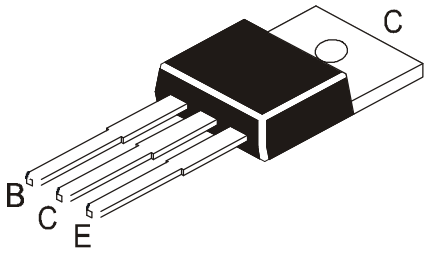
NPN PLASTIC MEDIUM DARLINGTON POWER TRANSISTORS

2N6387
2N6388

TO-220
Plastic Package



Designed for General Purpose Amplifier and Low Speed Switching Applications

ABSOLUTE MAXIMUM RATINGS

DESCRIPTION	SYMBOL	2N6387	2N6388	UNIT
Collector Emitter Voltage	V_{CEO}	60	80	V
Collector Base Voltage	V_{CBO}	60	80	V
Emitter Base Voltage	V_{EBO}	5.0		V
Collector Current Continuous	I_C	10		A
Collector Current Peak	I_{CM}	15		A
Base Current	I_B	250		mA
Power Dissipation upto T_c=25ºC	P_D	65		W
Derate above 25ºC		0.52		W/ºC
Power Dissipation upto T_a=25ºC	P_D	2.0		W
Derate above 25ºC		16		mW/ºC
Operating and Storage Junction Temperature Range	T_j, T_{stg}	- 65 to +150		ºC

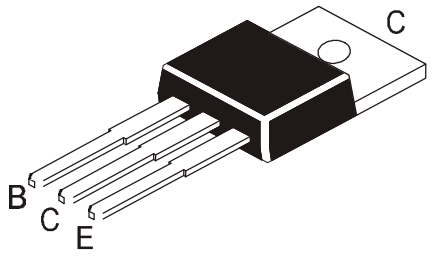
THERMAL RESISTANCE

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

ELECTRICAL CHARACTERISTICS (T_C=25ºC unless specified otherwise)

DESCRIPTION	SYMBOL	TEST CONDITION	2N6387		2N6388		UNIT
			MIN	MAX	MIN	MAX	
Collector Emitter (sus) Voltage	*$V_{CEO(sus)}$	I_C=200mA, I_B=0	60		80		V
Collector Cut Off Current	I_{CEO}	V_{CE}=60V, I_B=0		1.0			mA
		V_{CE}=80V, I_B=0				1.0	mA
Collector Cut Off Current	I_{CEX}	V_{CE}=60V, $V_{EB(Off)}$=1.5V		300			µA
		V_{CE}=80V, $V_{EB(Off)}$=1.5V				300	µA
		V_{CE}=60V, $V_{EB(Off)}$=1.5V, T_C=125ºC		3.0			mA
		V_{CE}=80V, $V_{EB(Off)}$=1.5V, T_C=125ºC				3.0	mA
Emitter Cut Off Current	I_{EBO}	V_{EB}=5V, I_C=0	<5.0				mA
DC Current Gain	*h_{FE}	I_C=5A,V_{CE}=3V	1000 - 20,000				
		I_C=10A, V_{CE}=3V	>100				
Collector Emitter Saturation Voltage	*$V_{CE\ (sat)}$	I_C=5A, I_B=0.01A	<2.0				V
		I_C=10A, I_B=0.1A	<3.0				V
Base Emitter on Voltage	*$V_{BE\ (on)}$	I_C=5A,V_{CE}=3V	<2.8				
		I_C=10A,V_{CE}=3V	<4.5				V

