

HSS8050

General Purpose Transistors NPN Silicon

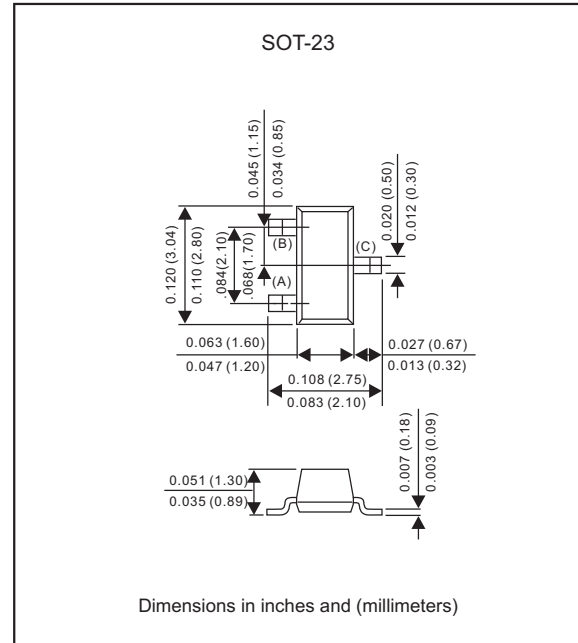
Features

- High Current Capacity in Compact Package (IC=1.5A)
- Epitaxial Planar Type
- Lead-free parts for green partner, exceeds environmental standards of MIL-STD-19500 /228

Mechanical data

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

Package outline



Maximum ratings (AT T_A=25°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	mA

Thermal Characteristics (AT T_A=25°C unless otherwise noted)

PARAMETER	Symbol	MIN.	TYP.	MAX.	UNIT
Total device dissipation FR-5 board (1)	T _A = 25°C			225	mW
	Derate above 25°C			1.8	mW/°C
Thermal resistance	Junction to ambient			556	°C/W
Total device dissipation alumina substrate(2)	T _A = 25°C			300	mW
	Derate above 25°C			2.4	mW/°C
Thermal resistance	Junction to ambient			417	°C/W
Operating Junction temperature Range	T _J	-55		+150	°C
Storage temperature	T _{STG}	-55		+150	°C

1.FR-5 = 1.0 X 0.75 X0.062 in.

2.Alumina = 0.4 X 0.3 X 0.024 in. 99.5% alumina.

