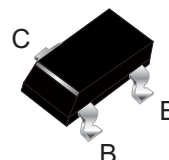


## FEATURES

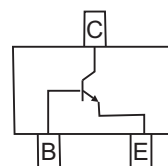
- Epoxy meets UL-94 V-0 flammability rating
- Complementary to S8550
- Power Dissipation of 300mW
- High Stability and High Reliability

### SOT-23



## MECHANICAL DATA

- Case: SOT-23(TO-236)
- Terminals: Plated solderable per MIL-STD-750, method 2026
- Mounting Position: Any
- Marking: J3Y



## MAXIMUM RATINGS( $T_A=25^{\circ}\text{C}$ Unless otherwise specified)

Parameter	Symbol	Unit	Value
Collector-Emitter Voltage	$V_{CE0}$	V	25
Collector-Base Voltage	$V_{CB0}$	V	40
Emitter-Base Voltage	$V_{EB0}$	V	5
Collector Current, Continuous	$I_C$	mA	500
Collector Power Dissipation	$P_D$	mW	300
Operation Junction Temperature	$T_J$	$^{\circ}\text{C}$	-55 to +150
Storage Temperature	$T_{STG}$	$^{\circ}\text{C}$	-55 to +150
Thermal resistance From junction to ambient	$R_{\theta JA}$	$^{\circ}\text{C}/\text{W}$	417

# S8050

## ELECTRICAL CHARACTERISTICS(T<sub>A</sub>=25°C Unless otherwise specified)

Parameter	Symbol	Unit	Conditions	Min	Max
Collector-Emitter Breakdown Voltage	V <sub>(BR)CEO</sub>	V	I <sub>C</sub> =1.0mA, I <sub>B</sub> =0	25	---
Collector-Base Breakdown Voltage	V <sub>(BR)CBO</sub>	V	I <sub>C</sub> =100μA, I <sub>E</sub> =0	40	---
Emitter-Base Breakdown Voltage	V <sub>(BR)EBO</sub>	V	I <sub>E</sub> =100μA, I <sub>C</sub> =0	5	---
Collector cut-off Current	I <sub>CBO</sub>	nA	V <sub>CB</sub> =40V, I <sub>E</sub> =0	---	100
Collector cut-off Current	I <sub>CEO</sub>	nA	V <sub>CE</sub> =20V, I <sub>B</sub> =0	---	100
Emitter cut-off Current	I <sub>EBO</sub>	nA	V <sub>EB</sub> =5V, I <sub>C</sub> =0	---	100
DC Current Gain	h <sub>FE</sub>		I <sub>C</sub> =1mA, V <sub>CE</sub> =1.0V	---	---
	h <sub>FE(1)</sub>		I <sub>C</sub> =50mA, V <sub>CE</sub> =1.0V	120	400
	h <sub>FE(2)</sub>		I <sub>C</sub> =500mA, V <sub>CE</sub> =1.0V	50	---
Collector-Emitter Saturation Voltage	V <sub>CE(sat)</sub>	V	I <sub>C</sub> =10mA, I <sub>B</sub> =1.0mA	---	---
			I <sub>C</sub> =500mA, I <sub>B</sub> =50mA	---	0.6
Base-Emitter Saturation Voltage	V <sub>BE(sat)</sub>	V	I <sub>C</sub> =10mA, I <sub>B</sub> =1.0mA	---	---
			I <sub>C</sub> =500mA, I <sub>B</sub> =50mA	---	1.2
Output Capacitance	C <sub>ob</sub>	pF	V <sub>CB</sub> =6V, f=1.0MHz, I <sub>E</sub> =0	---	---
Input Capacitance	C <sub>ib</sub>	pF	V <sub>EB</sub> =0.5V, f=1.0MHz, I <sub>C</sub> =0	---	---
Current Gain-Bandwidth Product	f <sub>T</sub>	MHz	I <sub>C</sub> =20mA, V <sub>CE</sub> =6V f=30MHz	150	---
Noise Figure	NF	dB	V <sub>CE</sub> =5.0V, f=1.0kHz, I <sub>C</sub> =100μA, R <sub>S</sub> =1.0K	---	---

