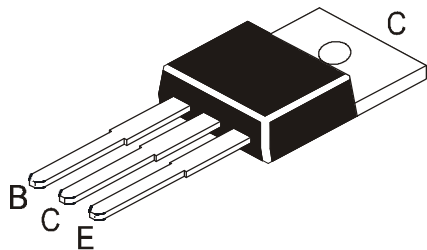


SILICON PLASTIC POWER TRANSISTORS

C44H Series NPN
C45H Series PNP

TO-220
Plastic Package



For General Purpose Power Amplification and Switching such as Output or Driver stages in Applications such as Switching Regulators, Converters and Power Amplifiers.

ABSOLUTE MAXIMUM RATINGS

RATING	SYMBOL	C44H or C45H				UNIT
		1, 2	4, 5	7, 8	10,11	
Collector Emitter Voltage	V_{CEO}	30	45	60	80	V
Emitter Base Voltage	V_{EBO}	5				V
Collector Current Continuous	I_C	10				A
Peak (1)	I_C	20				A
Total Power Dissipation $T_c=25^\circ\text{C}$	P_D	50				W
Total Power Dissipation $T_a=25^\circ\text{C}$		1.67				
Operating & Storage Junction Temperature Range	T_j, T_{stg}	- 55 to +150				$^\circ\text{C}$

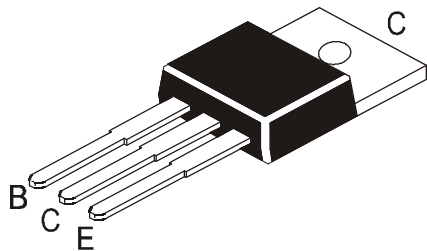
(1) Pulse width $\leq 6\text{ms}$, Duty Cycle $\leq 50\%$

THERMAL RESISTANCE

CHARACTERISTICS	SYMBOL	MAX	UNIT
Junction to Case	$R_{th(j-c)}$	2.5	$^\circ\text{C/W}$
Junction to Ambient	$R_{th(j-a)}$	75	$^\circ\text{C/W}$
Maximum Lead Temperature for Soldering Purpose 1/8" From Case for 5 seconds	T_L	275	$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS ($T_c=25^\circ\text{C}$ Unless Specified Otherwise)

CHARACTERISTICS	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNIT
DC Current	h_{FE}	$I_C=2\text{A}, V_{CE}=1\text{V}$ C44H1, 4, 7, 10 C45H1, 4, 7, 10	35			
		C44H2, 5, 8, 11 C45H2, 5, 8, 11	60			
		$I_C=4\text{A}, V_{CE}=1\text{V}$ C44H1, 4, 7, 10 C45H1, 4, 7, 10	20			
		C44H2, 5, 8, 11 C45H2, 5, 8, 11	35			

ELECTRICAL CHARACTERISTICS ($T_c=25^\circ\text{C}$ Unless Specified Otherwise)

CHARACTERISTICS	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNIT
Collector Cut Off Current	I_{CES}	$V_{BE}=0, V_{CE}=\text{Rated } V_{CEO}$			10	μA
Emitter Cut Off Current	I_{EBO}	$V_{EB}=5\text{V}, I_C=0$			100	μA
Collector Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=8\text{A}, I_B=0.4\text{A}$ C44H/C45H2, 5, 8, 11 $I_C=8\text{A}, I_B=0.8\text{A}$ C44H/C45H1, 4, 7, 10			1.85 1.0	V
Base Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=8\text{A}, I_B=0.8\text{A}$			1.5	V

