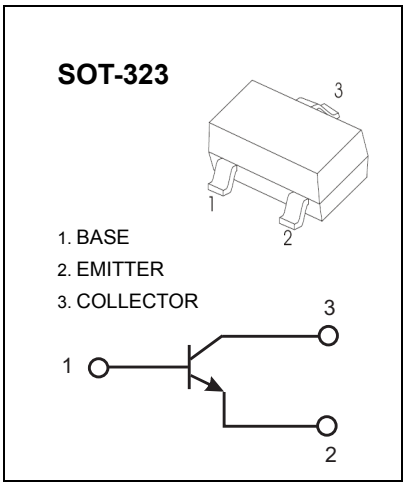
S8050WH

General Purpose Transistors
NPN Silicon

Features

- High Collector Current
- Excellent HFE Linearity
- Compliant to Halogen-free



Mechanical data

- Epoxy:UL94-V0 rated flame retardant
- Case : Molded plastic, SOT-323
- Mounting Position : Any

Maximum ratings (AT T_A=25°C unless otherwise noted)

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	40	V
V_{CEO}	Collector-Emitter Voltage	25	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current -Continuous	500	mA
P_C	Collector Dissipation	300	mW
T_J, T_{STG}	Junction and Storage Temperature	-55 to +150	℃

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

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C=100μA, I_E=0	40			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C=1mA, I_B=0	25			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=100μA, I_C=0	5			V
Collector cut-off current	I_{CBO}	V_{CB}=40V, I_E=0			0.1	μA
Collector cut-off current	I_{CEO}	V_{CE}=20V, I_B=0			0.1	μA
Emitter cut-off current	I_{EBO}	V_{EB}=3V, I_C=0			0.1	μA
DC current gain	h_{FE}	V_{CE}=1V, I_C=50mA	200		350	
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=500mA, I_B= 50mA			0.6	V
Base-emitter saturation voltage	$V_{BE(sat)}$	I_C=500mA, I_B= 50mA			1.2	V
Transition frequency	f_T	V_{CE}=6V, I_C= 20mA f=30MHz	150			MHz

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Rating and characteristic curves

