SEMICONDUCTOR

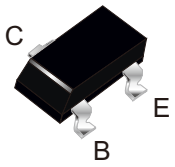
S8050T

NPN Plastic-Encapsulate Transistors

Features

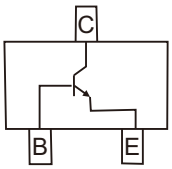
- Epoxy meets UL-94 V-0 flammability rating
- Complementary to S8550T
- Power Dissipation of 200mW
- High Stability and High Reliability

SOT-523



Mechanical Data

- Case:SOT-523
- Terminals:Plated solderable per MIL-STD-750,method 2026
- Mounting Position: Any
- Marking:J3Y



Maximum Ratings(T_A=25°C Unless otherwise specified)

Parameter	Symbol	Unit	Value
Collector-Emitter Voltage	V_{CEO}	V	25
Collector-Base Voltage	V_{CBO}	V	40
Emitter-Base Voltage	V_{EBO}	V	5.0
Collector Current, Continuous	I_C	mA	500
Power Dissipation	P_D	mW	200
Operation Junction Temperature	T_J	℃	-55 to +150
Storage Temperature	T_{STG}	℃	-55 to +150
Thermal resistance From junction to ambient	$R_{\theta JA}$	℃/W	625

Electrical Characteristics(T_A=25°C Unless otherwise specified)

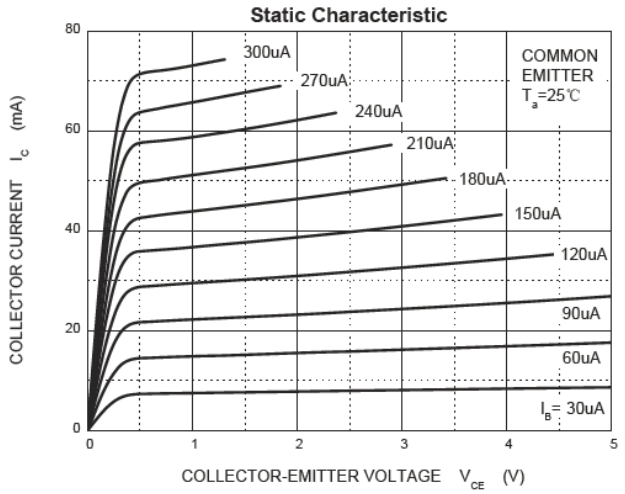
Parameter	Symbol	Unit	Conditions	Min	Max
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	V	I_C=1mA,I_B=0	25	---
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	V	I_C=100μA,I_E=0	40	---
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	V	I_E=100μA,I_C=0	5.0	---
Collector cut-off Current	I_{CEO}	nA	V_{CE}=20V,I_B=0	---	100
Collector cut-off Current	I_{CBO}	nA	V_{CB}=40V,I_E=0	---	100
Emitter cut-off Current	I_{EBO}	nA	V_{EB}=5V,I_C=0	---	100
DC Current Gain	$h_{FE(1)}$		I_C=50mA,V_{CE}=1V	120	400
	$h_{FE(2)}$		I_C=500mA,V_{CE}=1V	50	---
Collector-Emitter Saturation Voltage	VCE(sat)	V	I_C=500mA,I_B=50mA	---	0.60
Base-Emitter Saturation Voltage	VBE(sat)	V	I_C=500mA,I_B=50mA	---	1.20
Transition frequency	f_T	MHz	I_C=20mA,V_{CE}=6V f=30MHz	150	---
Base -emitter voltage	V_{BE}	V	V_{CE}=1V,I_C=10mA	---	0.70

