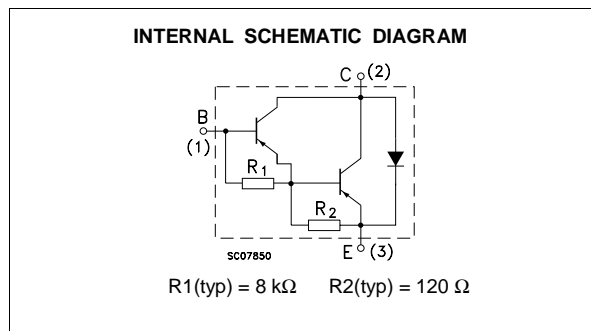
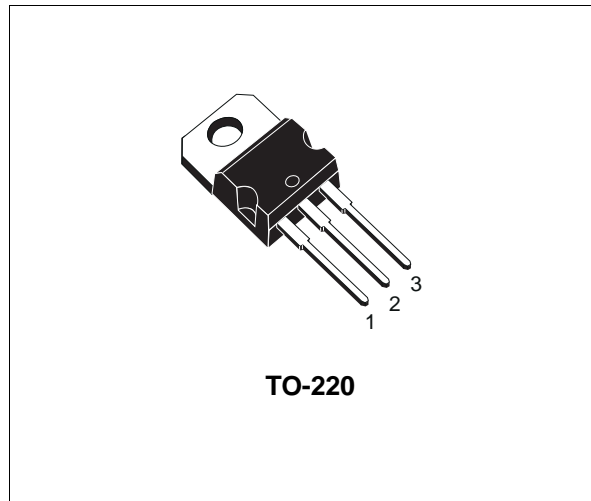


## SILICON PNP POWER DARLINGTON TRANSISTOR

- STMicroelectronics PREFERRED SALESTYPE
- PNP DARLINGTON
- INTEGRATED ANTIPARALLEL COLLECTOR-EMITTER DIODE

**APPLICATIONS:**

- GENERAL PURPOSE SWITCHING
- GENERAL PURPOSE SWITCHING AND AMPLIFIER


**ABSOLUTE MAXIMUM RATINGS**

Symbol	Parameter	Value	Unit
$V_{CBO}$	Collector-Base Voltage ( $I_E = 0$ )	80	V
$V_{CEO}$	Collector-Emitter Voltage ( $I_B = 0$ )	80	V
$V_{EBO}$	Emitter-Base Voltage ( $I_C = 0$ )	5	V
$I_C$	Collector Current	10	A
$I_{CM}$	Collector Peak Current	15	A
$I_B$	Base Current	250	mA
$P_{tot}$	Total Dissipation at $T_C \leq 25^\circ\text{C}$	65	W
$T_{stg}$	Storage Temperature	-65 to 150	$^\circ\text{C}$
$T_j$	Max. Operating Junction Temperature	150	$^\circ\text{C}$

For PNP type voltage and current values are negative.

## THERMAL DATA

R <sub>thj-case</sub>	Thermal Resistance Junction-case	Max	1.92	°C/W
R <sub>thj-amb</sub>	Thermal Resistance Junction-ambient	Max	62.5	°C/W