Fig 1. Static characteristics

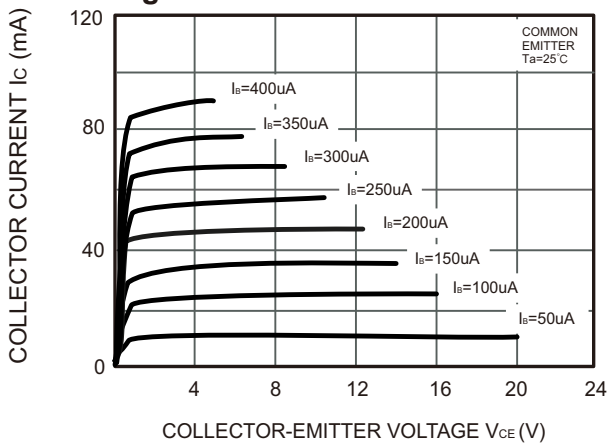


Fig 2. PC —— Ta

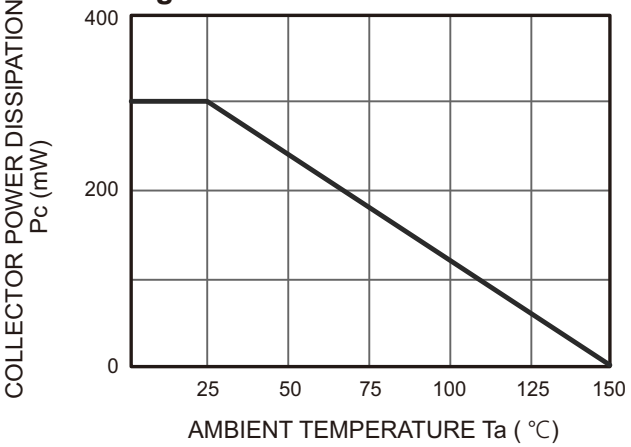


Fig 3. VCEsat —— IC

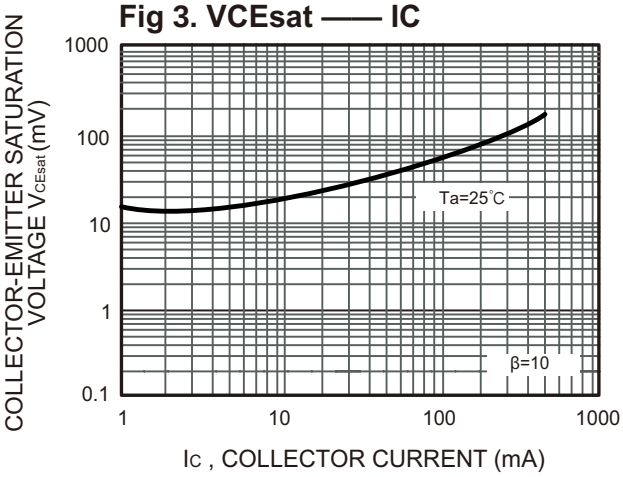


Fig 4. VBEsat —— IC

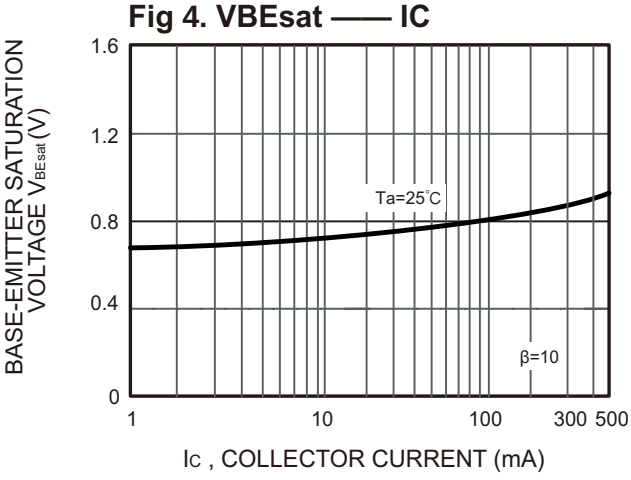


Fig 5. IC —— VBE

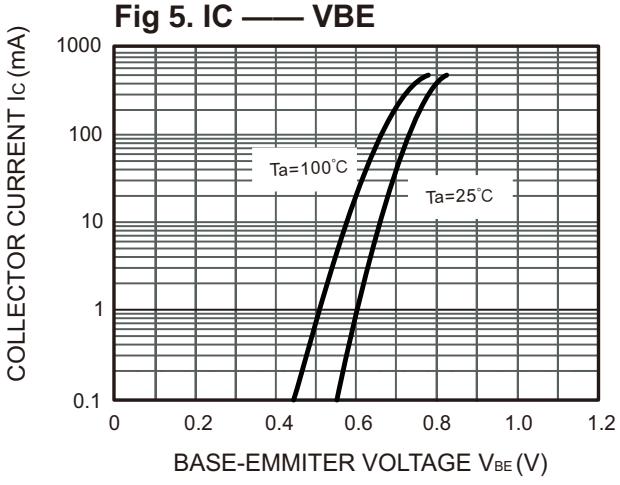
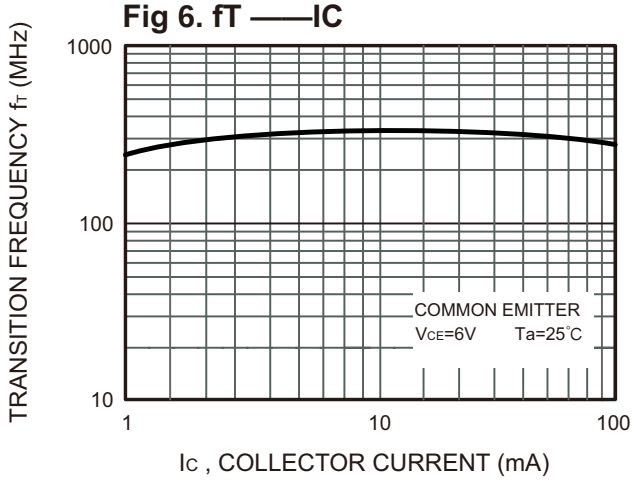


Fig 6. fT ——IC



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S8050WH

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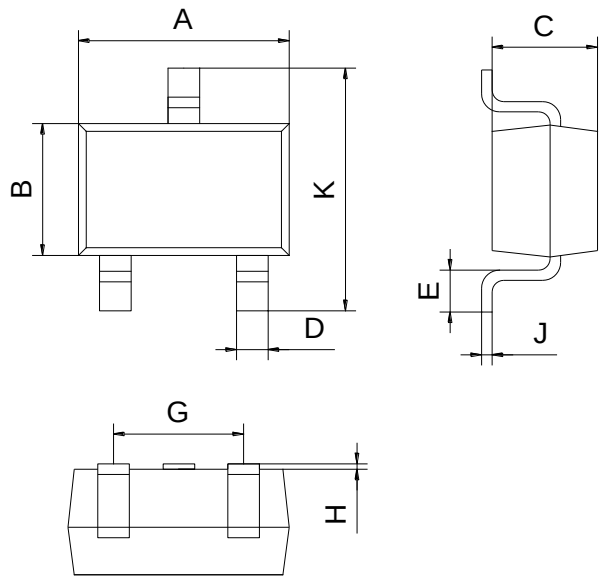
Marking

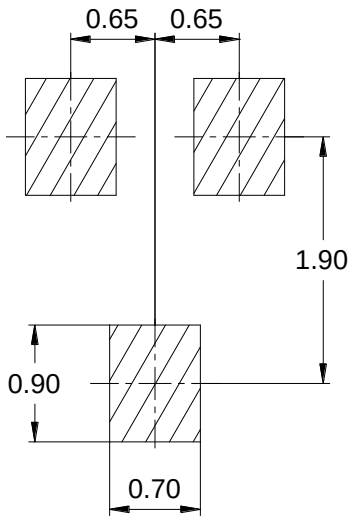
Type number	Marking code
S8050WH	J3Y

SOT-323 Package Outline Dimensions



SOT-323		
Dim	Min	Max
A	1.80	2.20
B	1.15	1.35
C	0.80	1.10
D	0.15	0.40
E	0.425 REF	
G	1.20	1.40
H	0.00	0.10
J	0.05	0.25
K	2.00	2.40
All Dimensions in mm		

SOT-323 Soldering Footprint (mm)



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