

NPN Epitaxial Silicon Transistor

1 Description

The S8050 is a medium power low voltage transistor

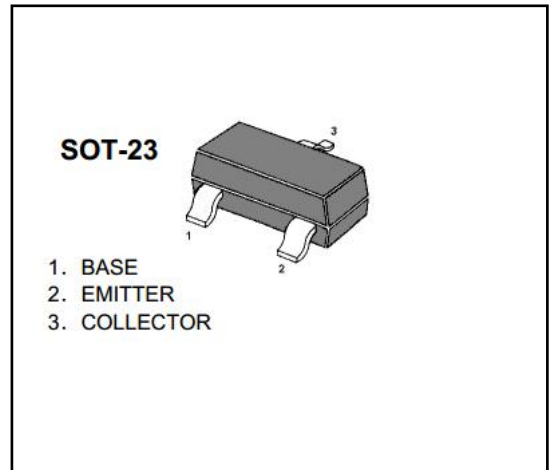
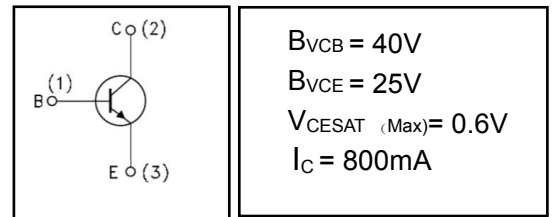
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2 Features

- High current output up to 0.8A
- Low saturation voltage
- Complement to S8550

3 Applications

- WELL SUITABLE FOR PORTABLE EQUIPMENT
- SMALL LOAD SWITCH TRANSISTOR WITH
- HIGH GAIN AND LOW SATURATION VOLTAGE



4 Electrical Characteristics

4.1 Absolute Maximum Ratings (T_c=25°C, unless otherwise noted)

PARAMETER	SYMBOL	VALUE	UNIT
Collector-Base Voltage	V _{CBO}	40	V
Collector-Emitter Voltage	V _{CEO}	25	V
Emitter-Base Voltage	V _{EBO}	5	V
Collector Current (DC)	I _C	800	mA
*Collector Current (Pulse)	I _{CP}	1	A
Base Current (DC)	I _B	200	mA
Collector Dissipation (T _c =25°C)	P _C	300	mW
Junction Temperature	T _J	150	°C
Storage Temperature	T _{STG}	- 55 ~ 150	°C

