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Intended for use in Linear and Switching Applications



# PLASTIC POWER TRANSISTORS

# ABSOLUTE MAXIMUM RATINGS (T\_=25%)

ABSOLUTE WAANVUIW RATINGS	$(I_a = 25^{\circ} C)$				
DESCRIPTION	SYMBOL	TIP130/135	TIP131/136	TIP132/137	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>	5.0			
Collector Current Continuous	I <sub>C</sub>	8.0			
Collector Current Peak	I <sub>CM</sub>	12			
Base Current	I <sub>B</sub>	0.3			
Power Dissipation upto T <sub>c</sub> =25°C	PD	70			
Power Dissipation upto T <sub>a</sub> =25 <sup>o</sup> C	P <sub>D</sub>	2.0			W
Derate above 25°C		16			mW/⁰C
Operating And Storage Junction Temperature	$T_{j}$ , $T_{stg}$	- 65 to +150			

## THERMAL RESISTANCE

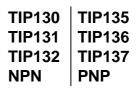
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Junction to Case	R <sub>th (j-c)</sub>	1.78	°C/W
Junction to Ambient in free air	R <sub>th (j-a)</sub>	62.5	°C/W

### 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>			0.5	mA
Collector Cut off Current	I <sub>CBO</sub>	V <sub>CB</sub> = Rated V <sub>CBO</sub>			0.2	mA
Emitter Cut off Current	I <sub>EBO</sub>	V <sub>EB</sub> =5V, I <sub>C</sub> =0			5.0	mA
Collector Emitter (sus) Voltage	*V <sub>CEO(sus)</sub>	I <sub>C</sub> =30mA, I <sub>B</sub> =0	TIP130/135	60		V
			TIP131/136	80		V
			TIP132/137	100		V
Collector Emitter Saturation	*V <sub>CE (sat)</sub>	I <sub>C</sub> =4A, I <sub>B</sub> =16mA			2.0	V
Voltage		I <sub>C</sub> =6A, I <sub>B</sub> =30mA			3.0	V
Base Emitter on Voltage	*V <sub>BE(on)</sub>	$I_{C}$ =4A, $V_{CE}$ =4V			2.5	V
DC Current Gain	*h <sub>FE</sub>	I <sub>C</sub> =1A, V <sub>CE</sub> =4V		500		
		I <sub>C</sub> =4A, V <sub>CE</sub> =4V		1,000	15,000	

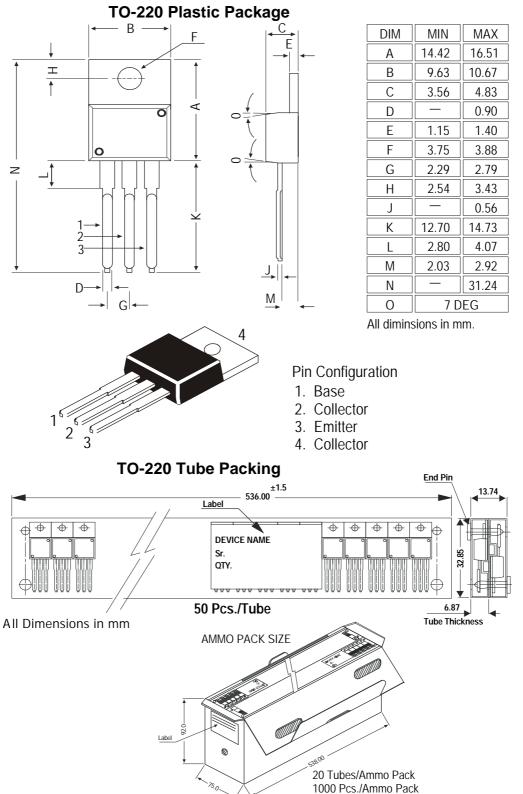
\*Pulse Test : Pulse width <300ms, Duty Cycle <2%



**TO-220 Plastic Package** 

TIP130	TIP135
TIP131	TIP136
TIP132	TIP137
NPN	PNP

## TO-220 Plastic Package



## **Packing Detail**

PACKAGE	STANDARDPACK		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

Notes

TIP130	TIP135
TIP131	TIP136
TIP132	TIP137
NPN	PNP

TO-220 Plastic Package

## Disclaimer

The product information and the selection guides facilitate selection of the CDIL's Discrete Semiconductor Device(s) best suited for application in your product(s) as per your requirement. It is recommended that you completely review our Data Sheet(s) so as to confirm that the Device(s) meet functionality parameters for your application. The information furnished in the Data Sheet and on the CDIL Web Site/CD are believed to be accurate and reliable. CDIL however, does not assume responsibility for inaccuracies or incomplete information. Furthermore, CDIL does not assume liability whatsoever, arising out of the application or use of any CDIL product; neither does it convey any license under its patent rights nor rights of others. These products are not designed for use in life saving/support appliances or systems. CDIL customers selling these products (either as individual Discrete Semiconductor Devices or incorporated in their end products), in any life saving/support appliances or systems or applications do so at their own risk and CDIL will not be responsible for any damages resulting from such sale(s).

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