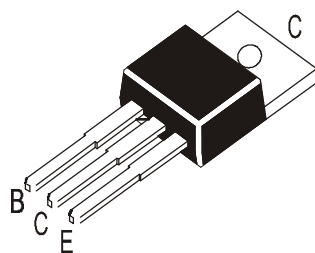


PLASTIC POWER TRANSISTORS



TIP41, A, B, C NPN
TIP42, A, B, C PNP

TO-220
Plastic Package

Complementary Silicon Transistors intended for a wide variety of Switching and Amplifier Applications, Series and Shunt Regulators, Driver and Output stages of Hi-Fi Amplifiers

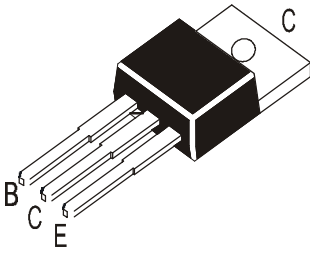
ABSOLUTE MAXIMUM RATINGS ($T_a=25^\circ\text{C}$)

DESCRIPTION	SYMBOL	TIP41	TIP41A	TIP41B	TIP41C	UNIT
		TIP42	TIP42A	TIP42B	TIP42C	
Collector Emitter Voltage	V_{CEO}	40	60	80	100	V
Collector Base Voltage	V_{CBO}	40	60	80	100	V
Emitter Base Voltage	V_{EBO}	5.0				V
Collector Current Continuous	I_C	6.0				A
Collector Current Peak	I_{CM}	10				A
Base Current	I_B	2.0				A
Power Dissipation upto $T_c=25^\circ\text{C}$ Derate above 25°C	P_D	65 520				W mW/°C
Power Dissipation upto $T_a=25^\circ\text{C}$ Derate above 25°C	P_D	2.0 16				W mW/°C
Unclamped Inductive Load Energy	*E	62.5				mJ
Storage Temperature	T_{stg}	150				°C
Junction Temperature	T_j	- 65 to +150				°C

THERMAL RESISTANCE

Junction to Case	$R_{th(j-c)}$	1.92	°C/W
Junction to Ambient in free air	$R_{th(j-a)}$	62.5	°C/W

* $I_C=2.5\text{A}$, $L=20\text{mH}$, $P.R.F.=10\text{Hz}$, $V_{cc}=10\text{V}$, $R_{BE}=100\text{W}$

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

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	MAX	UNIT
Collector Emitter Voltage	$*V_{CEO}$	$I_C=30\text{mA}$, $I_B=0$ TIP41/42	40		V
		TIP41A/42A	60		V
		TIP41B/42B	80		V
		TIP41C/42C	100		V
Collector Cut off Current	I_{CEO}	$V_{CE}=30\text{V}$, $I_B=0$ TIP41, A / 42, A		0.7	mA
		$V_{CE}=60\text{V}$, $I_B=0$ TIP41B, C / 42B, C		0.7	mA
Collector Cut off Current	I_{CES}	$V_{CE}=V_{CEO}(\text{max})$, $V_{BE}=0$		0.4	mA
Emitter Cut off Current	I_{EBO}	$V_{EB}=5\text{V}$, $I_C=0$		1.0	mA
DC Current Gain	$*h_{FE}$	$I_C=0.3\text{A}$, $V_{CE}=4\text{V}$	30		
		$I_C=3\text{A}$, $V_{CE}=4\text{V}$	15	75	
Collector Emitter Saturation Voltage	$*V_{CE(sat)}$	$I_C=6\text{A}$, $I_B=0.6\text{A}$		1.5	V
Base Emitter on Voltage	$*V_{BE(on)}$	$I_C=6\text{A}$, $V_{CE}=4\text{V}$		2.0	V

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

DYNAMIC CHARACTERISTIC

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	MAX	UNIT
Small Signal Current Gain	h_{fe}	$I_C=0.5\text{A}$, $V_{CE}=10\text{V}$, $f=1\text{KHz}$	20		
Transition Frequency	f_T	$I_C=0.5\text{A}$, $V_{CE}=10\text{V}$, $f=1\text{MHz}$	3		MHz