HSS8050

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

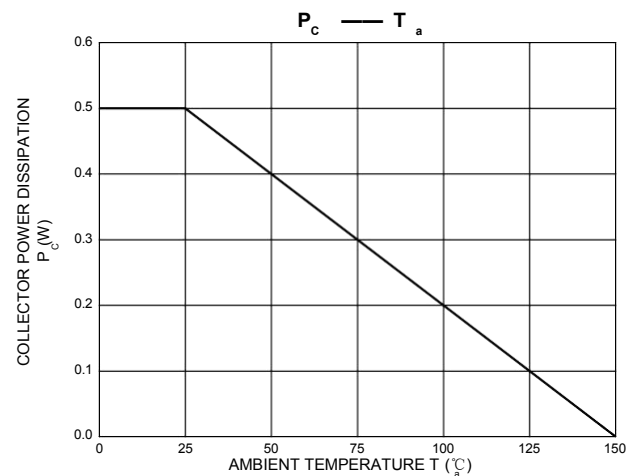
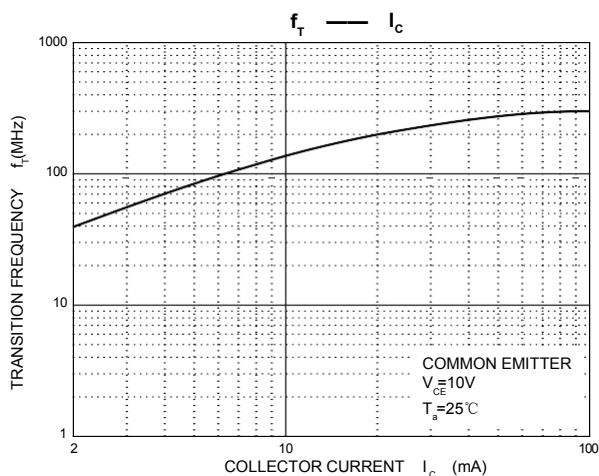
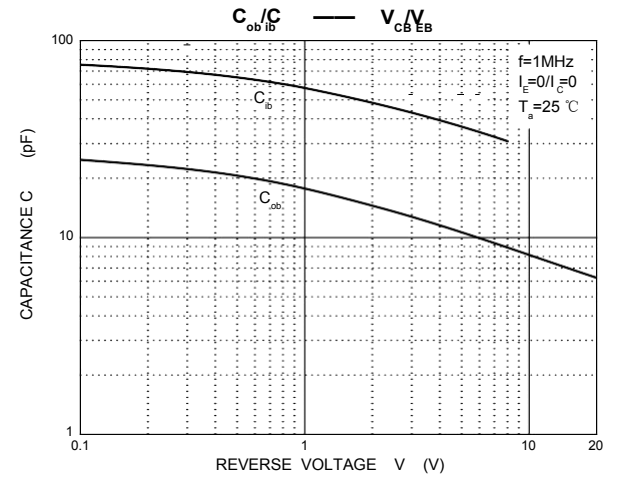
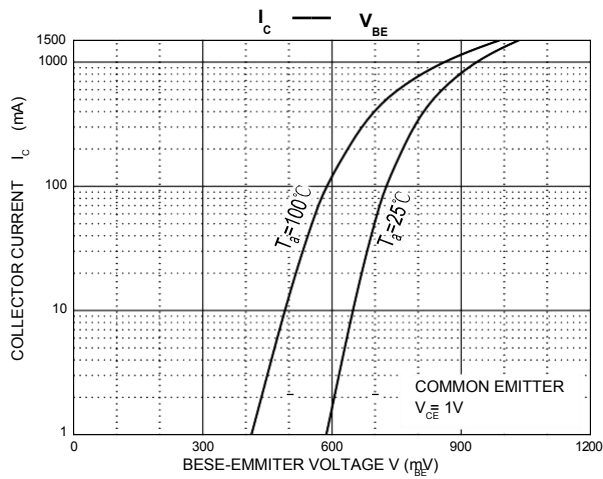
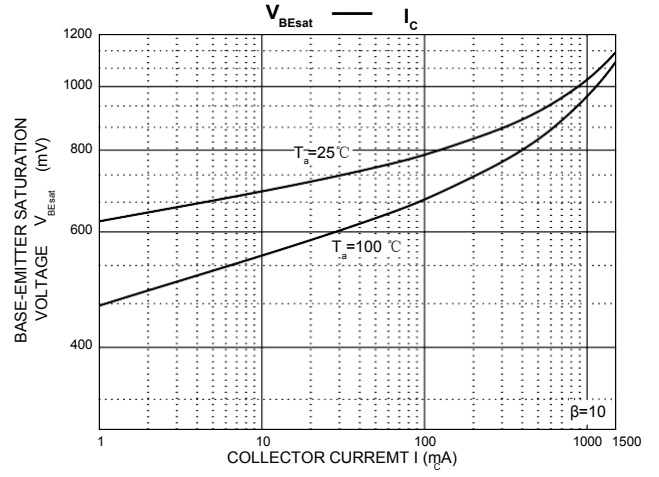
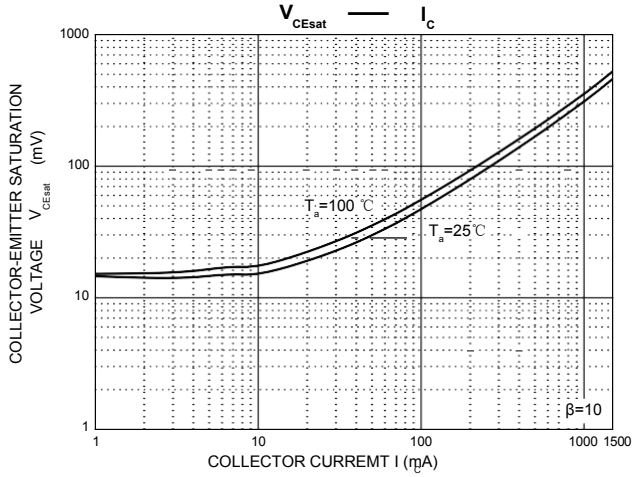
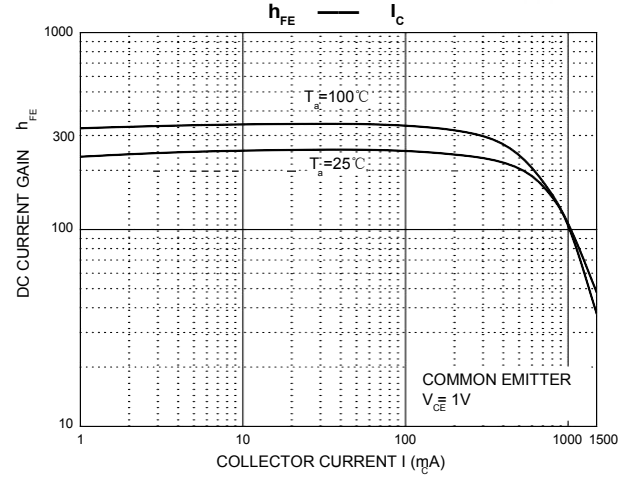
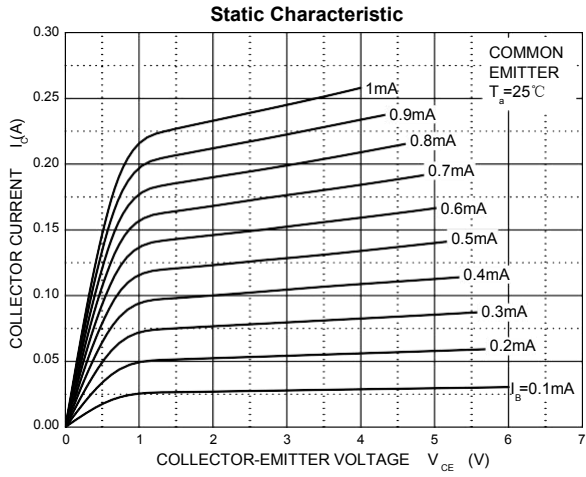
Off characteristics

