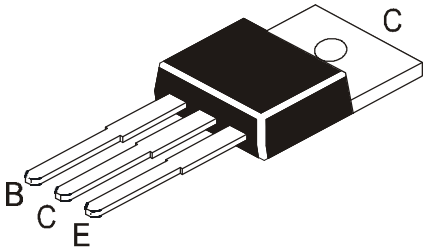
SILICON PLASTIC POWER TRANSISTORS

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=25ºC	P_D	50				W
Total Power Dissipation T_a=25ºC		1.67				
Operating & Storage Junction Temperature Range	T_j, T_{stg}	- 55 to +150				ºC

(1) Pulse width≤6ms, Duty Cycle≤50%

THERMAL RESISTANCE

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

ELECTRICAL CHARACTERISTICS (T_c=25ºC Unless Specified Otherwise)

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

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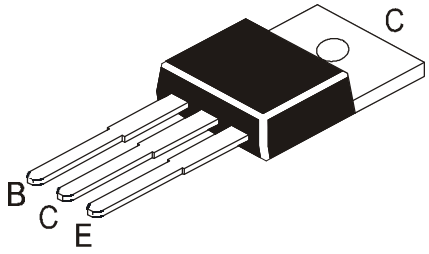

TO-220
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ELECTRICAL CHARACTERISTICS (T_c=25ºC Unless Specified Otherwise)

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

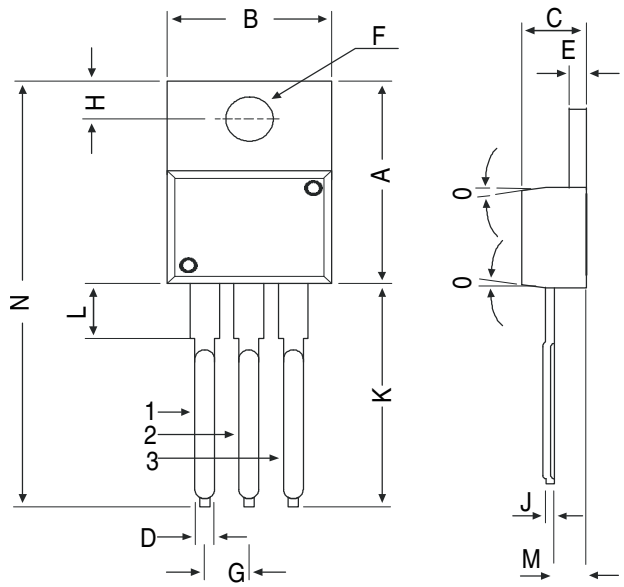
DYNAMIC CHARACTERISTICS

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

SWITCHING TIMES

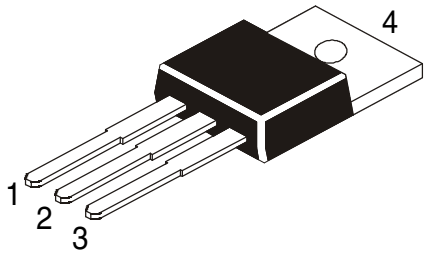
Delay And Rise Time	t_d+t_r	I_C=5A, I_{B1}=0.5A				
		C44H Series		300		ns
		C45H Series		135		
Storage Time	t_s	I_C=5A, I_{B1}= I_{B2}= 0.5A		500		ns
		C44H Series		500		
		C45H Series				
Fall Time	t_f	I_C=5A, I_{B1}= I_{B2}= 0.5A				
		C44H Series		140		ns
		C45H Series		100		

TO-220 Plastic Package



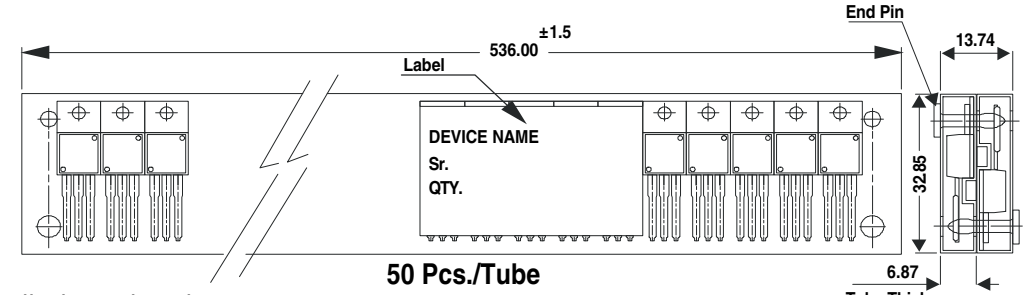
DIM	MIN	MAX
A	14.42	16.51
B	9.63	10.67
C	3.56	4.83
D	—	0.90
E	1.15	1.40
F	3.75	3.88
G	2.29	2.79
H	2.54	3.43
J	—	0.56
K	12.70	14.73
L	2.80	4.07
M	2.03	2.92
N	—	31.24
O	7 DEG	

All diminsions in mm.



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

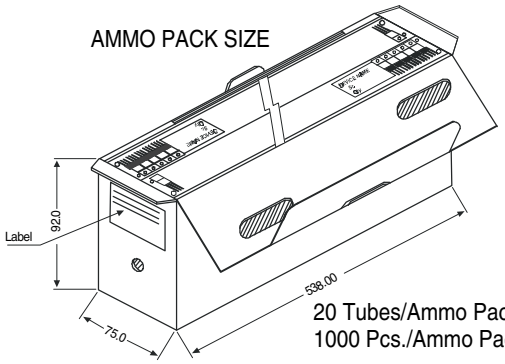
TO-220 Tube Packing



50 Pcs./Tube

All Dimensions in mm

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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