

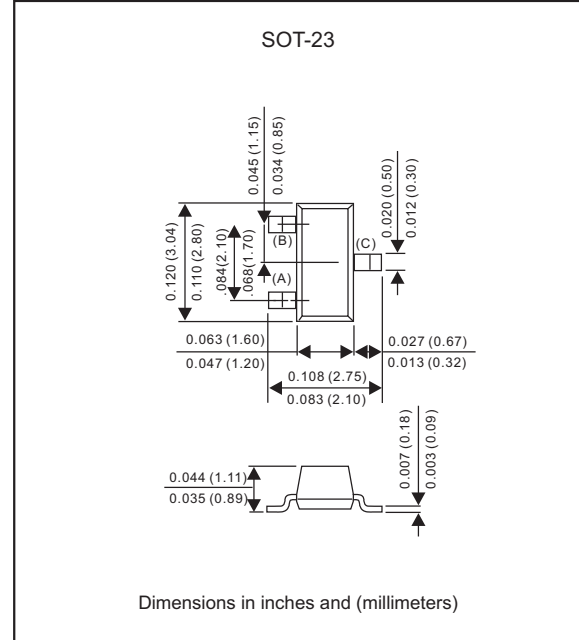
### Features

- High current capacity in compact package  $I_c = -0.5A$ .
- Epitaxial planar type
- Pb-free package is available
- Suffix "-H" indicates Halogen-free part, ex. S8550-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	Value	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	$I_c$	-500	mAdc