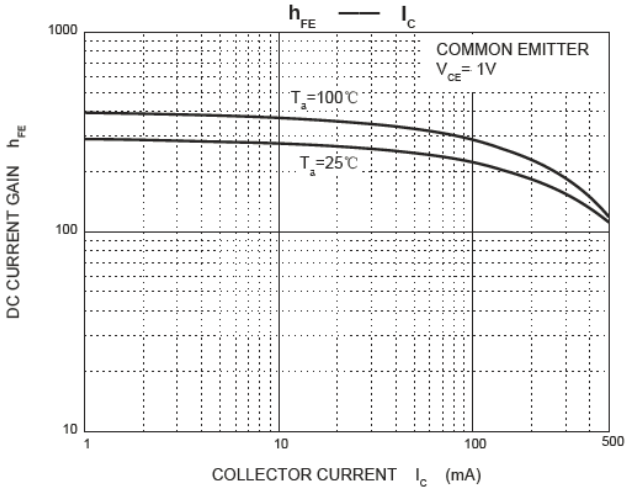
Pulse test:pulse width≤300us,duty cycle≤2.0%

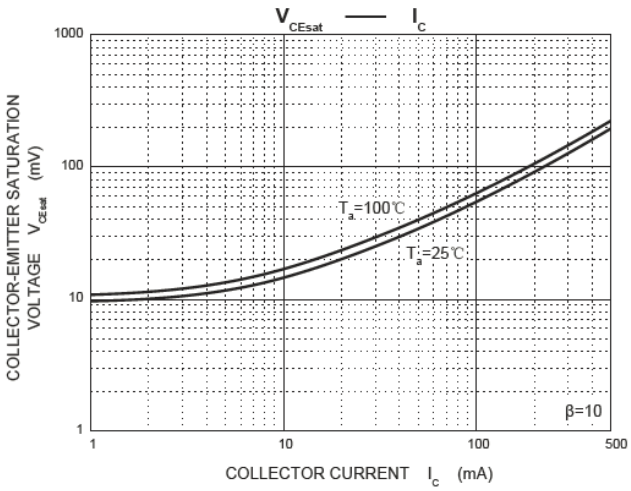
CLASSIFICATION OF $h_{FE(1)}$

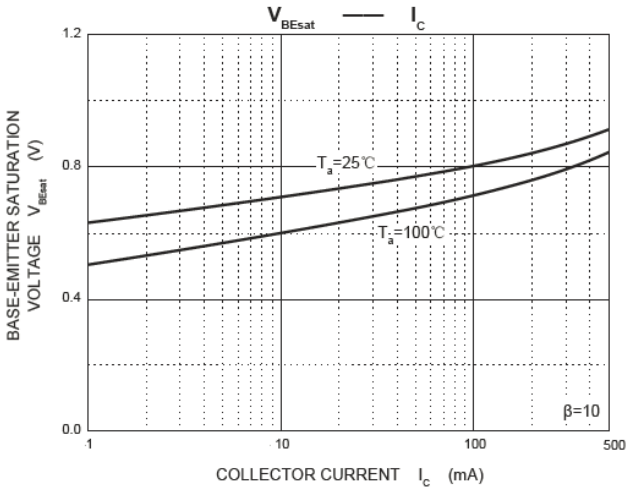
HFE	120-400		
Rank	L	H	J
Range	120-200	200-350	300-400

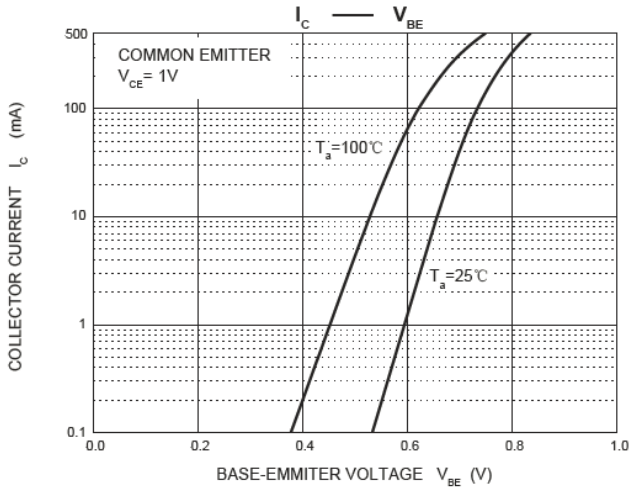
Characteristics(Typical)