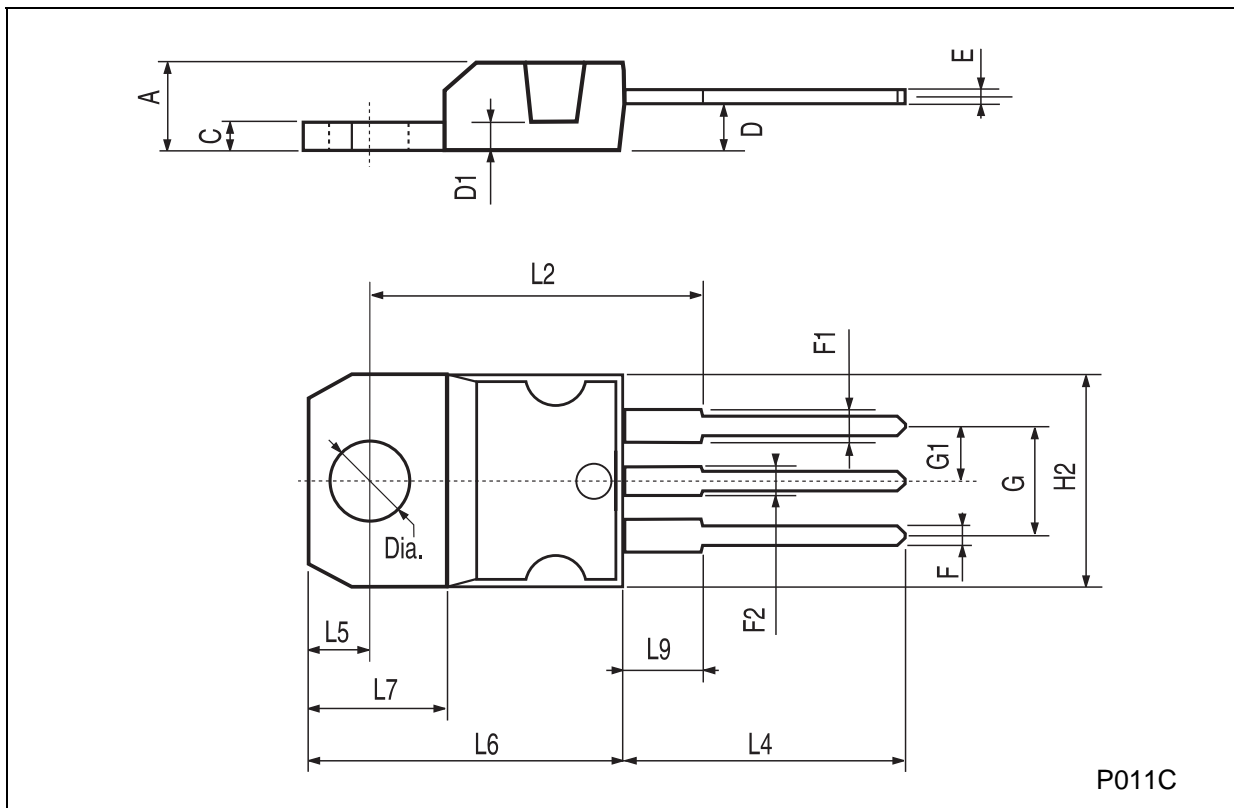
ELECTRICAL CHARACTERISTICS (T<sub>case</sub> = 25 °C unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I <sub>CEO</sub>	Collector Cut-off Current (I <sub>B</sub> = 0)	V <sub>CE</sub> = 80 V			1	mA
I <sub>EBO</sub>	Emitter Cut-off Current (I <sub>C</sub> = 0)	V <sub>EB</sub> = 5 V			5	mA
I <sub>CEV</sub>	Collector Cut-off Current (V <sub>EB</sub> = -1.5V)	V <sub>CE</sub> = 80 V			300	μA
V <sub>CEO(sus)</sub> *	Collector-Emitter Sustaining Voltage (I <sub>B</sub> =0)	I <sub>C</sub> = 200 mA	80			V
V <sub>CE(sat)</sub> *	Collector-Emitter Saturation Voltage	I <sub>C</sub> = 5 A    I <sub>B</sub> = 0.01 A I <sub>C</sub> = 10 A    I <sub>B</sub> = 0.1 A			2 3	V V
V <sub>BE(sat)</sub> *	Base-Emitter Saturation Voltage	I <sub>C</sub> = 5 A    I <sub>B</sub> = 0.01 A I <sub>C</sub> = 10 A    I <sub>B</sub> = 0.1 A			2.8 4.5	V V
h <sub>FE</sub> *	DC Current Gain	I <sub>C</sub> = 5 A    V <sub>CE</sub> = 3 V I <sub>C</sub> = 10 A    V <sub>CE</sub> = 3 V	1000 100		20000	

\* Pulsed: Pulse duration = 300 μs, duty cycle 1.5 %  
For PNP type voltage and current values are negative.

**TO-220 MECHANICAL DATA**

DIM.	mm			inch		
	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
A	4.40		4.60	0.173		0.181
C	1.23		1.32	0.048		0.051
D	2.40		2.72	0.094		0.107
D1		1.27			0.050	
E	0.49		0.70	0.019		0.027
F	0.61		0.88	0.024		0.034
F1	1.14		1.70	0.044		0.067
F2	1.14		1.70	0.044		0.067
G	4.95		5.15	0.194		0.203
G1	2.4		2.7	0.094		0.106
H2	10.0		10.40	0.393		0.409
L2		16.4			0.645	
L4	13.0		14.0	0.511		0.551
L5	2.65		2.95	0.104		0.116
L6	15.25		15.75	0.600		0.620
L7	6.2		6.6	0.244		0.260
L9	3.5		3.93	0.137		0.154
DIA.	3.75		3.85	0.147		0.151



P011C

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