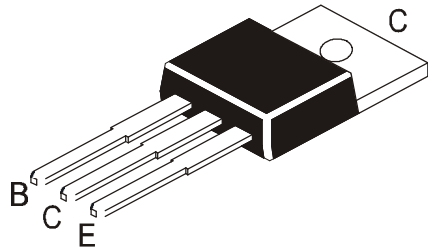


PLASTIC POWER TRANSISTORS



TIP100	TIP105
TIP101	TIP106
TIP102	TIP107
NPN	PNP

TO-220
Plastic Package

Intended for use in Linear Switching Applications

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

DESCRIPTION		TIP100/105	TIP101/106	TIP102/107	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			V
Collector Current Continuous	I_C	8			A
Collector Current Peak	I_{CM}	15			A
Base Current	I_B	1			A
Power Dissipation upto $T_c=25^\circ\text{C}$	P_D	80			W
Power Dissipation upto $T_a=25^\circ\text{C}$ Derate above 25°C	P_D	2 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	$R_{th(j-c)}$	1.56	$^\circ\text{C/W}$
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)

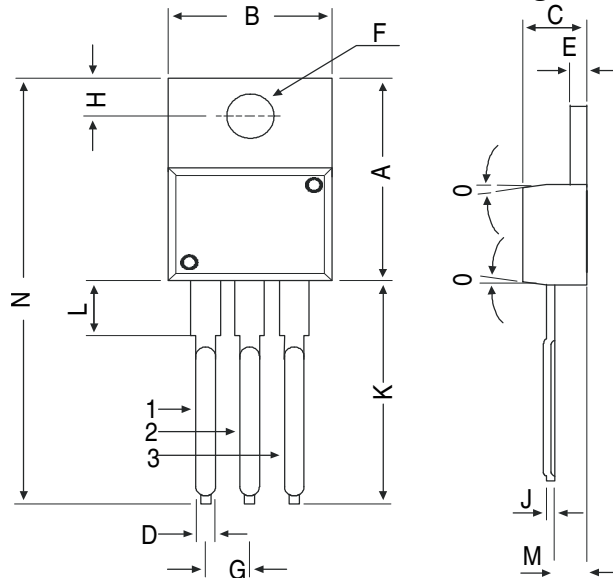
DESCRIPTION	SYMBOL	TEST CONDITION	MIN	MAX	UNIT
Collector Cut Off Current	I_{CEO}	$V_{CE}=30\text{V}, I_B=0$ $V_{CE}=40\text{V}, I_B=0$ $V_{CE}=50\text{V}, I_B=0$		50 50 50	μA μA μA
Collector Cut Off Current	I_{CBO}	$V_{CB}=60\text{V}, I_E=0$ $V_{CB}=80\text{V}, I_E=0$ $V_{CB}=100\text{V}, I_E=0$		50 50 50	μA μA μA
Emitter Cut Off Current	I_{EBO}	$V_{EB}=5\text{V}, I_C=0$		8.0	mA
Collector Emitter (sus) Voltage	$*V_{CEO(sus)}$	$I_C=30\text{mA}, I_B=0$	60 80 100		V V V
Collector Emitter Saturation Voltage	$*V_{CE(sat)}$	$I_C=3\text{A}, I_B=6\text{mA}$ $I_C=8\text{A}, I_B=80\text{mA}$		2.0 2.5	V V
Base Emitter On Voltage	$*V_{BE(on)}$	$I_C=8\text{A}, V_{CE}=4\text{V}$		2.8	V
DC Current Gain	$*h_{FE}$	$I_C=3\text{A}, V_{CE}=4\text{V}$ $I_C=8\text{A}, V_{CE}=4\text{V}$	1,000 200	20,000	
Forward Voltage of Commutation Diode	$*V_F$	$I_F=I_C=10\text{A}, I_B=0$		6.0	V

*Pulse Test : Pulse Width=300 μs , Duty Cycle $\leq 2\%$

TIP100	TIP105
TIP101	TIP106
TIP102	TIP107
NPN	PNP

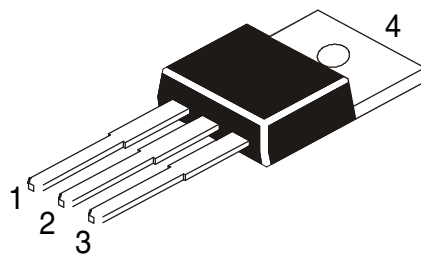
TO-220 Plastic Package

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	

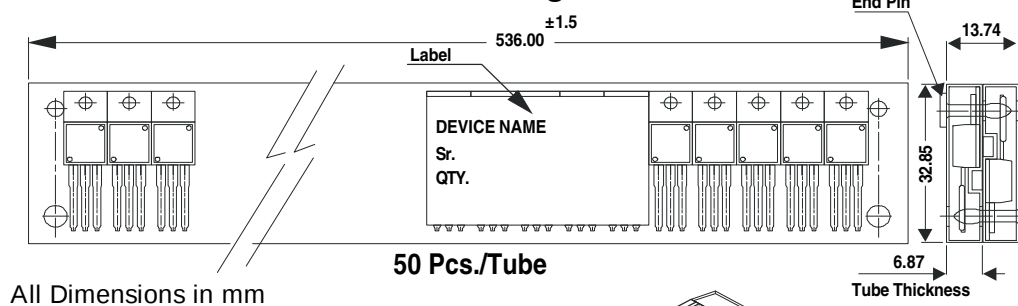
All dimensions in mm.



Pin Configuration

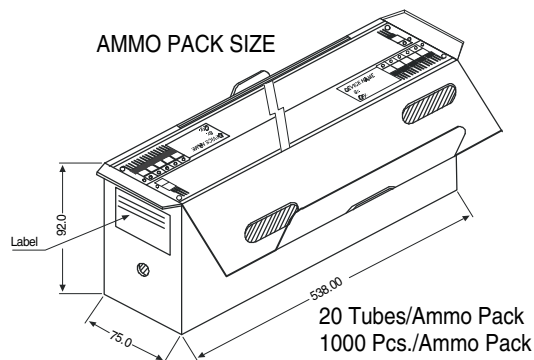
1. Base
2. Collector
3. Emitter
4. Collector

TO-220 Tube Packing



All Dimensions in mm

AMMO PACK SIZE



Packing Details

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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