DYNAMIC CHARACTERISTICS

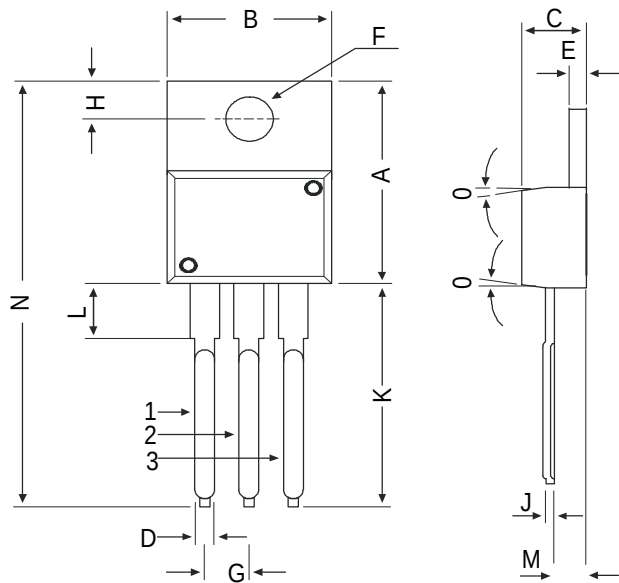
Collector Capacitance	C_{Cb}	$V_{CB}=10\text{V}, f=1\text{MHz}$ C44H Series C45H Series		130 230		pF
Current Gain Product	f_T	$I_C=0.5\text{A}, V_{CE}=10\text{V}, f=20\text{MHz}$ C44H Series C45H Series		50 40		MHz

SWITCHING TIMES

Delay And Rise Time	t_d+t_r	$I_C=5\text{A}, I_{B1}=0.5\text{A}$ C44H Series C45H Series		300 135		ns
Storage Time	t_s	$I_C=5\text{A}, I_{B1}=I_{B2}=0.5\text{A}$ C44H Series C45H Series		500 500		ns
Fall Time	t_f	$I_C=5\text{A}, I_{B1}=I_{B2}=0.5\text{A}$ C44H Series C45H Series		140 100		ns

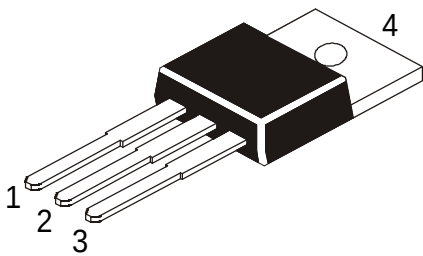
TO-220
Plastic Package

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	

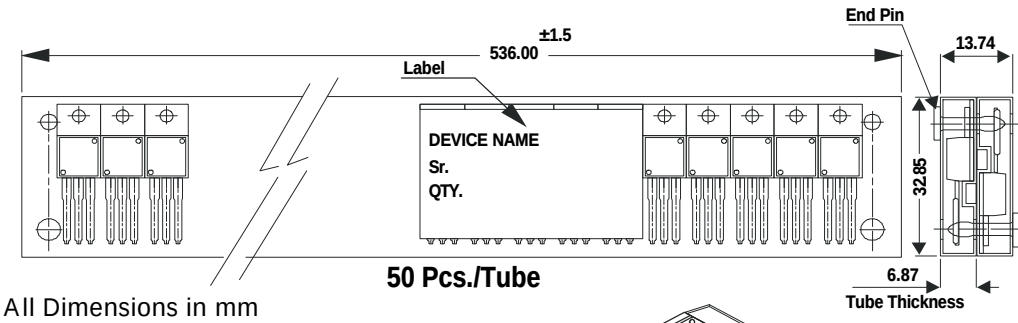
All diminsions in mm.



Pin Configuration

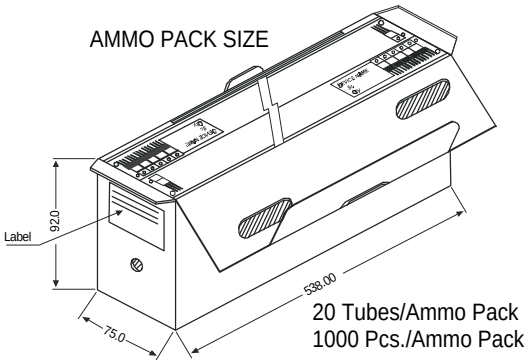
1. Base
2. Collector
3. Emitter
4. Collector

TO-220 Tube Packing



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

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