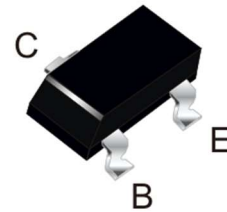


Features

- Low profile package
- Ideal for automated placement
- Complementary to S8550T
- Power Dissipation of 200mW
- High Stability and High Reliability

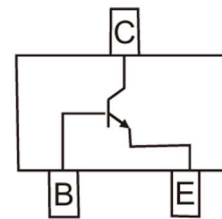
Appearance & Symbol

SOT-523



Mechanical Data

- Package: SOT-523
- UL Flammability Classification Rating 94V-0
- Terminals: Plated solderable per MIL-STD-750, Method 2026



Application

- Amplifying signal
- Electronic switch
- Oscillating circuit
- Variable resistance

Order Information

Part Number	Package	Marking	Quantity
S8050T	SOT-523	J3Y	3000

Absolute Maximum Ratings (T_A = 25°C unless otherwise specified)

Parameter	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	500	mA
Collector Power Dissipation	P _D	200	mW
Thermal Resistance from Junction to Ambient	R _{θJA}	625	°C/W
Junction Temperature	T _J	-55 to +150	°C
Junction and Storage Temperature	T _{STG}	-55 to +150	°C

Electrical Characteristics (T_A = 25°C unless otherwise noted)

