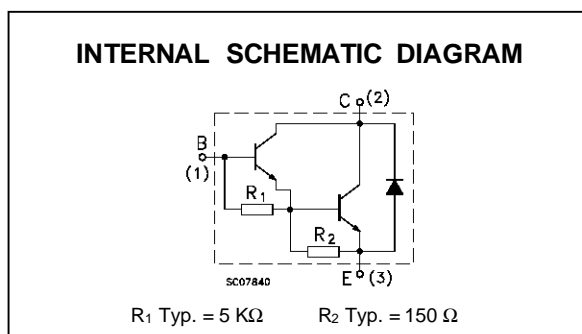
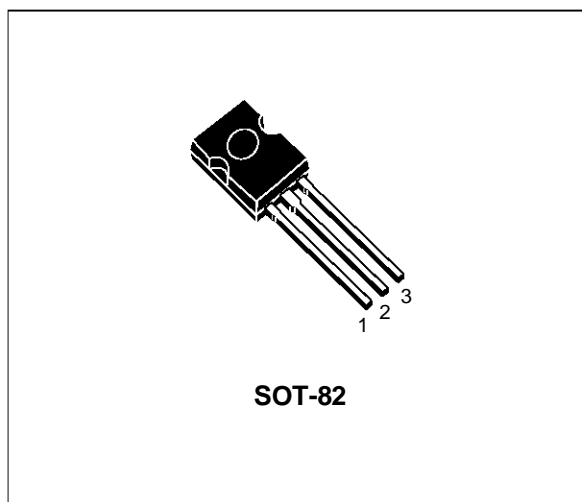


COMPLEMENTARY SILICON POWER DARLINGTON TRANSISTORS

■ SGS-THOMSON PREFERRED SALESTYPES

DESCRIPTION

The SGS122 is silicon epitaxial-base NPN power transistors in monolithic Darlington configuration Jedec SOT-82 plastic package, intended for use in power linear and switching applications.



ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value	Unit
V _{CBO}	Collector-Base Voltage (I _E = 0)	100	V
V _{CEO}	Collector-Emitter Voltage (I _B = 0)	100	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	0.1	A
P _{tot}	Total Dissipation at T _{case} ≤ 25 °C	65	W
	T _{amb} ≤ 25 °C	2	W
T _{stg}	Storage Temperature	-65 to 150	°C
T _j	Max. Operating Junction Temperature	150	°C

* For PNP types voltage and current values are negative.

THERMAL DATA

$R_{thj-case}$	Thermal Resistance Junction-case	Max	1.92	$^{\circ}C/W$
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ELECTRICAL CHARACTERISTICS ($T_{case} = 25^{\circ}C$ unless otherwise specified)

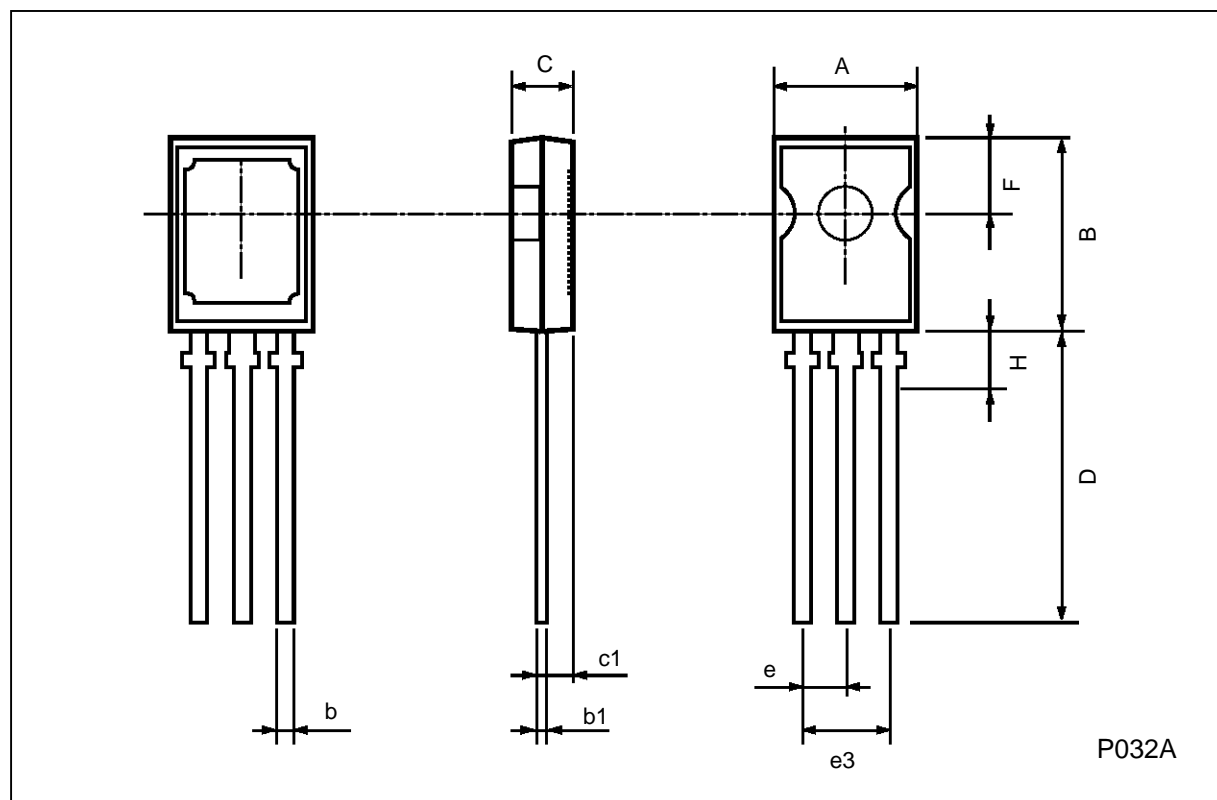
Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I_{CEO}	Collector Cut-off Current ($I_B = 0$)	$V_{CE} = \text{half rated } V_{CEO}$			0.5	mA
I_{CBO}	Collector Cut-off Current ($I_B = 0$)	$V_{CB} = \text{half rated } V_{CBO}$			0.2	mA
I_{EBO}	Emitter Cut-off Current ($I_C = 0$)	$V_{EB} = 5 V$			2	mA
$V_{CEO(sus)}^*$	Collector-Emitter Sustaining Voltage ($I_B = 0$)	$I_C = 30 \text{ mA}$	100			V
$V_{CE(sat)}^*$	Collector-Emitter Saturation Voltage	$I_C = 3 A$			2	V
		$I_C = 5 A$	$I_B = 12 \text{ mA}$ $I_B = 20 \text{ mA}$		4	V
V_{BE}^*	Base-Emitter Voltage	$I_C = 3 A$			2.5	V
h_{FE}^*	DC Current Gain	$I_C = 0.5 A$		1000		
		$I_C = 3 A$	$V_{CE} = 3 V$ $V_{CE} = 3 V$	1000		

* Pulsed: pulse duration = 300 μs , duty cycle $\leq 2\%$

* For PNP types voltage and current values are negative.

SOT-82 MECHANICAL DATA

DIM.	mm			inch		
	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
A	7.4		7.8	0.291		0.307
B	10.5		11.3	0.413		0.445
b	0.7		0.9	0.028		0.035
b1	0.49		0.75	0.019		0.030
C	2.4		2.7	0.04		0.106
c1		1.2			0.047	
D		15.7			0.618	
e		2.2			0.087	
e3		4.4			0.173	
F		3.8			0.150	
H			2.54		0.100	



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