



SGS125

SILICON PNP POWER DARLINGTON TRANSISTOR

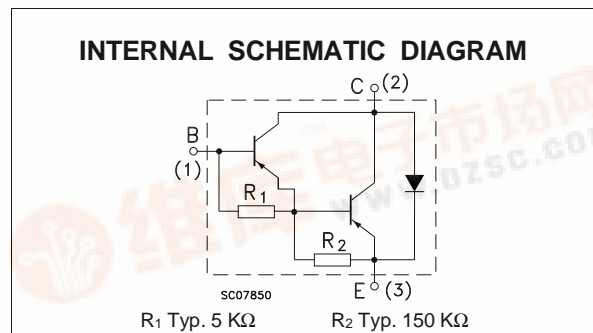
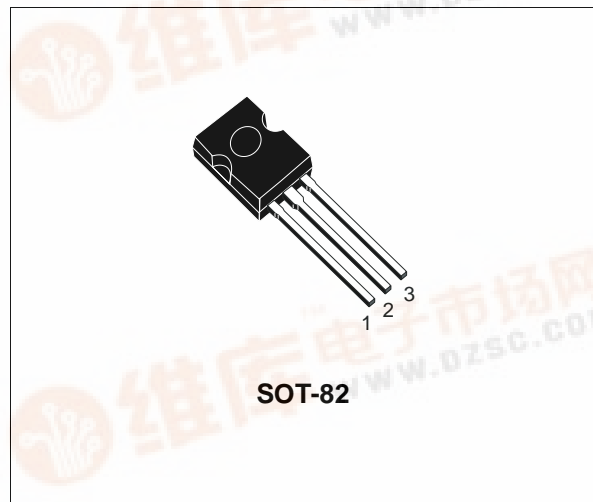
- SGS-THOMSON PREFERRED SALESTYPE
- PNP DARLINGTON
- INTEGRATED ANTIPARALLEL COLLECTOR-EMITTER DIODE

APPLICATION

- GENERAL PURPOSE SWITCHING

DESCRIPTION

The SGS125 is a silicon epitaxial-base PNP transistor in monolithic Darlington configuration in SOT82 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)	- 60	V
V _{CEO}	Collector-Emitter Voltage (I _B = 0)	- 60	V
V _{EBO}	Base-Emitter 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 Power Dissipation at T _{case} ≤ 25 °C T _{amb} ≤ 25 °C	65 2	W W
T _{stg}	Storage Temperature	-65 to 150	°C
T _j	Max Operating Junction Temperature	150	°C

THERMAL DATA

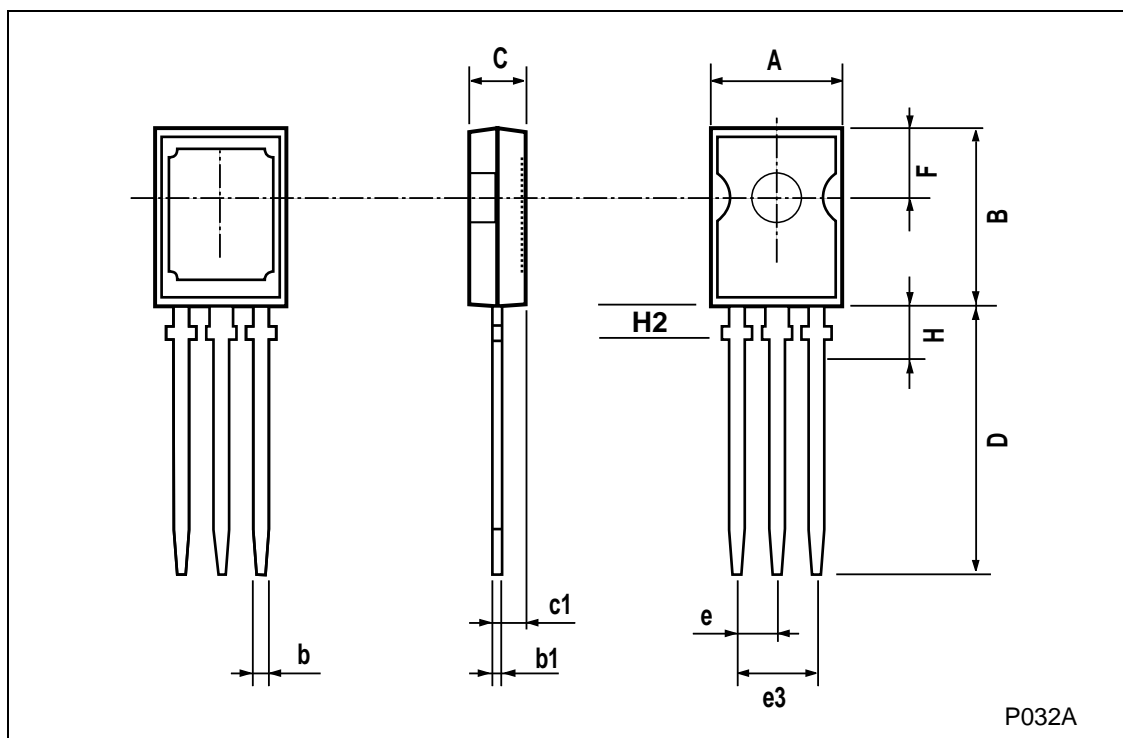
R _{thj-case}	Thermal Resistance Junction-case	Max	1.92	°C/W
R _{thj-amb}	Thermal Resistance Junction-ambient	Max	62.5	°C/W

ELECTRICAL CHARACTERISTICS (T_{case} = 25 °C unless otherwise specified)

Symbol	Parameter	Test Conditions		Min.	Typ.	Max.	Unit
I _{CEO}	Collector Cut-off Current (I _B = 0)	V _{CE} = - 30 V				- 0.5	mA
I _{CBO}	Collector Cut-off Current (I _E = 0)	V _{CB} = - 60 V				- 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 mA		- 60			V
V _{CE(sat)} *	Collector-Emitter Saturation Voltage	I _C = - 3 A	I _B = -12 mA			- 2	V
		I _C = - 5 A	I _B = - 20 mA			- 4	V
V _{BE(on)} *	Base-Emitter Voltage	I _C = - 3 A	V _{CE} = - 3 V			- 2.5	V
h _{FE} *	DC Current Gain	I _C = - 0.5 A	V _{CE} = - 3 V	1000			
		I _C = - 3 A	V _{CE} = - 3 V	1000			

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		10.8	0.413		0.444
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	1.0		1.3	0.039		0.05
D	15.4		16	0.606		0.629
e		2.2			0.087	
e3	4.15		4.65	0.163		0.183
F		3.8			0.150	
H			2.54		0.100	
H2		2.15			0.084	



P032A

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