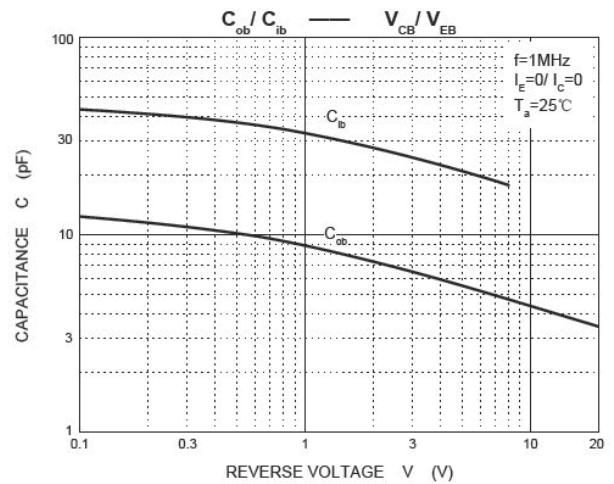
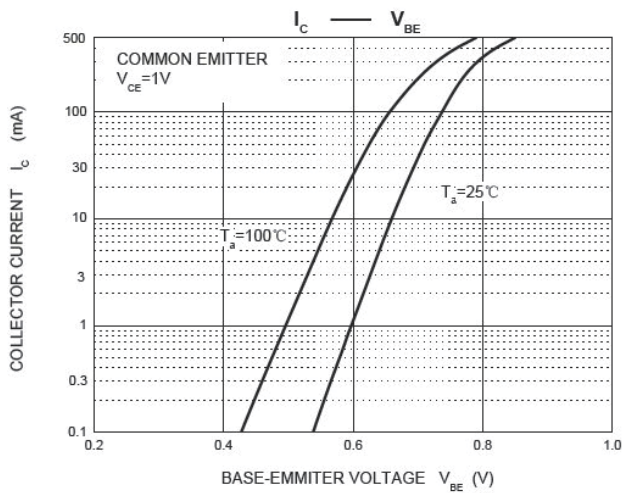
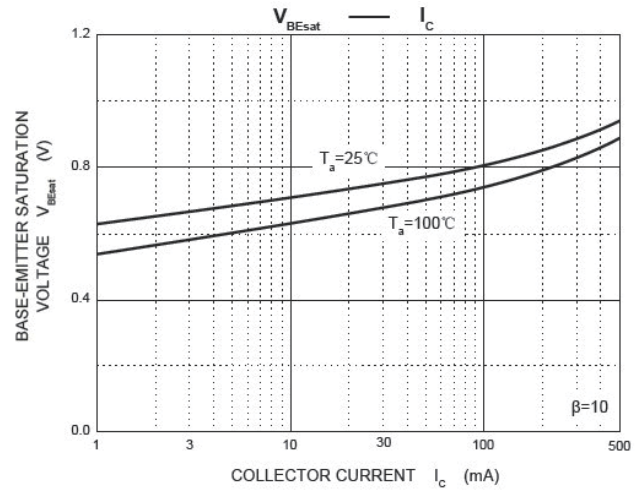
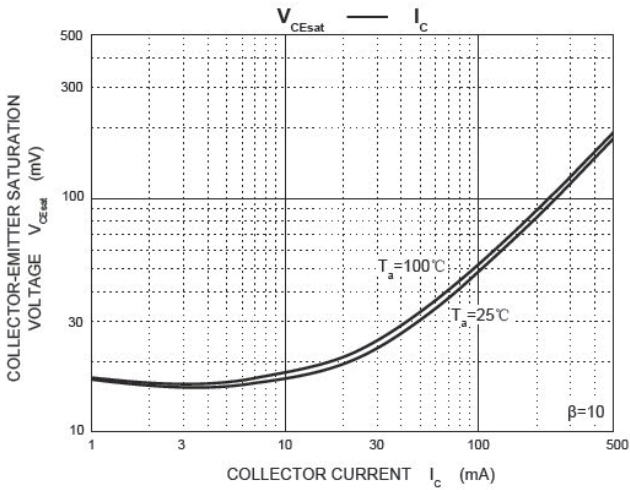
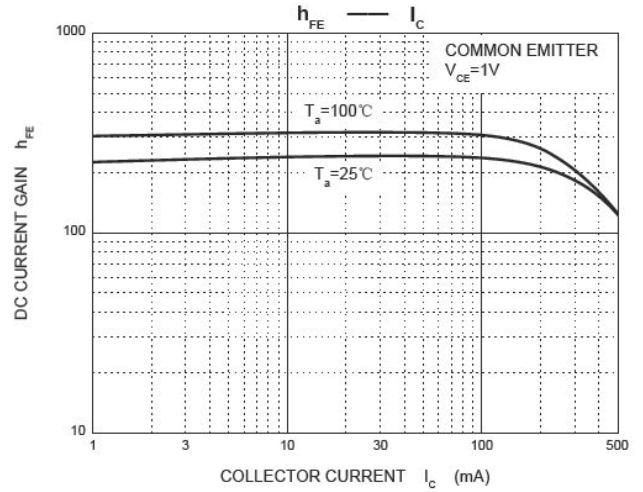
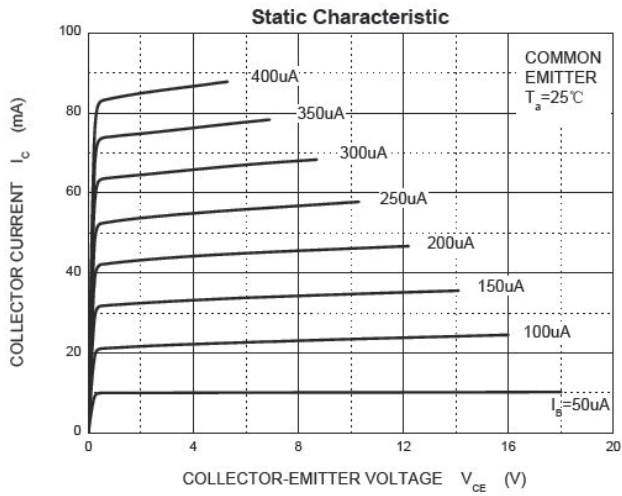
## CLASSIFICATION OF h<sub>FE(1)</sub>

