

# SS8050

## General Purpose Transistors NPN Silicon

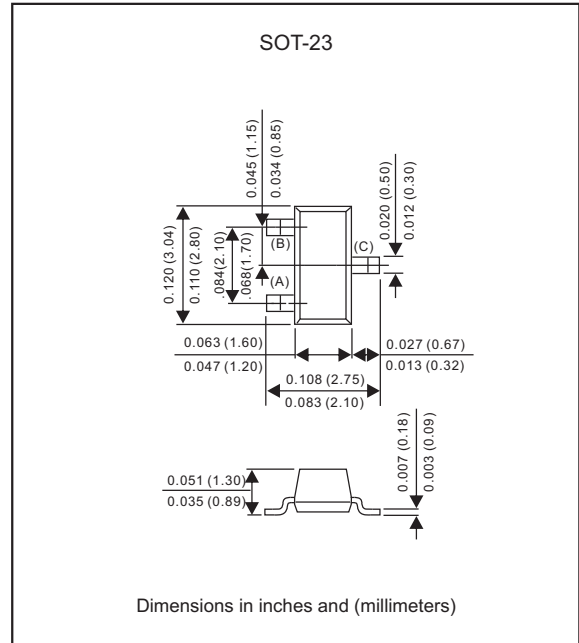
### Features

- High current capacity in compact package  $I_c = 1.5A$ .
- Epitaxial planar type
- Pb-Free package is available
- Suffix "-H" indicates Halogen free parts, ex. SS8050-H.

### Mechanical data

- Epoxy: UL94-V0 rated flame retardant
- Case : Molded plastic, SOT-23
- Terminals : Solder plated, solderable per MIL-STD-750, Method 2026
- Mounting Position : Any
- Weight : Approximated 0.008 gram

### Package outline



### Maximum ratings (AT $T_A=25^\circ C$ unless otherwise noted)

PARAMETER	Symbol	MAX.	UNIT
Collector-base voltage	$V_{CBO}$	40	V
Collector-emitter voltage	$V_{CEO}$	25	V
Emitter-base voltage	$V_{EBO}$	5.0	V
Collector current-continuoun	$I_c$	1500	mAdc

### Thermal Characteristics

PARAMETER	Symbol	MIN.	TYP.	MAX.	UNIT
Total device dissipation FR-5 board (1)	$T_A = 25^\circ C$ $P_D$			225	mW
				Derate above $25^\circ C$	1.8
Thermal resistance	Junction to ambient	$R_{\theta JA}$		556	$^\circ C/W$
Total device dissipation alumina substrate(2)	$T_A = 25^\circ C$ $P_D$			300	mW
				Derate above $25^\circ C$	2.4
Thermal resistance	Junction to ambient	$R_{\theta JA}$		417	$^\circ C/W$
Operating Junction temperature Range	$T_J$	-55		+150	$^\circ C$
Storage temperature Range	$T_{STG}$	-55		+150	$^\circ C$

1.FR-5 = 1.0 X 0.75 X 0.062 in.  
2.Alumina = 0.4 X 0.3 X 0.024 in. 99.5% alumina.