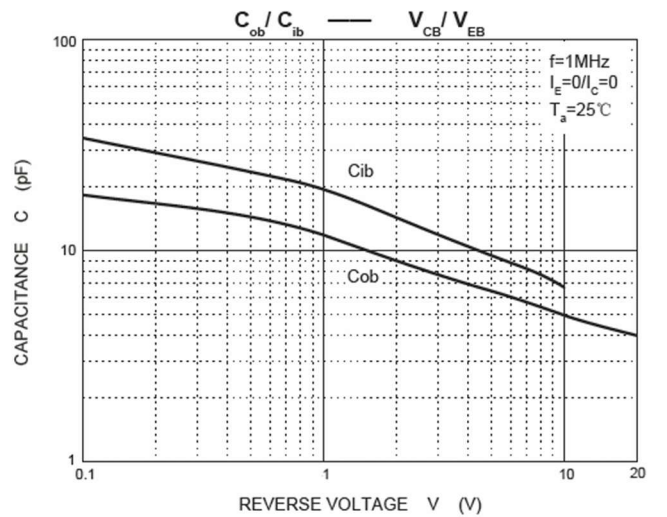
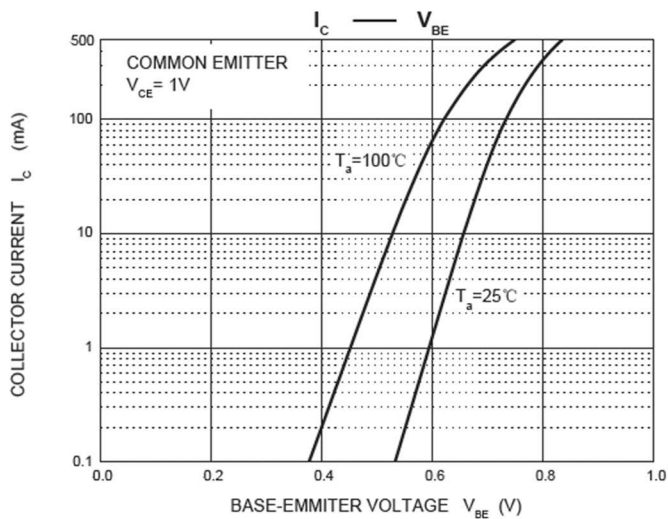
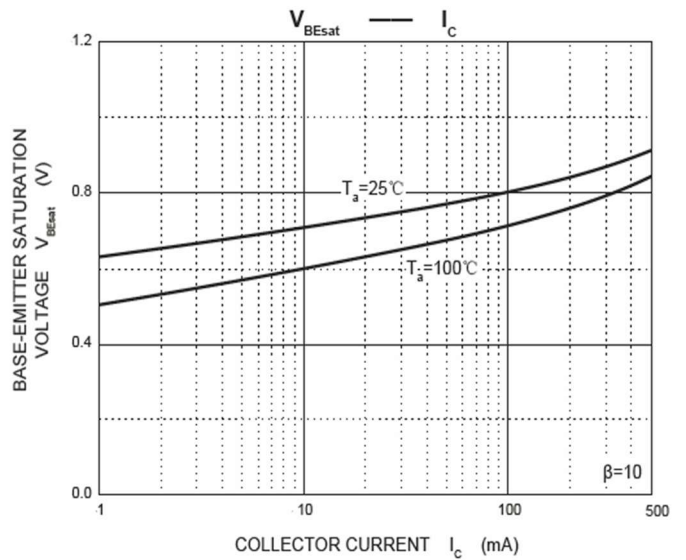
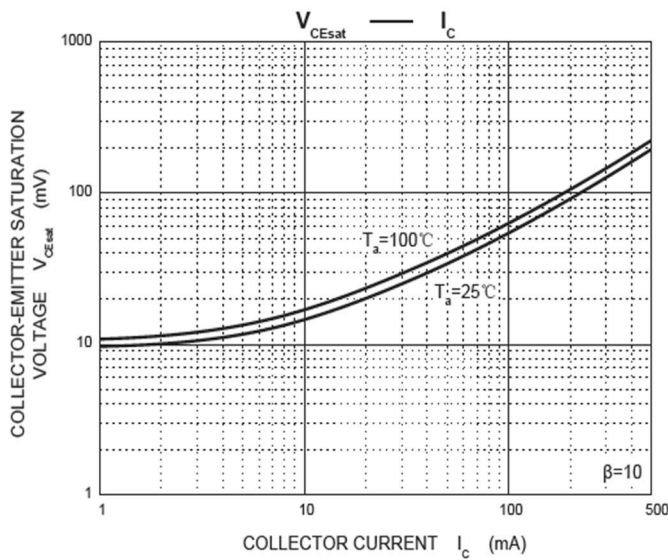
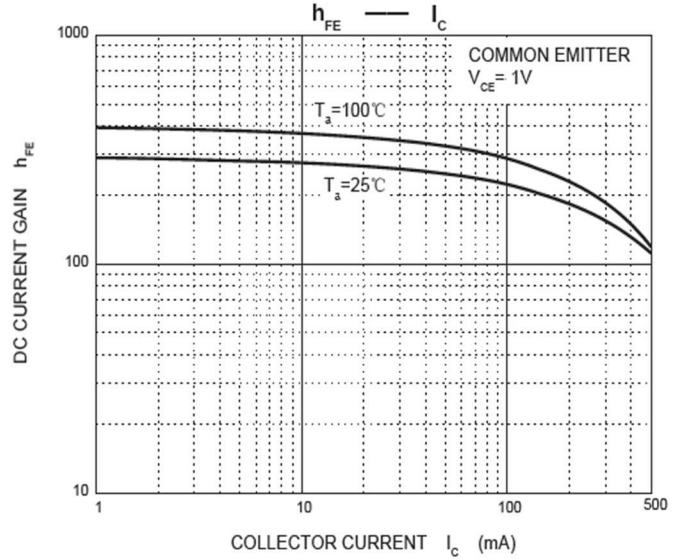
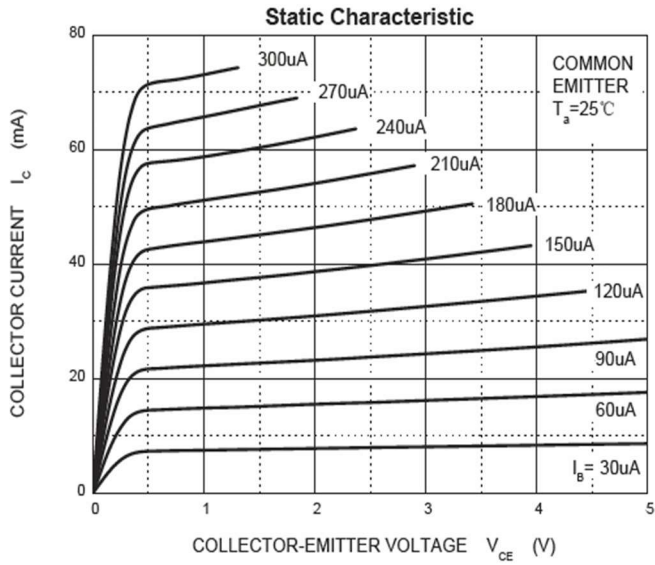
Parameter	Symbol	Test conditions	Min	Max	Unit
Collector-base breakdown voltage	V _{(BR)CBO}	I _C =100μA, I _E =0	40		V
Collector-emitter breakdown voltage	V _{(BR)CEO}	I _C =1mA, I _B =0	25		V
Emitter-base breakdown voltage	V _{(BR)EBO}	I _E =100μA, I _C =0	5		V
Collector cut-off current	I _{CBO}	V _{CB} =40V, I _E =0		100	nA
Collector cut-off current	I _{CEO}	V _{CE} =20V, I _B =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 =50mA	120	400	
	h _{FE(2)}	V _{CE} =1V, I _C =500mA	50		
Collector-emitter saturation voltage	V _{CE(sat)}	I _C =500mA, I _B =50mA		0.6	V
Base -emitter saturation voltage	V _{BE(sat)}	I _C =500mA, I _B =50mA		1.2	V
Transition frequency	f _T	V _{CE} =6V, I _C =20mA, f=30MHz	150		MHz
Base -emitter voltage	V _{BE}	V _{CE} =1V, I _C =10mA		0.7	V

