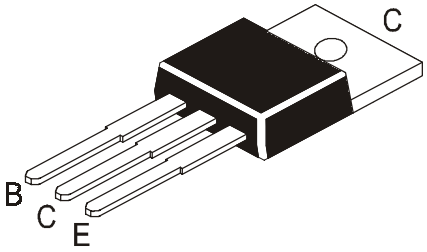
NPN SILICON PLANAR POWER TRANSISTOR

BD707



TO-220
Plastic Package

For use in Power Linear and Switching Applications

ABSOLUTE MAXIMUM RATINGS

DESCRIPTION	SYMBOL	VALUE	UNIT
Collector Base Voltage	V_{CBO}	60	V
Collector Emitter Voltage	V_{CER}	60	V
Collector Emitter Voltage	V_{CEO}	60	V
Emitter Base Voltage	V_{EBO}	5	V
Collector Current Collector Peak Current	I_C I_{CM}	12 18	A
Base Current	I_B	5	A
Power Dissipation @ $T_c \leq 25$ °C	P_{tot}	75	W
Operating & Storage Junction Temperature Range	T_j, T_{stg}	- 65 to +150	°C

THERMAL RESISTANCE

Junction to Case	$R_{th\ (j-c)}$	1.67	°C/W
Junction to Ambient	$R_{th\ (j-a)}$	70	°C/W

ELECTRICAL CHARACTERISTICS (T_c=25°C Unless Specified Otherwise)

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNIT
Collector Cut off Current	I_{CBO}	V_{CB}=60V, I_E=O T_c=150 °C V_{CB}=60V, I_E=O			100 1.0	µA mA
Collector Cut off Current	I_{CEO}	V_{CE}=30V, I_B=0			100	mA
Emitter Cut off Current	I_{EBO}	V_{EB}=5V, I_C=0			1.0	mA
Collector Emitter Sustaining Voltage	$V_{CEO(sus)}$ *	I_C=100mA, I_B=0	60			V
Collector Emitter Saturation Voltage	$V_{CE(sat)}$*	I_C=4A, I_B=0.4A			1.0	V
Knee Voltage	V_{CEK} *	I_C=3A, I_B= **			0.4	V
Base Emitter on Voltage	$V_{BE(on)}$ *	I_C=4A, V_{CE}=4V			1.5	V
DC Current Gain	h_{FE} *	I_C=0.5A, V_{CE}=2V I_C=2A, V_{CE}=2V I_C=4A, V_{CE}=4V I_C=10A, V_{CE}=4V	40 30 15 5		400 150	
Transition frequency	f_T	I_C=300mA, V_{CE}=3V	3			MHz

***Pulsed : Pulse duration =300µs, duty cycle1.5%**
****Value for which I_C=3.3A @ V_{CE}=2V**

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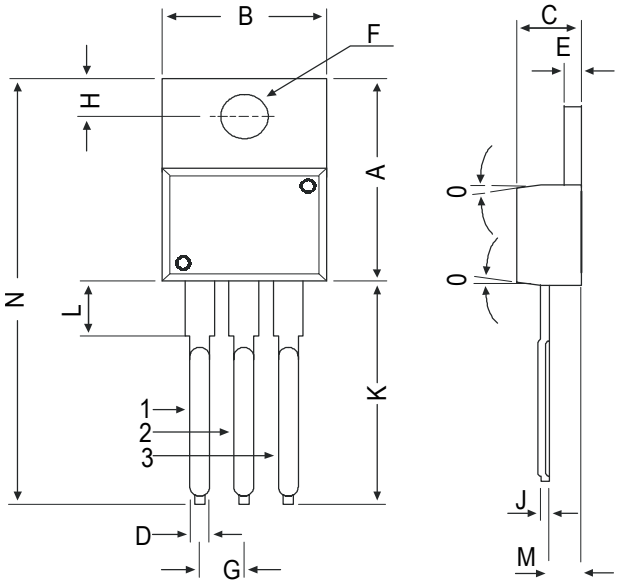
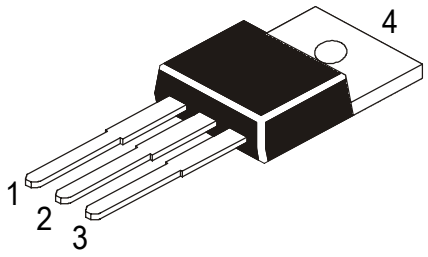


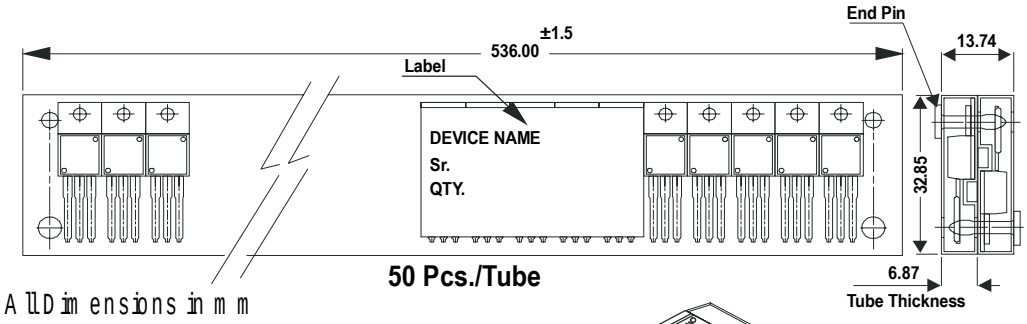
DIM	MIN	MAX
A	14.42	16.51
B	9.63	10.67
C	3.56	4.83
D	—	0.90
E	1.15	1.40
F	3.75	3.88
G	2.29	2.79
H	2.54	3.43
J	—	0.56
K	12.70	14.73
L	2.80	4.07
M	2.03	2.92
N	—	31.24
O	7 DEG	

All diminsions in mm.



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

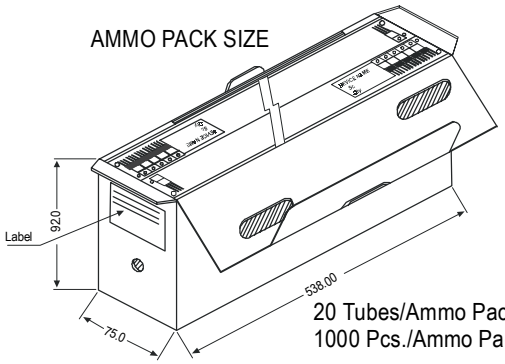
TO-220 Tube Packing



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 50 pcs/tube	396 gm/200 pcs 120 gm/50 pcs	3" x 7.5" x 7.5" 3.5" x 3.7" x 21.5"	1.0K 1.0K	17" x 15" x 13.5" 19" x 19" x 19"	16.0K 10.0K	36 kgs 29 kgs

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Plastic Package

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