**SS8050****Electrical Characteristics** (AT  $T_A = 25^\circ\text{C}$  unless otherwise noted)**Off characteristics**

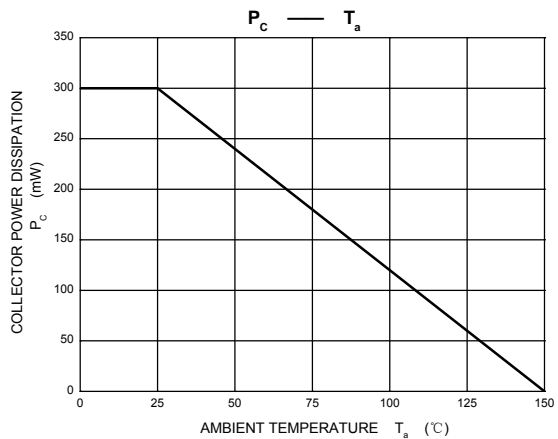
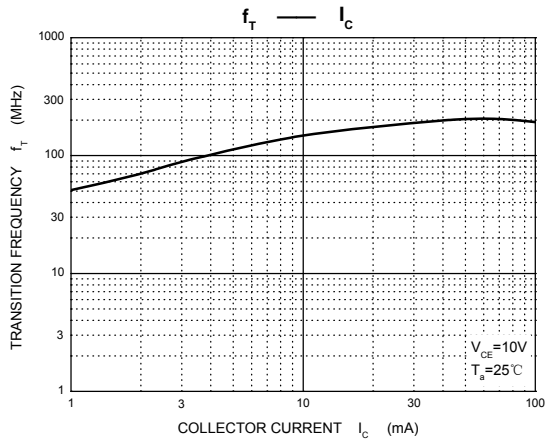
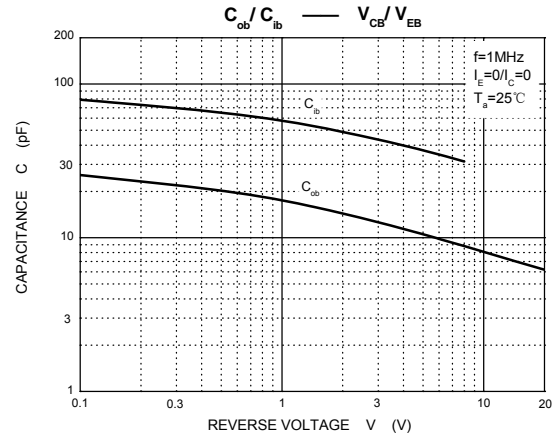
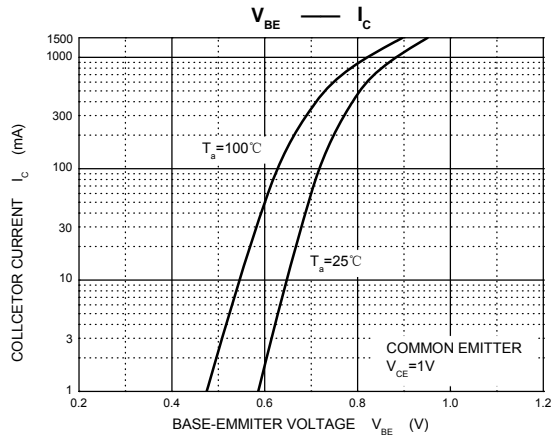
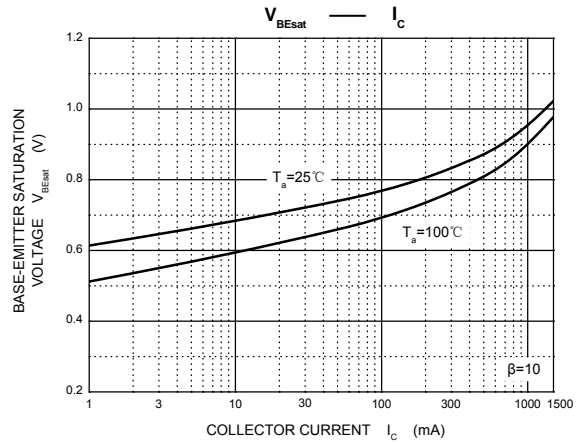
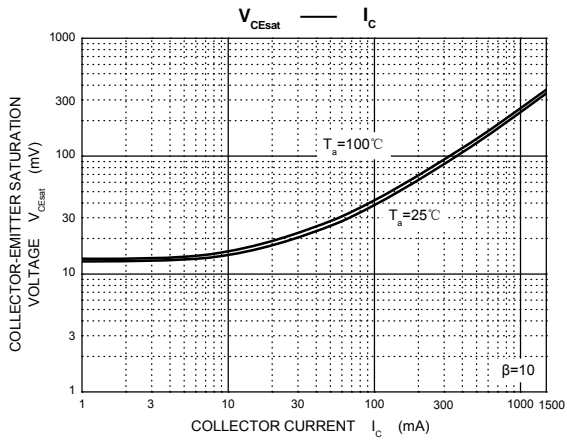
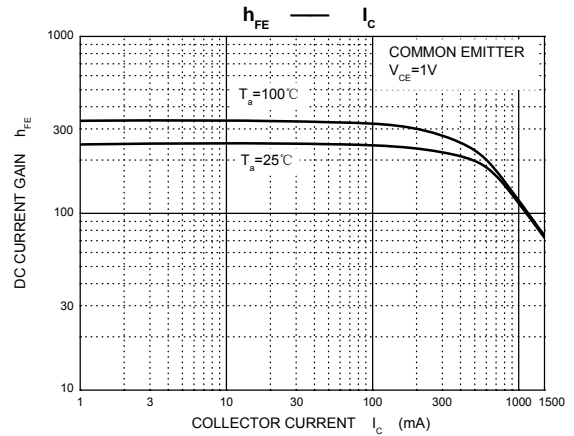
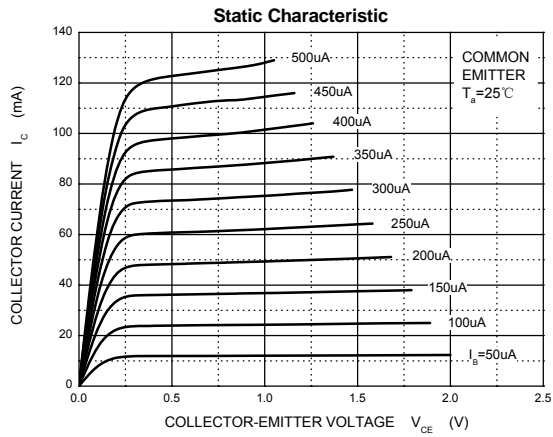
PARAMETER	CONDITIONS	Symbol	MIN.	TYP.	MAX.	UNIT
Collector-base breakdown voltage	$I_c = 100\mu\text{A}$	$V_{(BR)CBO}$	40			V
Collector-emitter breakdown voltage	$I_c = 1.0\text{mA}$	$V_{(BR)CEO}$	25			V
Emitter-base breakdown voltage	$I_E = 100\mu\text{A}$	$V_{(BR)EBO}$	5.0			V
Collector cutoff current	$V_{CB} = 35\text{V}$	$I_{CBO}$			150	nA
Emitter cutoff current	$V_{EB} = 4.0\text{V}$	$I_{EBO}$			150	nA