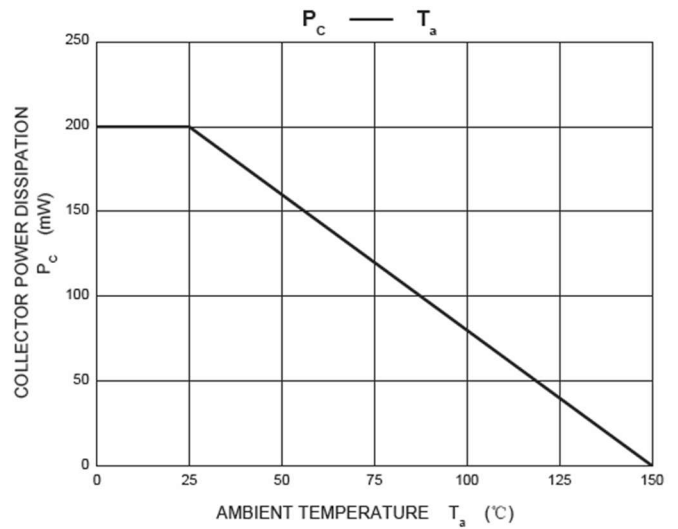
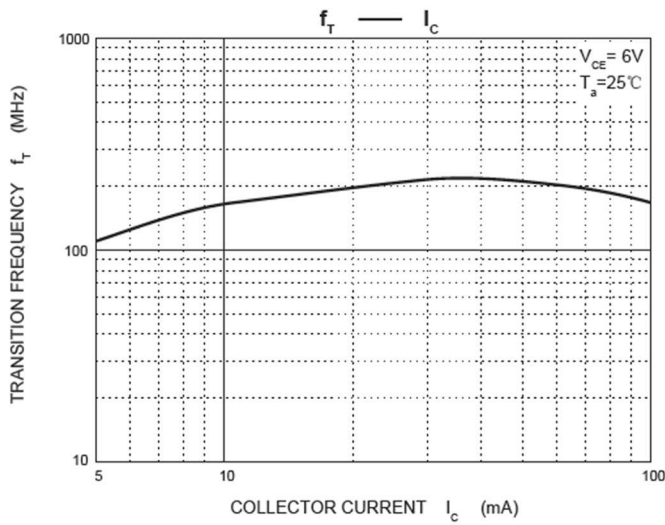
Pulse test: pulse width≤300us, duty cycle≤2.0%

Classification of h_{FE(1)}

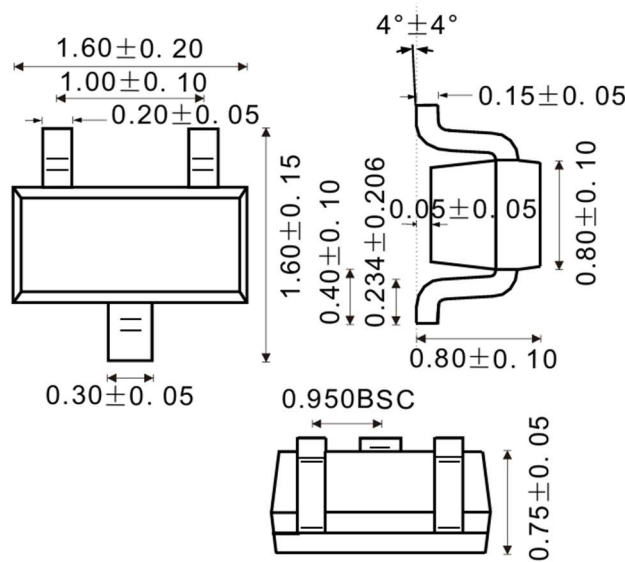
Rank	L	H	J
Range	120 - 200	200 - 350	300 - 400

Typical Characteristics



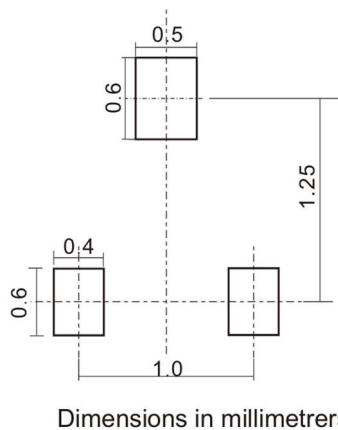


Package Outline Dimensions (Units: mm) SOT-523



Dimensions in inches and (millimeters)

Suggested pad layout



Dimensions in millimeters