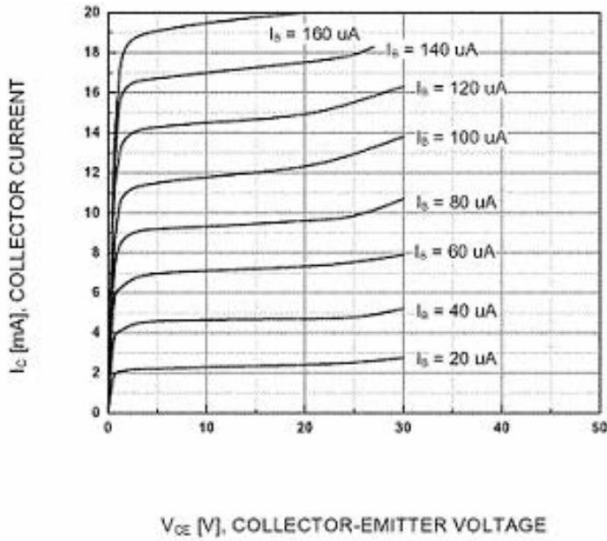
* PW≤10ms, Duty Cycle≤50%

4.2 Electrical Characteristics (Tc=25°C, unless otherwise noted)

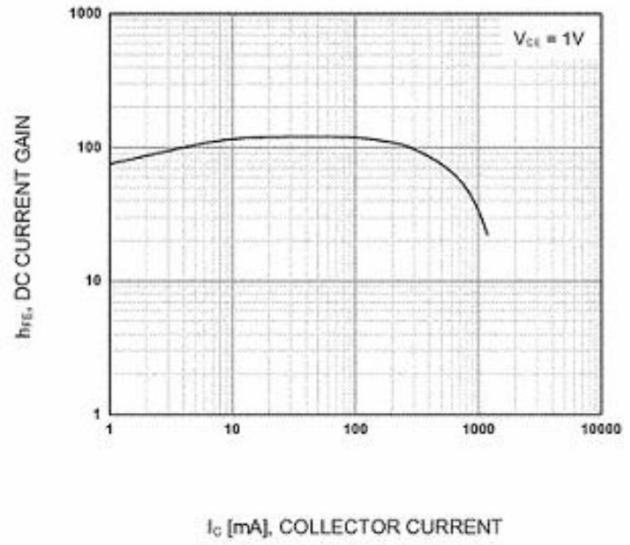
SYMBOL	PARAMETER	Test Conditions	Min	Typ	Max	Unit
I _{CBO}	Collector cut-off current	V _{CB} =40V	-	-	0.1	uA
I _{CEO}	Collector cut-off current	V _{CE} =20V	-	-	0.1	uA
I _{EBO}	Emitter Cut-off Current (I _C = 0)	V _{EB} =6V	-	-	0.1	uA
V _{(BR)CEO}	Collector-Emitter Breakdown Voltage (I _B = 0)	I _C =1mA	25	-	-	V
V _{(BR)CBO}	Collector-Base Breakdown Voltage (I _E = 0)	I _C =100uA	40	-	-	V
V _{(BR)EBO}	Emitter-Base Breakdown Voltage (I _C = 0)	I _E =100uA	5	-	-	V
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C =100mA I _B =10mA I _C =500mA I _B =50mA	-	-	0.4 0.6	V
V _{BE(sat)}	Base-Emitter Saturation Voltage	I _C =100mA I _B =10mA I _C =500mA I _B =50mA	-	-	1 1.2	
h _{FE}	DC Current Gain	I _C =50mA, V _{CE} =1V I _C =500mA, V _{CE} =1V	200 50	-	350 -	
f _T	Transition Frequency	V _{CE} =6V, I _C =20mA, f=30MHZ	150	-	-	MHZ

*Pulse test: pulse width ≤300μs, duty cycle≤ 2.0%.

