

SS8050 NPN Transistors

General description

SOT-23 Plastic-Encapsulate Transistors

SOT-23

FEATURES

- Complementary to SS8550
- Power Dissipation of 300mW
- High Stability and High Reliability

MECHANICAL DATA

- SOT-23 Small Outline Plastic Package
- Epoxy UL: 94V-0
- Mounting Position: Any

1. BASE
2. EMITTER
3. COLLECTOR



Marking: Y1

Maximum Ratings & Thermal Characteristics T_A = 25°C unless otherwise noted

Parameters	Symbol	Value	Unit
Collector-Base Voltage	V _{CB0}	40	V
Collector-Emitter Voltage	V _{CEO}	25	V
Emitter -Base Voltage	V _{EBO}	5	V
Collector Current-Continuous	I _c	1500	mA
Collector Power Dissipation	P _c	300	mW
Junction Temperature	T _j	150	°C
Storage Temperature	T _{stg}	-55-+150	°C
Thermal resistance From junction to ambient	R _{θJA}	417	°C/W

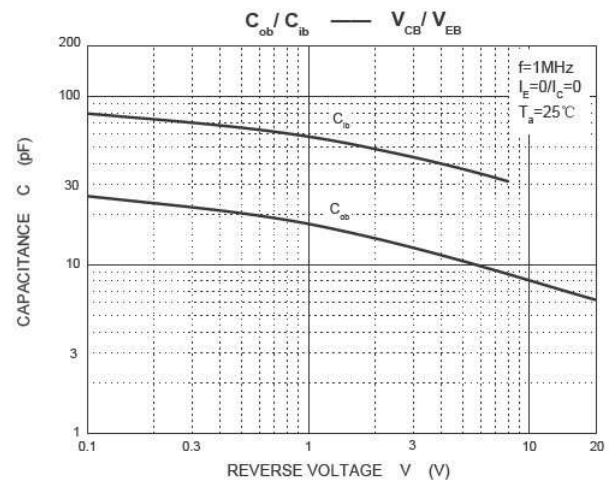
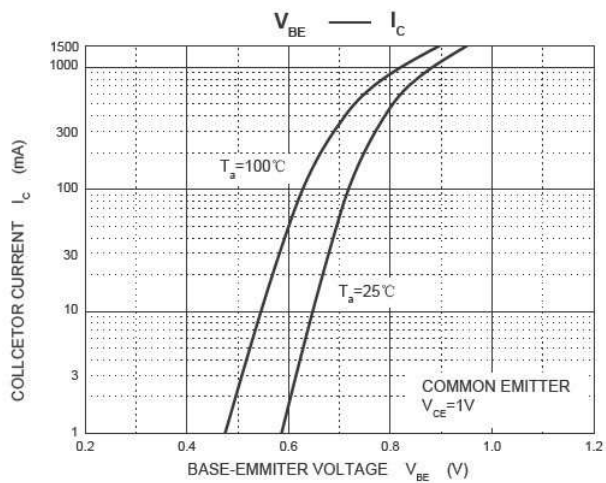
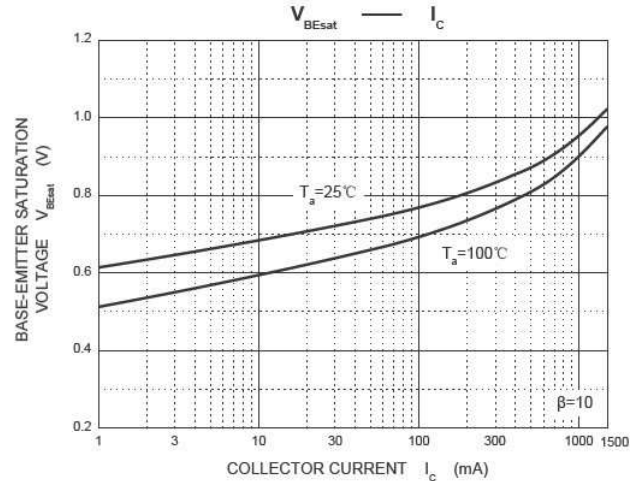
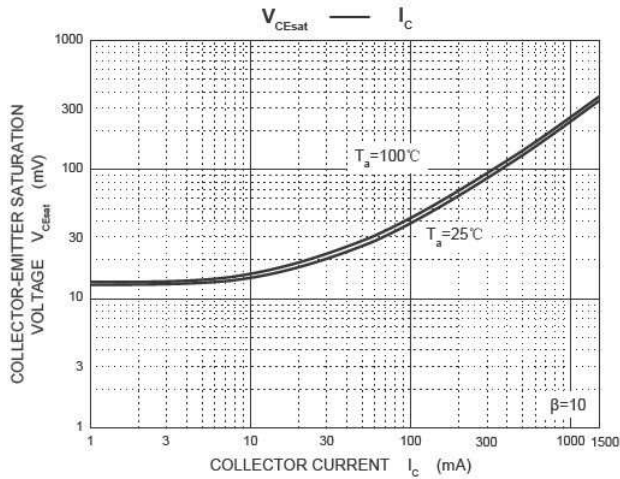
