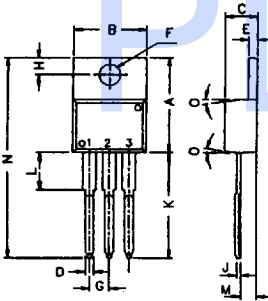
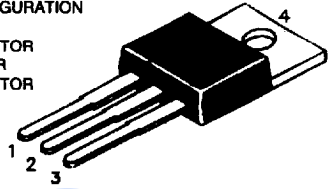


TIP130, 131, 132 NPN PLASTIC POWER TRANSISTORS
TIP135, 136, 137 PNP PLASTIC POWER TRANSISTORS
Power Darlingtons and Switching Applications

PIN CONFIGURATION
1. BASE
2. COLLECTOR
3. EMITTER
4. COLLECTOR



ALL DIMENSIONS ARE IN M.M.

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	-	6,35
M	2,03	2,92
N	-	31,24
O	7	DEG

ABSOLUTE MAXIMUM RATINGS

		130	131	132	
		135	136	137	
Collector-base voltage (open emitter)	V_{CB0} max.	60	80	100	V
Collector-emitter voltage (open base)	V_{CE0} max.	60	80	100	V
Collector current	I_C max.		8.0		A
Total power dissipation up to $T_C = 25^\circ C$	P_{tot} max.		70		W
Junction temperature	T_j max.		150		$^\circ C$
Collector-emitter saturation voltage	V_{CEsat} max.		2.0		V
$I_C = 4 A; I_B = 16 mA$					
D.C. current gain	h_{FE} min.		1		K
$I_C = 4 A; V_{CE} = 4 V$					
	h_{FE} max.		15		K

RATINGS (at $T_A=25^\circ C$ unless otherwise specified)

		130	131	132	
		135	136	137	
Collector-base voltage (open emitter)	V_{CB0} max.	60	80	100	V
Collector-emitter voltage (open base)	V_{CE0} max.	60	80	100	V

Emitter-base voltage (open collector)	V_{EBO}	max.	5.0	V
Collector current	I_C	max.	8.0	A
Collector current (peak)	I_{CM}	max.	12	A
Base current	I_B	max.	0.3	A
Total power dissipation up to $T_C = 25^\circ\text{C}$	P_{tot}	max.	70	W
Total power dissipation up to $T_A = 25^\circ\text{C}$	P_{tot}	max.	2	W
Junction temperature	T_j	max.	150	$^\circ\text{C}$
Storage temperature	T_{stg}		-65 to +150	$^\circ\text{C}$

THERMAL RESISTANCE

From junction to ambient	$R_{th\ j-a}$		63.5	$^\circ\text{C/W}$
From junction to case	$R_{th\ j-c}$		1.78	$^\circ\text{C/W}$

CHARACTERISTICS

$T_{amb} = 25^\circ\text{C}$ unless otherwise specified

			130	131	132	
			135	136	137	
Collector cutoff current						
$I_B = 0; V_{CE} = \text{half rated } V_{CEO}$	I_{CEO}	max.		0.5		mA
$I_E = 0; V_{CB} = \text{Rated } V_{CBO}$	I_{CBO}	max.		0.2		mA
Emitter cut-off current						
$I_C = 0; V_{EB} = 5\text{ V}$	I_{EBO}	max.		5		mA
Breakdown voltages						
$I_C = 30\text{ mA}; I_B = 0$	$V_{CEO(sus)}^*$	min.	60	80	100	V
$I_C = 1\text{ mA}; I_E = 0$	V_{CBO}	min.	60	80	100	V
$I_E = 1\text{ mA}; I_C = 0$	V_{EBO}	min.		5.0		V
Saturation voltages						
$I_C = 4\text{ A}; I_B = 16\text{ mA}$	V_{CEsat}^*	max.		2.0		V
$I_C = 6\text{ A}; I_B = 30\text{ mA}$	V_{CEsat}^*	max.		3.0		V
Base-emitter on voltage						
$I_C = 4\text{ A}; V_{CE} = 4\text{ V}$	$V_{BE(on)}^*$	max.		2.5		V
D.C. current gain						
$I_C = 1\text{ A}; V_{CE} = 4\text{ V}$	h_{FE}^*	min.		500		
$I_C = 4\text{ A}; V_{CE} = 4\text{ V}$	h_{FE}^*	min.		1.0		K
		max.		15		K

* Pulse: Pulse duration = 300 μs ; Duty cycle $\leq 2\%$.