### Thermal characteristics

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

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

#### Off characteristics

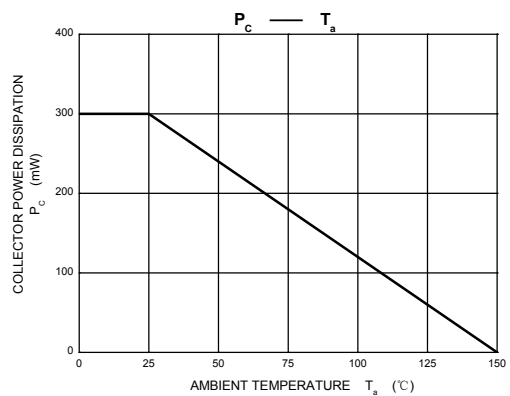
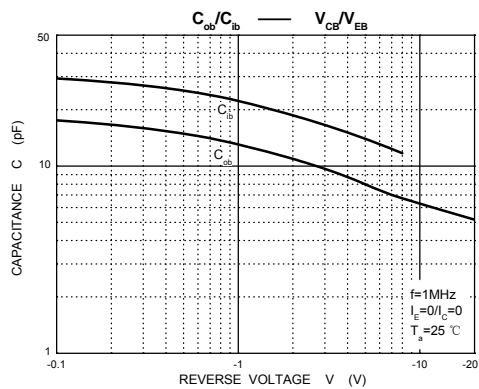
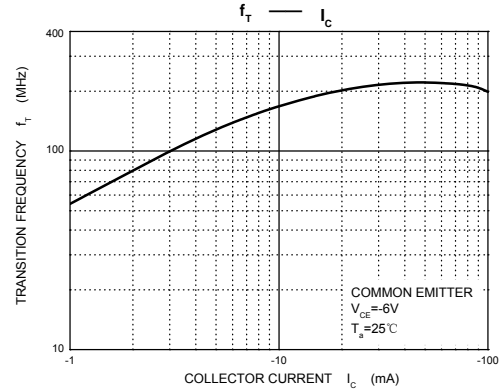
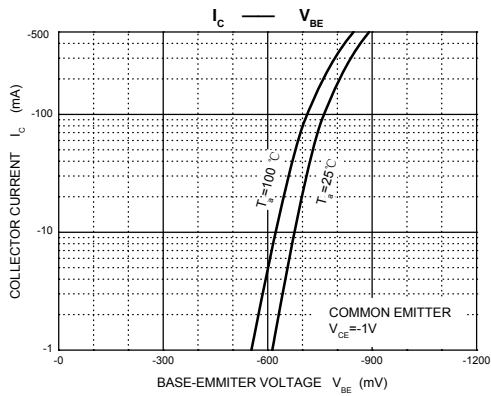
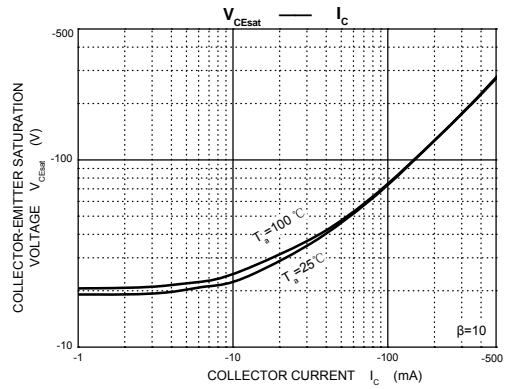
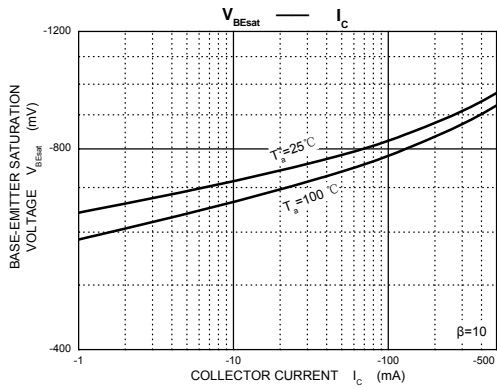
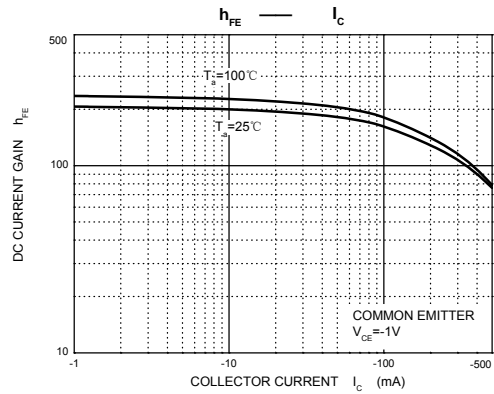
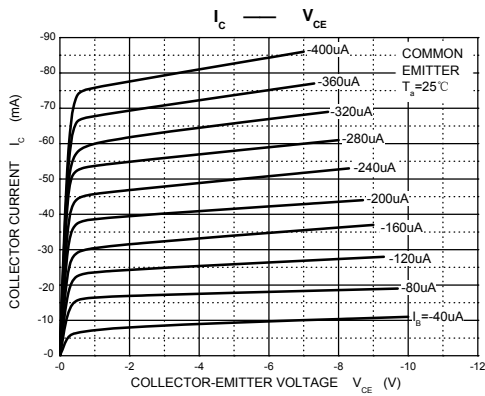
PARAMETER	CONDITIONS	Symbol	MIN.	TYP.	MAX.	UNIT
Collector-base breakdown voltage	$I_c = -100\mu\text{A}$	$V_{(BR)CBO}$	-40			V
Collector-emitter breakdown voltage	$I_c = -1.0\text{mA}$	$V_{(BR)CEO}$	-25			V
Emitter-base breakdown voltage	$I_e = -100\mu\text{A}$	$V_{(BR)EBO}$	-5.0			V
Collector cutoff 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

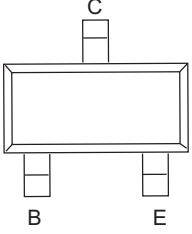
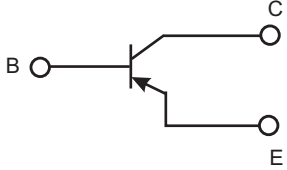
PARAMETER	CONDITIONS	Symbol	MIN.	TYP.	MAX.	UNIT
DC current gain	$I_c = -100\text{mA}, V_{CE} = -1.0\text{V}$	$h_{FE}^{*Note}$	100		600	
Collector-emitter saturation voltage	$I_c = -800\text{mA}, I_b = -80\text{mA}$	$V_{CE(sat)}$			-0.5	V

Note	*	L	H	J
	$h_{FE}$		120~200	200~350

## Rating and characteristic curves



### Pinning information

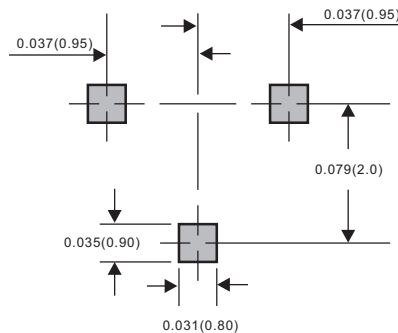
Pin	Simplified outline	Symbol
PinB Base PinC Collector PinE Emitter		

### Marking

Type number	Marking code
S8550	2YT

### 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