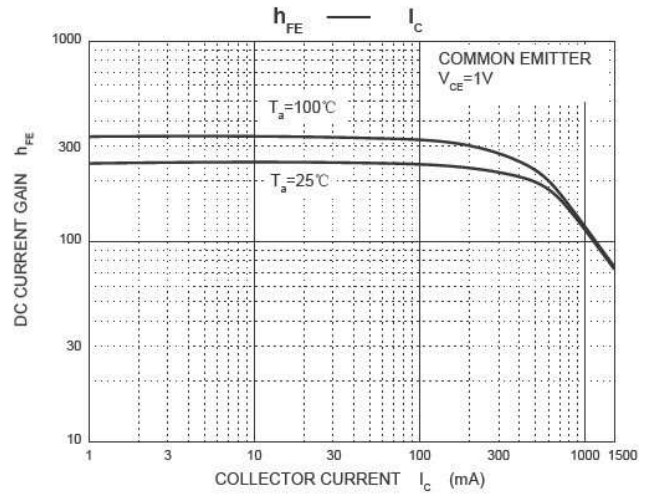
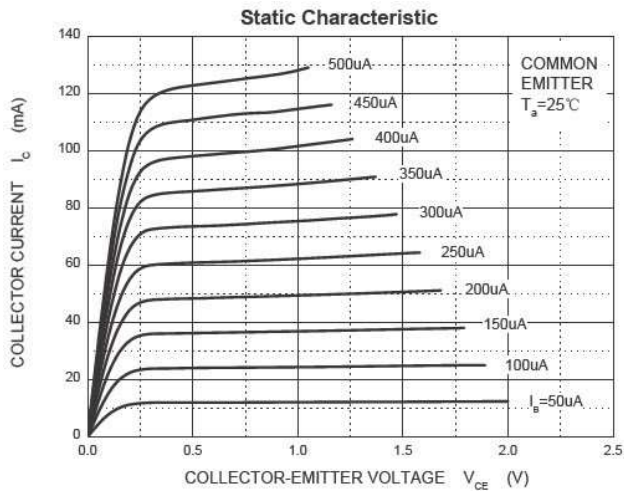
Electrical Characteristics T_A = 25°C unless otherwise noted

Parameter	Symbols	Test Condition	Limits		Unit
			Min	Max	
Collector-base breakdown voltage	V(BR)CBO	I _C =100uA, I _E =0	40		V
Collector-emitter breakdown voltage	V(BR)CEO	I _C =0.1mA, I _B =0	25		V
Emitter-base breakdown voltage	V(BR)EBO	I _E =100uA, I _C =0	5		V
Collector cut-off current	I _{CEO}	V _{CE} =20V, I _B =0		100	nA
Collector cut-off current	I _{CBO}	V _{CB} =40V, I _E =0		100	nA
Emitter cut-off current	I _{EBO}	V _{EB} =5V, I _C =0		100	nA
DC current gain	h _{FE} (1)	V _{CE} =1V, I _C =100mA	120	400	
	h _{FE} (2)	V _{CE} =1V, I _C =800mA	50		
Collector-emitter saturation voltage	V _{CE(sat)}	I _C =800mA, I _B =80mA		0.60	V
Base -emitter saturation voltage	V _{BE(sat)}	I _C =800mA, I _B =80mA		1.20	V
Transition frequency	f _t	V _{CE} =10V, I _C =50mA, f=30MHz	100		MHz

