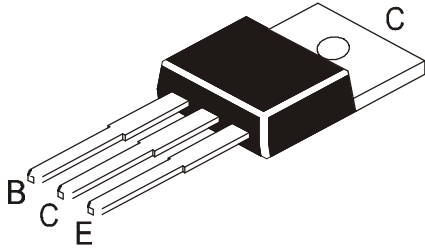


**PLASTIC POWER TRANSISTORS**

TIP110	TIP115
TIP111	TIP116
TIP112	TIP117
NPN	PNP

**TO-220  
Plastic Package**



**Intended for use in Medium Power Linear and Switching Applications**

**ABSOLUTE MAXIMUM RATINGS (T<sub>a</sub>=25°C)**

DESCRIPTION	SYMBOL	TIP110/115	TIP111/116	TIP112/117	UNIT
Collector Emitter Voltage	V <sub>CEO</sub>	60	80	100	V
Collector Base Voltage	V <sub>CBO</sub>	60	80	100	V
Emitter Base Voltage	V <sub>EBO</sub>		5		V
Collector Current Continuous	I <sub>C</sub>		2		A
Collector Current Peak	I <sub>CM</sub>		4		A
Base Current	I <sub>B</sub>		50		mA
Power Dissipation upto T <sub>c</sub> =25°C	P <sub>D</sub>		50		W
Power Dissipation upto T <sub>a</sub> =25°C Derate above 25°C	P <sub>D</sub>		2 16		W mW/°C
Operating And Storage Junction Temperature	T <sub>j</sub> , T <sub>stg</sub>		-65 to +150		°C

**THERMAL RESISTANCE**

Junction to Case	R <sub>th(j-c)</sub>	2.5	°C/W
Junction to Ambient in free air	R <sub>th(j-a)</sub>	62.5	°C/W

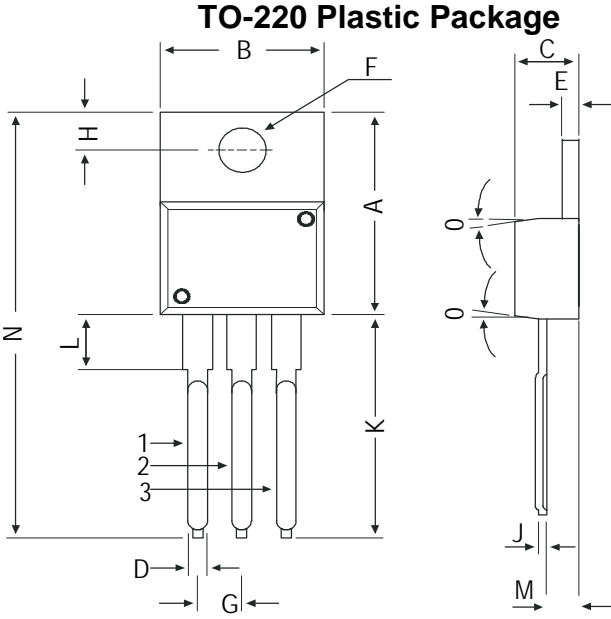
**ELECTRICAL CHARACTERISTICS (T<sub>c</sub>=25°C unless specified otherwise)**

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	MAX	UNIT
Collector Cut Off Current	I <sub>CEO</sub>	V <sub>CE</sub> = Half Rated V <sub>CEO</sub>		2.0	mA
Collector Cut Off Current	I <sub>CBO</sub>	V <sub>CB</sub> = Half Rated V <sub>CBO</sub>		1.0	mA
Emitter Cut Off Current	I <sub>EBO</sub>	V <sub>EB</sub> =5V, I <sub>C</sub> =0		2.0	mA
Collector Emitter (sus) Voltage	*V <sub>CEO(sus)</sub>	I <sub>C</sub> =30mA, I <sub>B</sub> =0	<b>TIP110/115</b>	60	V
			<b>TIP111/116</b>	80	V
			<b>TIP112/117</b>	100	V
Collector Emitter Saturation Voltage	*V <sub>CE(sat)</sub>	I <sub>C</sub> =2A, I <sub>B</sub> =8mA		2.5	V
Base Emitter On Voltage	*V <sub>BE(on)</sub>	I <sub>C</sub> =2A, V <sub>CE</sub> =4V		2.8	V
DC Current Gain	*h <sub>FE</sub>	I <sub>C</sub> =1A, V <sub>CE</sub> =4V	1,000		
		I <sub>C</sub> =2A, V <sub>CE</sub> =4V	500		