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

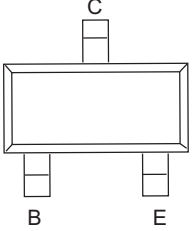
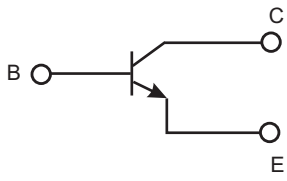
PARAMETER	CONDITIONS	Symbol	MIN.	TYP.	MAX.	UNIT
DC current gain	$I_c = 100\text{mA}, V_{CE} = 1.0\text{V}$	h_{FE}^{*Note}	100		600	
Collector-Emitter saturation voltage	$I_c = 800\text{mA}, I_B = 80\text{mA}$	$V_{CE(sat)}$			0.5	V

Note	*	P	Q	R	S
	h_{FE}	100~200	150~300	200~400	300~600



HSS8050

Pinning information

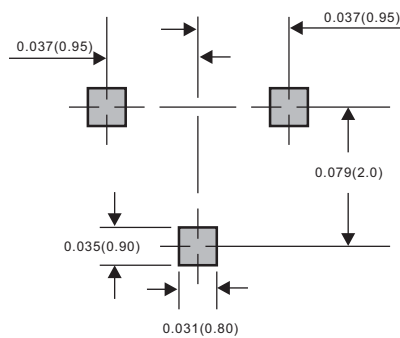
Pin	Simplified outline	Symbol
PinB Base PinC Collector PinE Emitter		

Marking

Type number	Marking code
HSS8050	Y1

Suggested solder pad layout

SOT-23



Dimensions in inches and (millimeters)