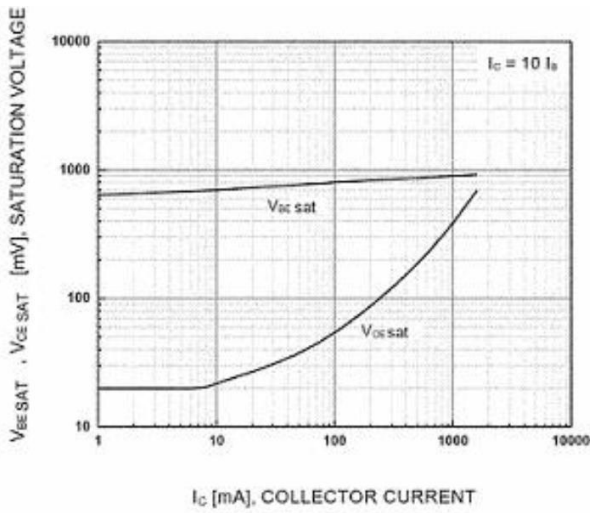
5 Typical characteristics diagrams



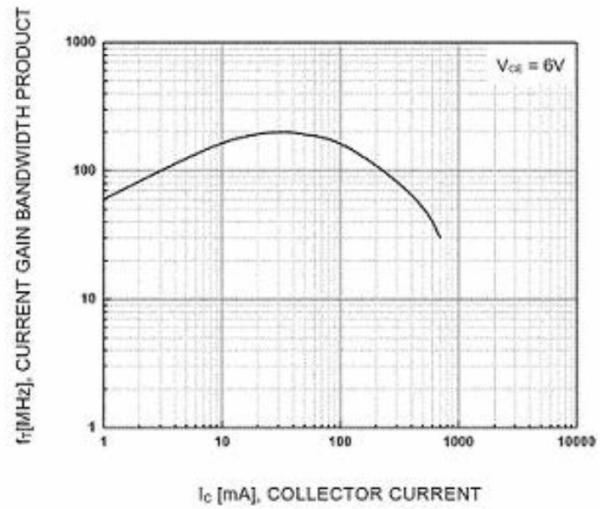
Static Characteristic



DC current Gain

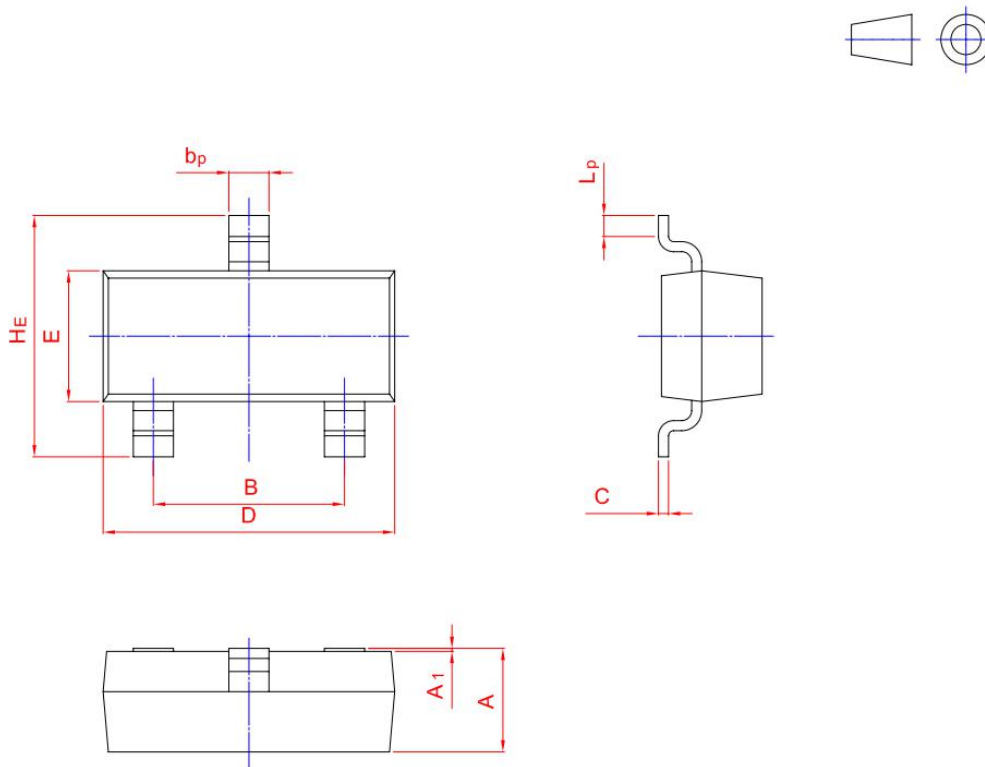


**Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage**



Current Gain Bandwidth Product

6 Dimensions



UNIT	A	B	bp	C	D	E	HE	A1	Lp
mm	1.40	2.04	0.50	0.19	3.10	1.65	3.00	0.100	0.50
	0.95	1.78	0.35	0.08	2.70	1.20	2.20	0.013	0.20

7 Attentions

- ROUM Semiconductor Technology CO.,LTD. reserves the right to change the specification without prior notice! The customer should obtain the latest version of the information before making the order and verify that the information is complete and up to date.
- It is the responsibility of the purchaser for any failure or failure of any semiconductor product under certain conditions. It is the responsibility of the purchaser to comply with safety standards and to take safety measures in the system design and machine manufacturing of Roma products in order to avoid potential risk of failure. Injury or property damage.
- Product promotion is endless, our company will be dedicated to provide customers with better products.

8 Appendix

Revision history:

Date	REV.	Description	Page
2017.09.5	1.0	Original	