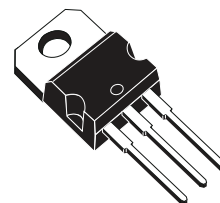


**TIP120 DARLINGTON TRANSISTOR
276-2068**

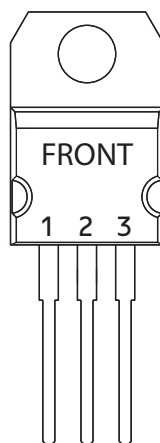
The TIP120 is a medium power darlington configuration NPN transistor resulting in exceptional high gain. Ideally suited for general-purpose amplifier and low-speed switching applications.



→ ARCHER →

TECHNICAL DATA

AN EXCLUSIVE TANDY SERVICE TO THE EXPERIMENTER



- 1. BASE
- 2. COLLECTOR
- 3. EMMITER

ABSOLUTE MAXIMUM RATINGS

Based on 25°C average ambient temperature (Exceeding maximum ratings will result in component failure).

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-base voltage ($I_E = 0$)	60	V
V_{CEO}	Collector-emitter voltage ($I_B = 0$)	60	V
V_{EBO}	Emitter-base voltage ($I_C = 0$)	5	V
I_C	Collector current	5	A
I_{CM}	Collector peak current	8	A
I_B	Base current	0.12	A
P_{TOT}	Total dissipation without heatsink air temp. $\leq 25^\circ\text{C}$, with heatsink maintaining case temperature $\leq 25^\circ\text{C}$	2 65	W
T_{stg}	Storage temperature	-65 to 150	$^\circ\text{C}$
T_J	Max. operating junction temperature	150	$^\circ\text{C}$

$R_{thj-case}$	Thermal resistance junction-case max.	1.92	$^\circ\text{C/W}$
$R_{thj-amb}$	Thermal resistance junction-ambient max.	62.5	$^\circ\text{C/W}$

ELECTRICAL CHARACTERISTICS

Symbol	Parameter	Test conditions	Min.	Typ.	Max.	Unit
I_{CEO}	Collector cut-off current	$I_B = 0, V_{CE} = 30V$			0.5	mA
I_{CBO}	Collector cut-off current	$I_B = 0, V_{CE} = 60V$			0.2	mA
I_{EBO}	Emitter cut-off current	$I_C = 0, V_{EB} = 5V$			2	mA
$V_{CEO(sus)}$	Collector-emitter sustaining voltage	$I_C = 100mA, I_B = 0$	60			V
$V_{CE(sat)}$	Collector-emitter saturation voltage	$I_C = 3A, I_B = 12mA$			2	V
		$I_C = 5A, I_B = 20mA$			4	V
$V_{BE(on)}$	Base-emitter on voltage	$I_C = 3A, V_{CE} = 3V$			2.5	V
h_{FE}	DC current gain	$I_C = 0.5A, V_{CE} = 3V$	1000			
		$I_C = 3A, V_{CE} = 3V$	1000			