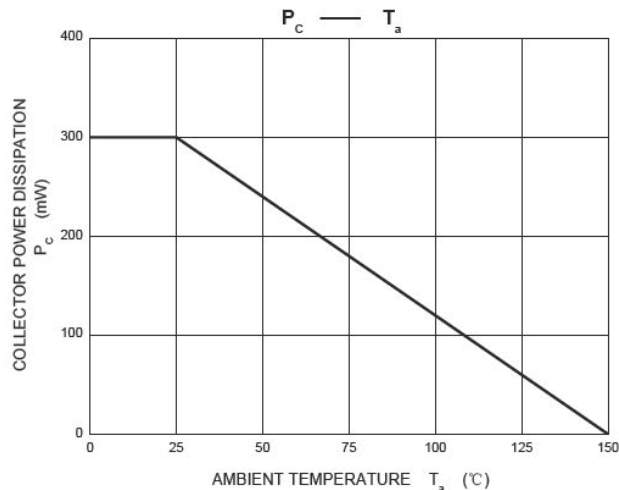
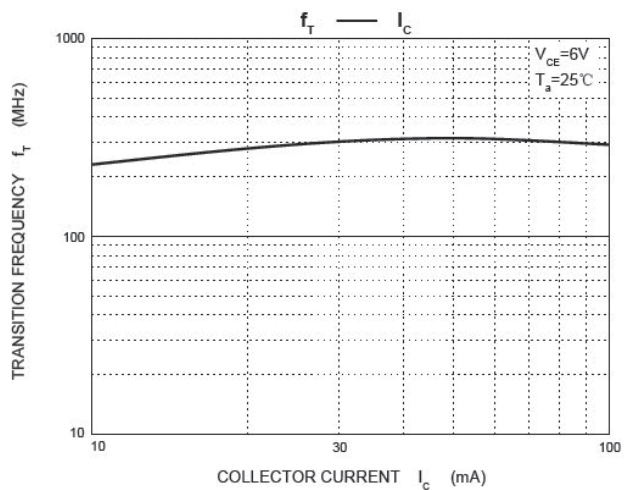
Rank	L	H	J
Range	120-200	200-350	300-400

## AVAILABLE PACK INFORMATION

Product code	Pack	Reel Size (mm)	Quantity (Pcs/reel)	Quantity (pcs/box)	Quantity (pcs/carton)
S8050	T/R	Φ180	3K	30K	120K

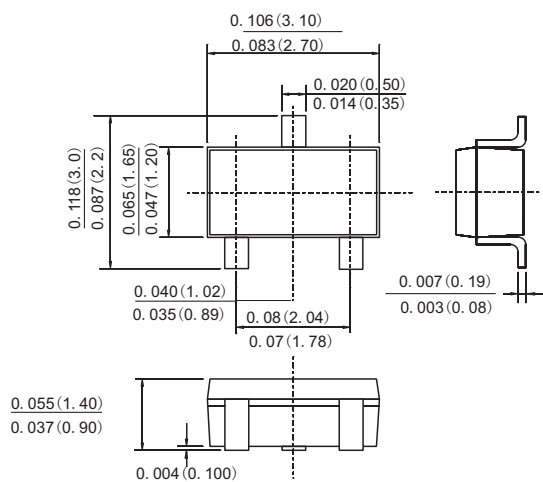
Characteristics(Typical)





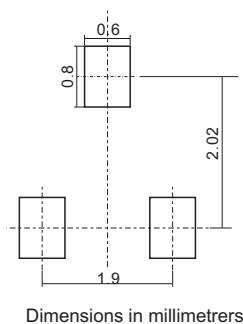
## Outline Dimensions

### SOT-23



Dimensions in inches and (millimeters)

## Suggested pad layout



Dimensions in millimeters

## Friendship Reminder

■ JiNan JingHeng ( hereinafter referred to as JH) reserves the right to make changes to this document and its products and specifications at anytime without notice.

■ Customers should obtain and confirm the latest product information and specifications before final design, purchase or use.

■ JH makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, nor does JH assume any liability for application assistance or customer product design.

■ JH does not warrant or accept any liability with products which are purchased or used for any unintended or unauthorized application.

■ No license is granted by implication or otherwise under any intellectual property rights of JH.

■ JH is products are not authorized for use as critical components in life support devices or systems without express written approval of JH.