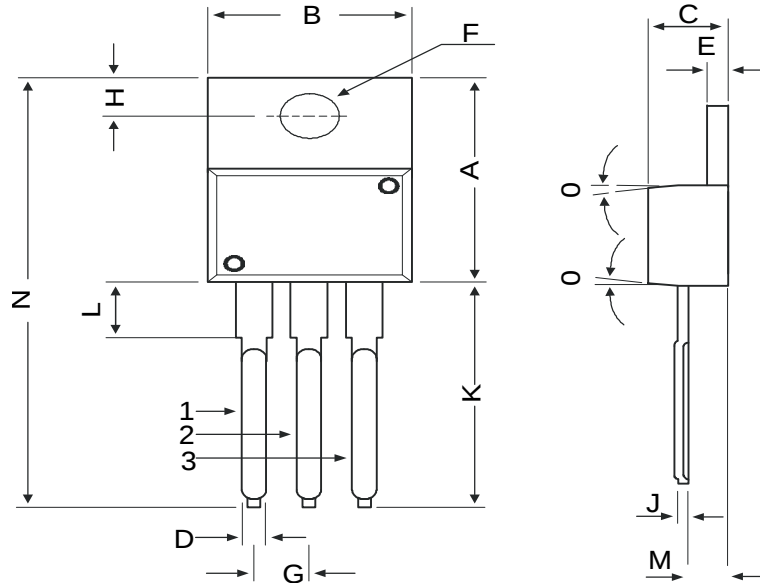
SWITCHING CHARACTERISTICS

DESCRIPTION	SYMBOL	TEST CONDITION	TYP	UNIT
Turn On Time	t_{on}	$V_{CC}=30\text{V}$, $I_C=6\text{A}$, $I_{B1}=I_{B2}=0.6\text{A}$, $R_L=5\Omega$	0.6	μs
Turn Off Time	t_{off}		1.4	μs

TIP41, A, B, C NPN
TIP42, A, B, C PNP

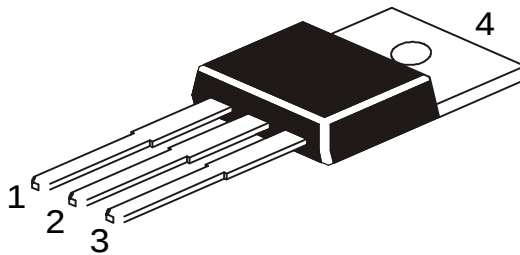
TO-220 Plastic Package

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	

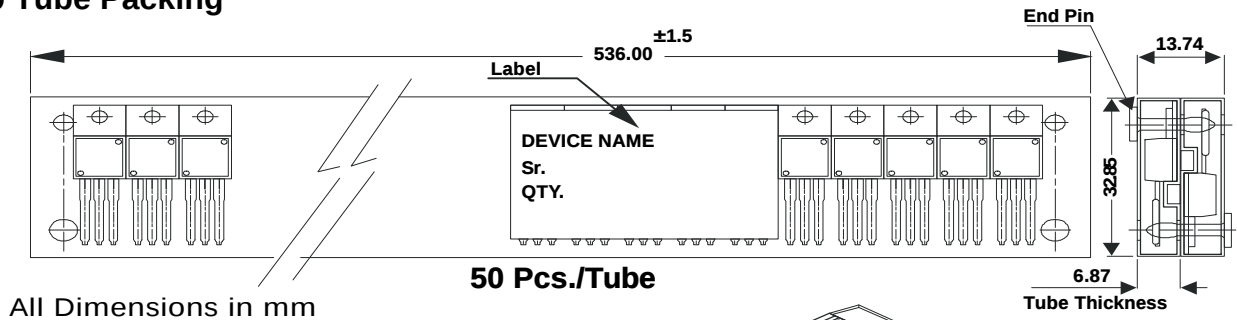
All diminsions in mm.



Pin Configuration

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

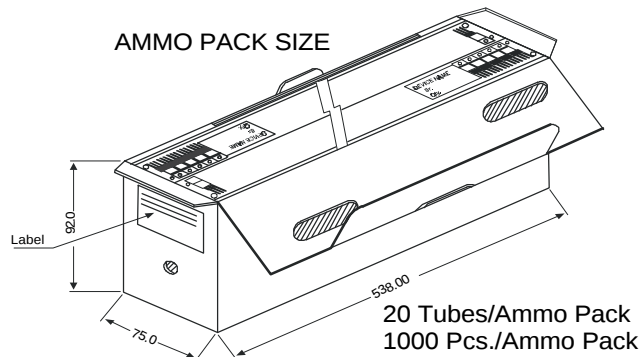
TO-220 Tube Packing



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

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CDIL is a registered Trademark of
Continental Device India Limited

C-120 Naraina Industrial Area, New Delhi 110 028, India.
Telephone + 91-11-2579 6150, 5141 1112 Fax + 91-11-2579 5290, 5141 1119
email@cdil.com www.cdilsemi.com