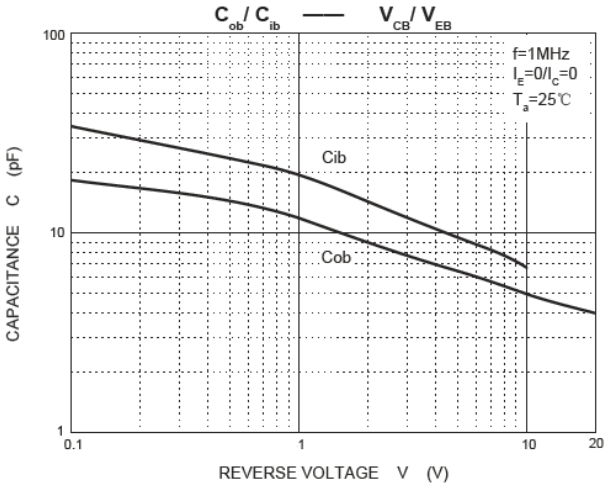


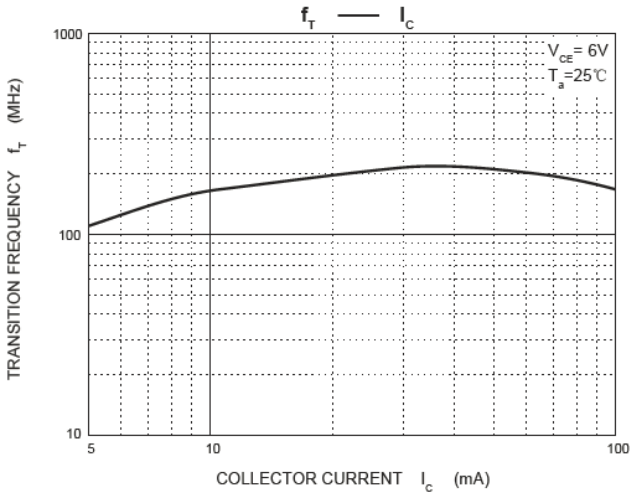


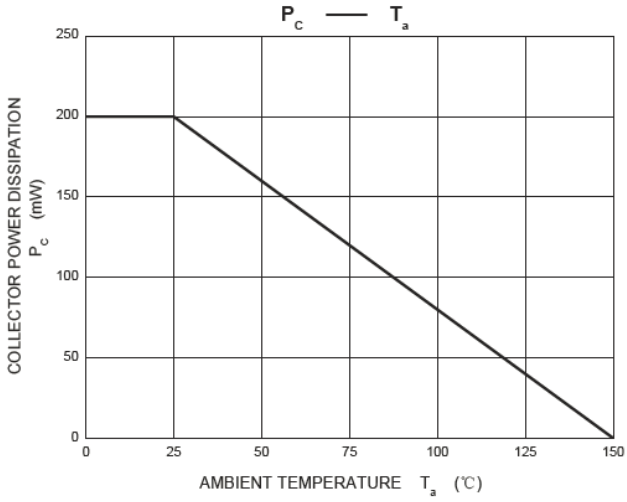






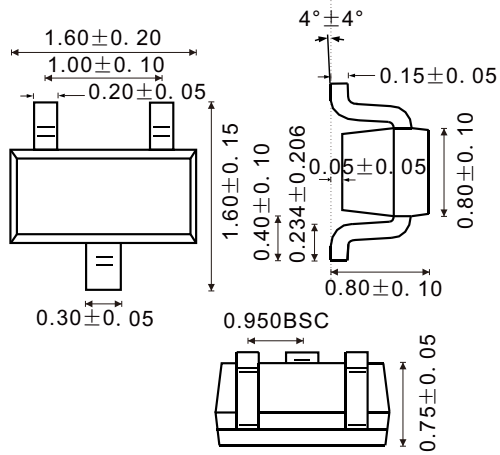






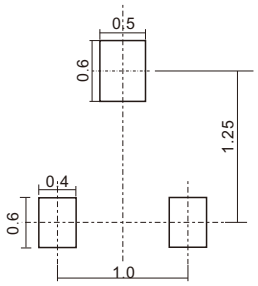
Outline Dimensions

SOT-523



Dimensions in inches and (millimetrers)

Suggested pad layout



Dimensions in millimetrers

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