**On characteristics**

PARAMETER	CONDITIONS	Symbol	MIN.	TYP.	MAX.	UNIT
DC current gain	$I_c = 100\text{mA}$ , $V_{CE} = 1.0\text{V}$	$h_{FE}^{*Note}$	80		400	
Collector-emitter saturation voltage	$I_c = 800\text{mA}$ , $I_B = 80\text{mA}$	$V_{CE(sat)}$			0.5	V

Note	*	L	H	J
	$h_{FE}$	80~200	200~350	300~400

# Rating and characteristic curves



# SS8050

## Pinning information

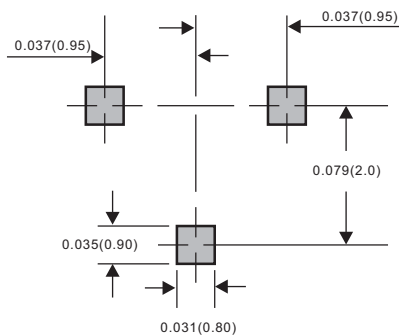
Pin	Simplified outline	Symbol
PinB Base PinC Collector PinE Emitter		

## Marking

Type number	Marking code
SS8050	Y1

## Suggested solder pad layout

SOT-23



Dimensions in inches and (millimeters)

## Reel packing

PACKAGE	REEL SIZE	REEL (pcs)	COMPONENT SPACING (m/m)	BOX (pcs)	INNER BOX (m/m)	REEL DIA, (m/m)	CARTON SIZE (m/m)	CARTON (pcs)	APPROX. GROSS WEIGHT (kg)
SOT-23	7"	3,000	4.0	30,000	183*123*183	178	382*257*387	240,000	11.6