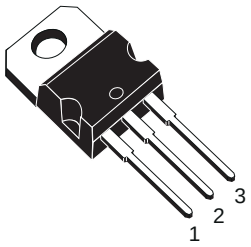
SGS-THOMSON MICROELECTRONICS

2N6668

SILICON PNP POWER DARLINGTON TRANSISTOR

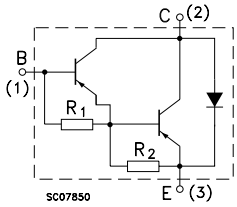
- SGS-THOMSON PREFERRED SALESTYPE
- PNP DARLINGTON
- INTEGRATED ANTIPARALLEL COLLECTOR-EMITTER DIODE

APPLICATIONS:
- GENERAL PURPOSE SWITCHING
- GENERAL PURPOSE SWITCHING AND AMPLIFIER



TO-220

INTERNAL SCHEMATIC DIAGRAM



R1(typ) = 8 kΩ R2(typ) = 120 Ω

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 $T_c \leq 25\ ^oC$	65	W
T_{stg}	Storage Temperature	-65 to 150	^oC
T_j	Max. Operating Junction Temperature	150	^oC

For PNP type voltage and current values are negative.

THERMAL DATA

$R_{thj\text{-}case}$	Thermal Resistance Junction-case	Max	1.92	$^oC/W$
$R_{thj\text{-}amb}$	Thermal Resistance Junction-ambient	Max	62.5	$^oC/W$

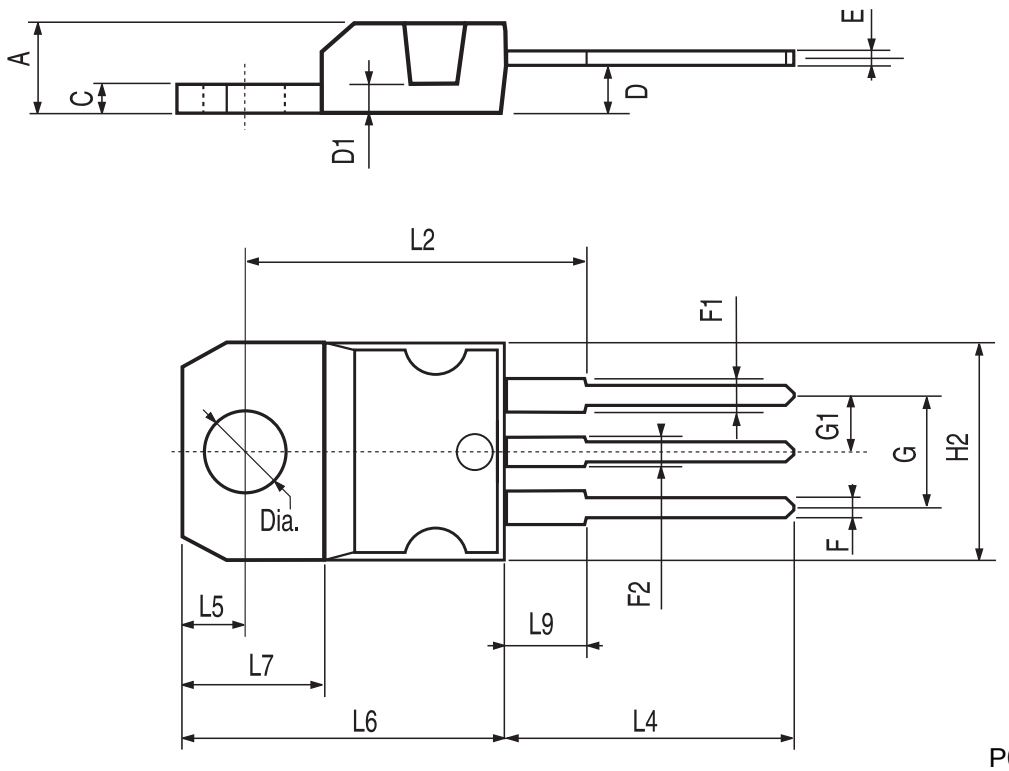
ELECTRICAL CHARACTERISTICS (T_{case} = 25 ^oC unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I_{CEO}	Collector Cut-off Current (I_B = 0)	V_{CE} = 80 V			1	mA
I_{EBO}	Emitter Cut-off Current (I_C = 0)	V_{EB} = 5 V			5	mA
I_{CEV}	Collector Cut-off Current (V_{EB} = -1.5V)	V_{CE} = 80 V			300	µA
$V_{CEO(sus)}$*	Collector-Emitter Sustaining Voltage (I_B=0)	I_C = 200 mA	80			V
$V_{CE(sat)}$*	Collector-Emitter Saturation Voltage	I_C = 5 A I_B = 0.01 A I_C = 10 A I_B = 0.1 A			2 3	V V
$V_{BE(sat)}$*	Base-Emitter Saturation Voltage	I_C = 5 A I_B = 0.01 A I_C = 10 A I_B = 0.1 A			2.8 4.5	V V
h_{FE}*	DC Current Gain	I_C = 5 A V_{CE} = 3 V I_C = 10 A V_{CE} = 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