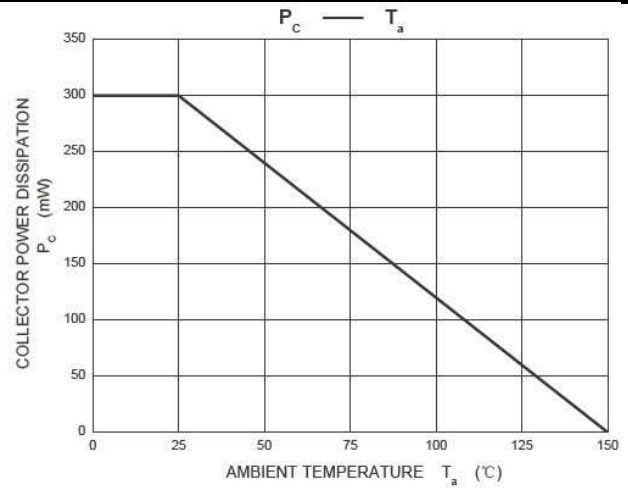
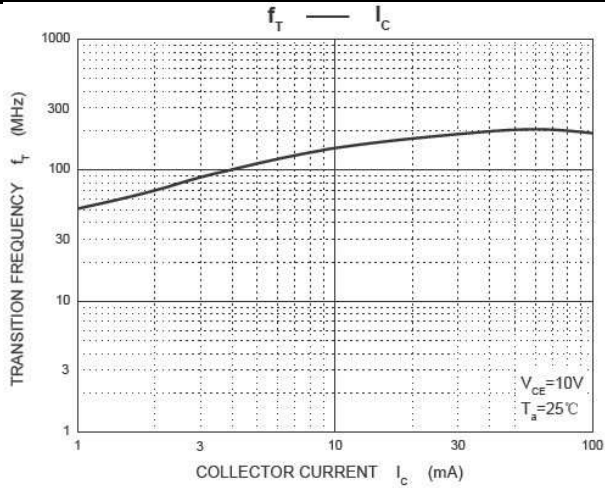
CLASSIFICATION OF h_{FE}(1)

RANK	L	H	J
RANGE	120-200	200-350	300-400

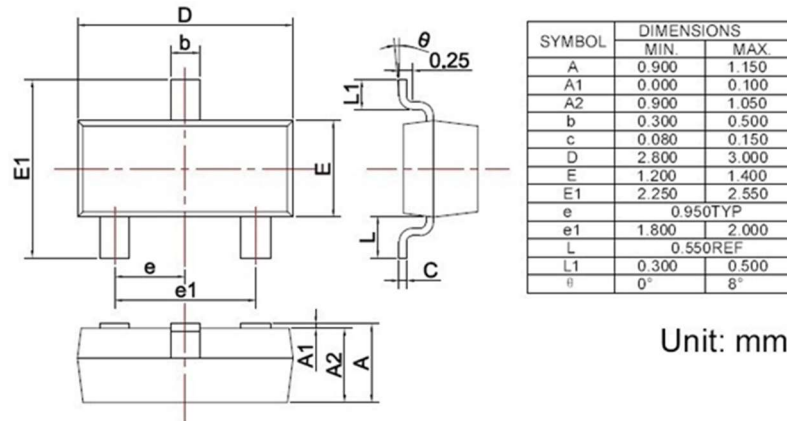
Typical characteristics



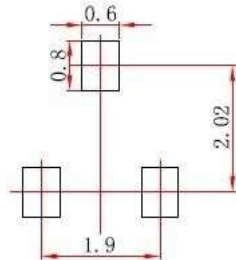
SS8050



SOT-23 PACKAGE OUTLINE Plastic surface mounted package



Recommended land dimensions for SOT-23 diode. Electrode patterns for PCBs



- Note:
1. Controlling dimension: In millimeters.
 2. General tolerance: ± 0.05 mm.
 3. The pad layout is for reference purposes only.

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