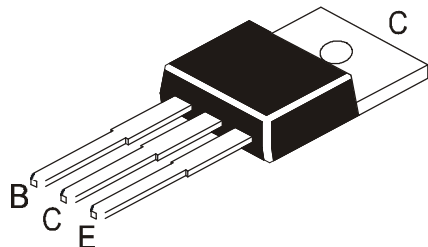


PLASTIC POWER TRANSISTORS



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°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°C	P _D	80			W
Power Dissipation upto T _a =25°C Derate above 25°C	P _D	2			W
		16			mW/°C
Operating And Storage Junction Temperature	T _j , T _{stg}	- 65 to +150			°C

THERMAL RESISTANCE

Junction to Case	R _{th(j-c)}	1.56	°C/W
Junction to Ambient in free air	R _{th(j-a)}	62.5	°C/W

ELECTRICAL CHARACTERISTICS (T_c=25°C unless specified otherwise)

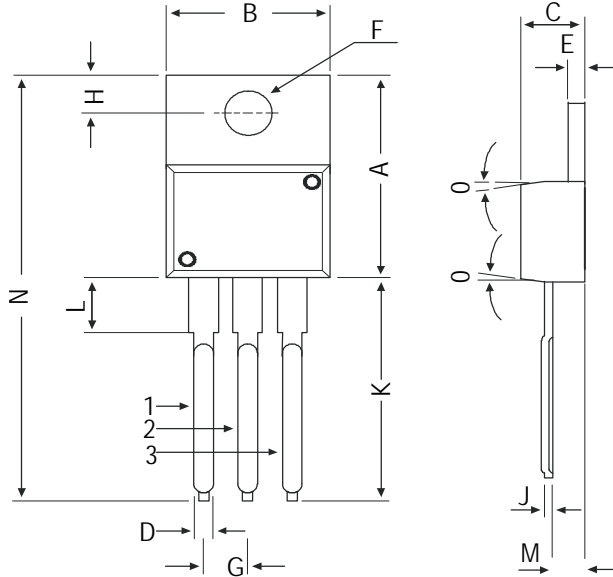
DESCRIPTION	SYMBOL	TEST CONDITION	MIN	MAX	UNIT
Collector Cut Off Current	I _{CEO}	V _{CE} =30V, I _B =0	TIP100/105	50	μA
		V _{CE} =40V, I _B =0	TIP101/106	50	μA
		V _{CE} =50V, I _B =0	TIP102/107	50	μA
Collector Cut Off Current	I _{CBO}	V _{CB} =60V, I _E =0	TIP100/105	50	μA
		V _{CB} =80V, I _E =0	TIP101/106	50	μA
		V _{CB} =100V, I _E =0	TIP102/107	50	μA
Emitter Cut Off Current	I _{EBO}	V _{EB} =5V, I _C =0		8.0	mA
Collector Emitter (sus) Voltage	*V _{CEO(sus)}	I _C =30mA, I _B =0	TIP100/105	60	V
			TIP101/106	80	V
			TIP102/107	100	V
Collector Emitter Saturation Voltage	*V _{CE(sat)}	I _C =3A, I _B =6mA		2.0	V
		I _C =8A, I _B =80mA		2.5	V
Base Emitter On Voltage	*V _{BE(on)}	I _C =8A, V _{CE} =4V		2.8	V
DC Current Gain	*h _{FE}	I _C =3A, V _{CE} =4V	1,000	20,000	
		I _C =8A, V _{CE} =4V	200		
Forward Voltage of Commutation Diode	*V _F	I _F =I _C =10A, I _B =0		6.0	V

*Pulse Test : Pulse Width=300μs, Duty Cycle ≤ 2%

TIP100	TIP105
TIP101	TIP106
TIP102	TIP107
NPN	PNP

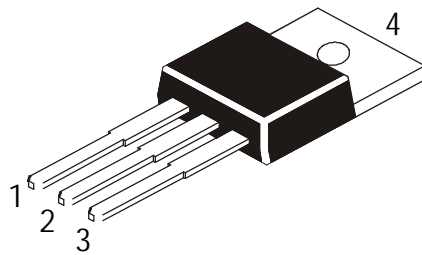
TO-220 Plastic Package

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	

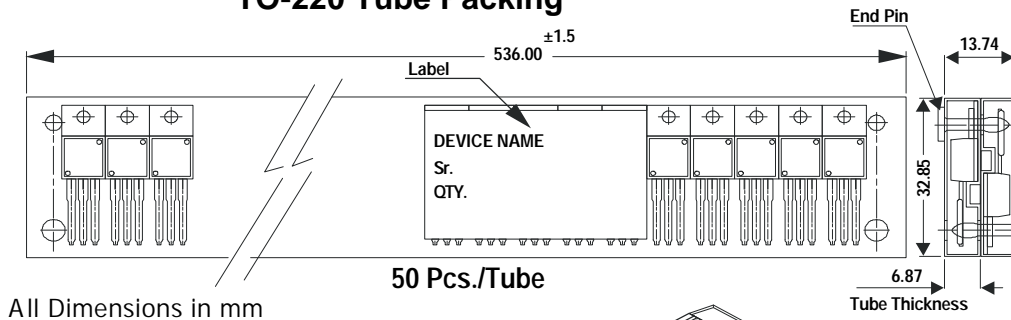
All dimensions in mm.



Pin Configuration

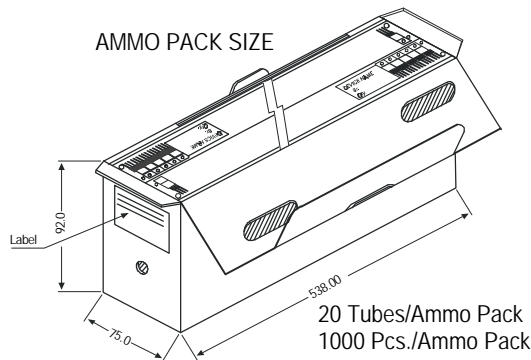
1. Base
2. Collector
3. Emitter
4. Collector

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

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).

CDIL strives for continuous improvement and reserves the right to change the specifications of its products without prior notice.



CDIL is a registered Trademark of
Continental Device India Limited