SEMICONDUCTOR

H8550

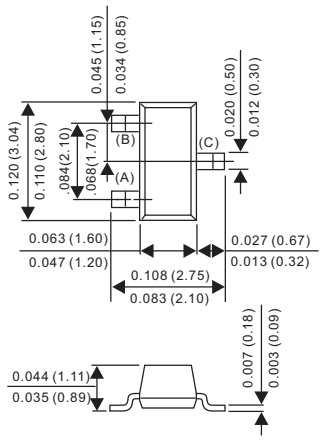
General Purpose Transistors
PNP Silicon

Features

- High current capacity in compact package I_C = -0.8A.
- Epitaxial planar type
- Pb-free package is available
- Suffix "-H" indicates Halogen free parts, ex. H8550P.

Package outline

SOT-23



Dimensions in inches and (millimeters)

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

Maximum ratings (AT T_A=25°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	-800	mAdc

Thermal characteristics

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

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Electrical characteristics (AT T_A=25°C unless otherwise noted)

Off characteristics

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

On characteristics

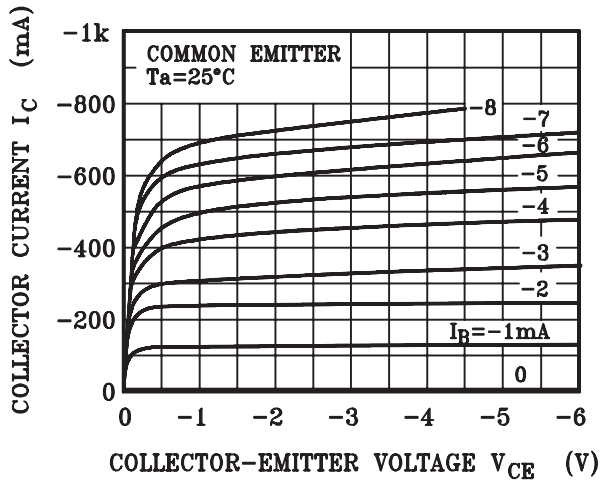
PARAMETER	CONDITIONS	Symbol	MIN.	TYP.	MAX.	UNIT
DC current gain	I_c = -100mA, V_{CE} = -1.0V	h_{FE} *Note	100		600	
Collector-emitter saturation voltage	I_c = -800mA, I_B = -80mA	$V_{CE(sat)}$			-0.5	V

Note

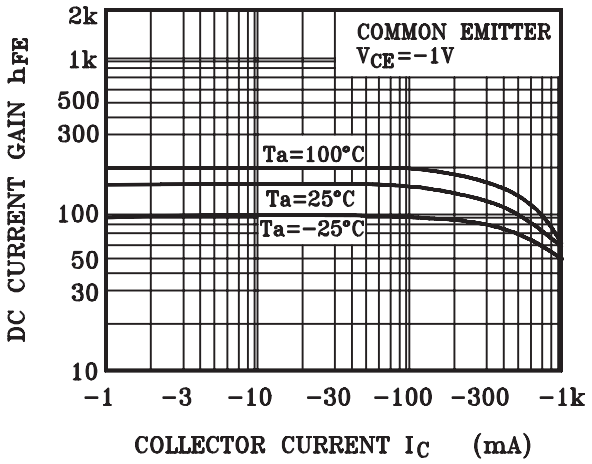
*	P	Q	R	S
h_{FE}	100~200	150~300	200~400	300~600

Rating and characteristic curves

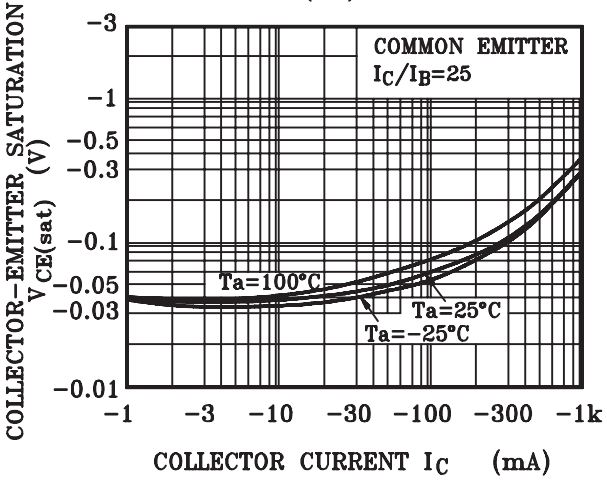
I_C – V_{CE}



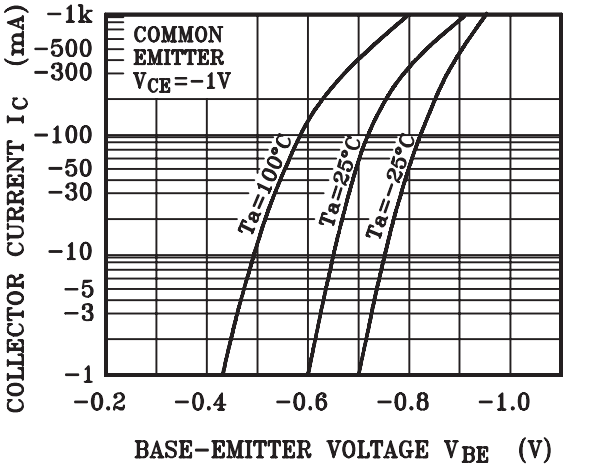
h_{FE} – I_C



$V_{CE(sat)}$ – I_C



I_C – V_{BE}



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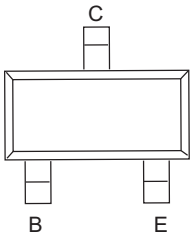
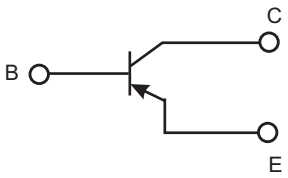
Pinning information

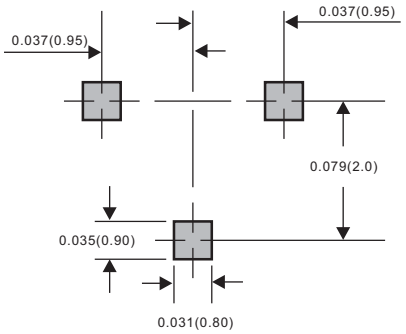
Pin	Simplified outline	Symbol
PinB Base PinC Collector PinE Emitter		

Marking

Type number	Marking code
H8550	2TY

Suggested solder pad layout

SOT-23



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