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



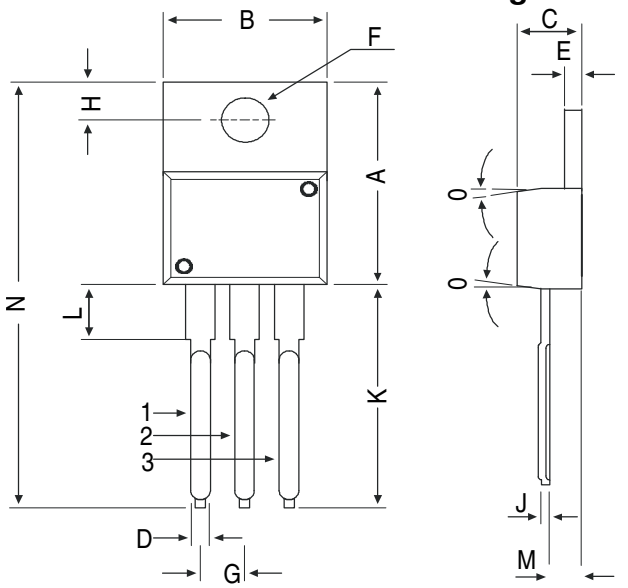
TO-220
Plastic Package

ELECTRICAL CHARACTERISTICS (T_C=25ºC unless specified otherwise)

DYNAMIC CHARACTERISTIC

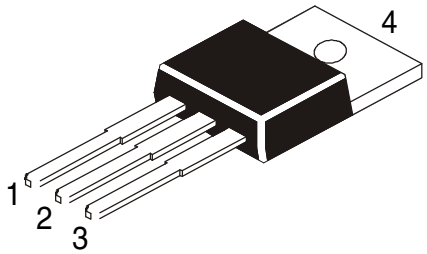
DESCRIPTION	SYMBOL	TEST CONDITION	MIN	MAX	UNIT
Small Signal Current Gain	$\|h_{fe}\|$	I_C=1A,V_{CE}=5V, f=1MHz	20		
Output Capacitance	C_{ob}	V_{CB}=10V, I_E=0, f=0.1MHz		200	pF
Small Signal Current Gain	h_{fe}	I_C=1A,V_{CE}=5V, f=1kHz	1000		

TO-220 Plastic Package



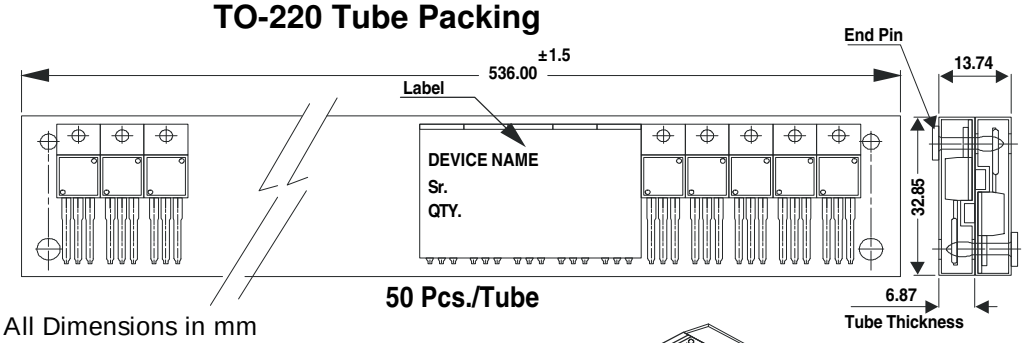
DIM	MIN	MAX
A	14.42	16.51
B	9.63	10.67
C	3.56	4.83
D	—	0.90
E	1.15	1.40
F	3.75	3.88
G	2.29	2.79
H	2.54	3.43
J	—	0.56
K	12.70	14.73
L	2.80	4.07
M	2.03	2.92
N	—	31.24
O	7 DEG	

All diminsions in mm.



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

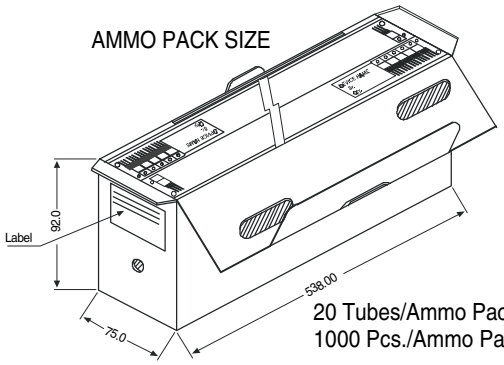
TO-220 Tube Packing



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**

2N6387_2N6388Rev 310505E

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