\*Pulse Test : Pulse width =300ms, Duty Cycle ≤2%

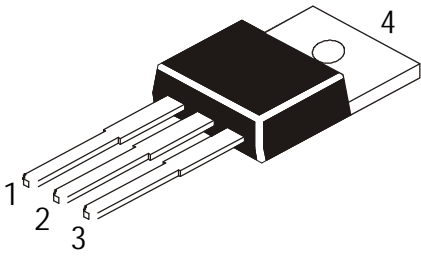
TIP110 | TIP115  
 TIP111 | TIP116  
 TIP112 | TIP117  
 NPN | PNP

**TO-220  
 Plastic Package**



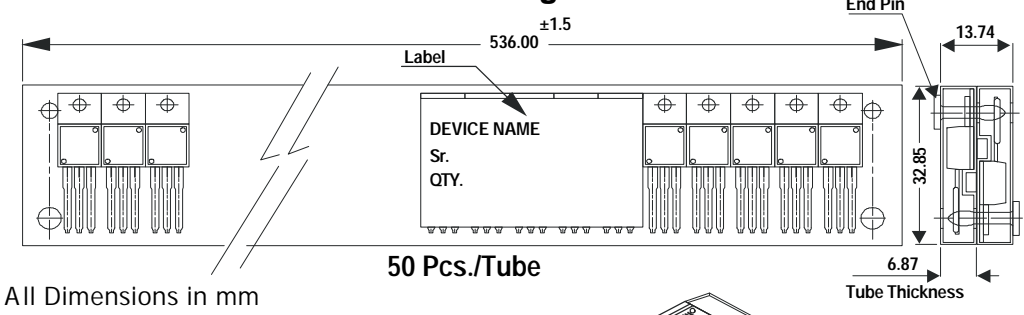
DIM	MIN	MAX
A	14.42	16.51
B	9.63	10.67
C	3.56	4.83
D	—	0.90
E	1.15	1.40
F	3.75	3.88
G	2.29	2.79
H	2.54	3.43
J	—	0.56
K	12.70	14.73
L	2.80	4.07
M	2.03	2.92
N	—	31.24
O	7 DEG	

All dimensions in mm.



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

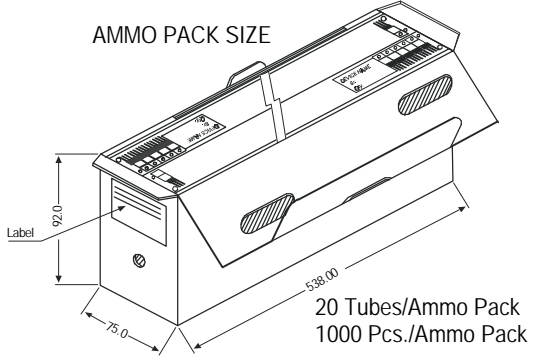
**TO-220 Tube Packing**



All Dimensions in mm

50 Pcs./Tube

AMMO PACK SIZE



**Packing Detail**

PACKAGE	STANDARD PACK		INNER CARTON BOX		OUTER CARTON BOX		
	Details	Net Weight/Qty	Size	Qty	Size	Qty	Gr Wt
TO-220	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

TIP110	TIP115
TIP111	TIP116
TIP112	TIP117
NPN	PNP

**TO-220  
Plastic Package**

**Disclaimer**

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