

SS8050

DATASHEET

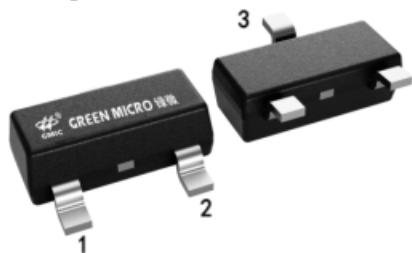
Specification Revision History:

Version	Date	Description
V1.0	2021/12	New
V1.1	2022/06	Modify Ordering Information
V1.2	2023/02	Modify Ordering Information
V1.3	2025/05	Add application precautions and overall typesetting.

Features

- ※NPN Transistors
- ※Collector Current: $I_c=1.5A$

Simplified outline



- 1.Base
- 2.Emitter
- 3.Collector

SOT-23

Ordering Information

Product Model	Package Type	Marking	Packing	Packing Qty
SS8050-GM	SOT-23	Y1	REEL	3000PCS/REEL

Absolute Maximum Ratings $T_a = 25 \text{ } ^\circ\text{C}$

Parameter	Symbol	Rating	Unit
Collector-Base Voltage	V_{CBO}	40	V
Collector-Emitter Voltage	V_{CEO}	25	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current -Continuous	I_c	1.5	A
Collector Dissipation	P_c	0.3	W
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature	T_{stg}	-55 to 150	$^\circ\text{C}$

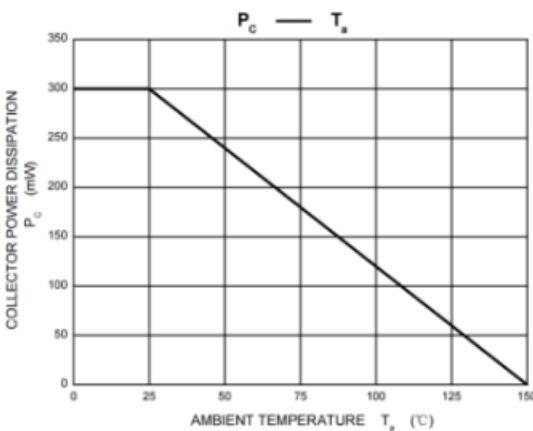
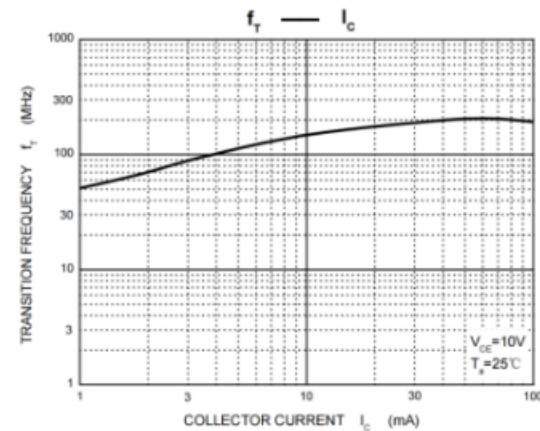
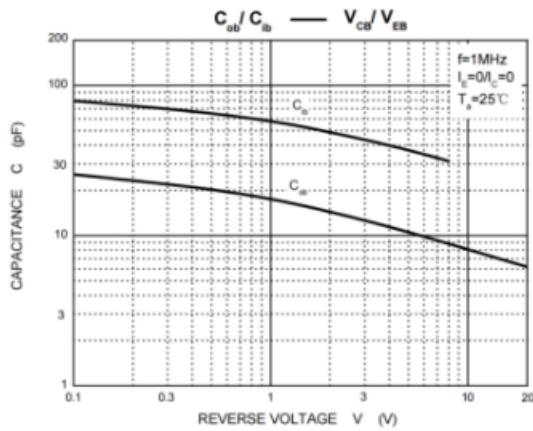
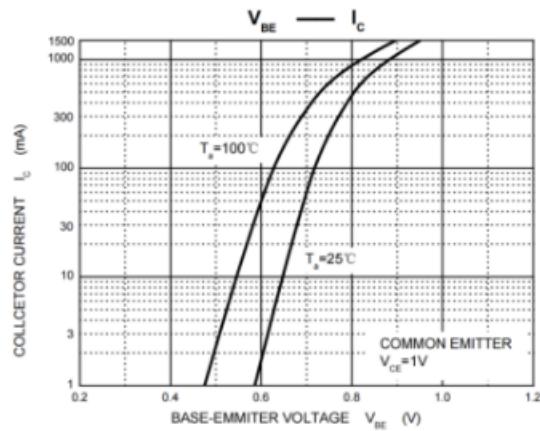
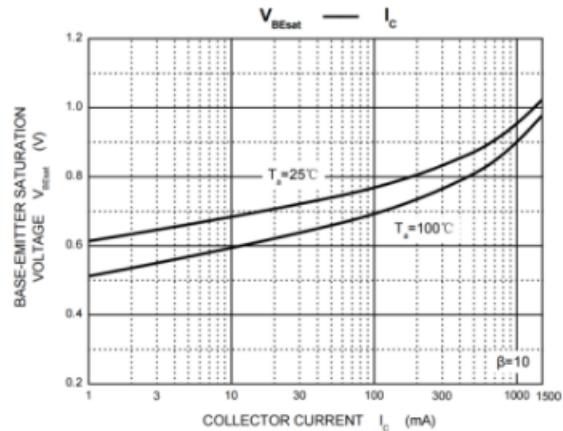
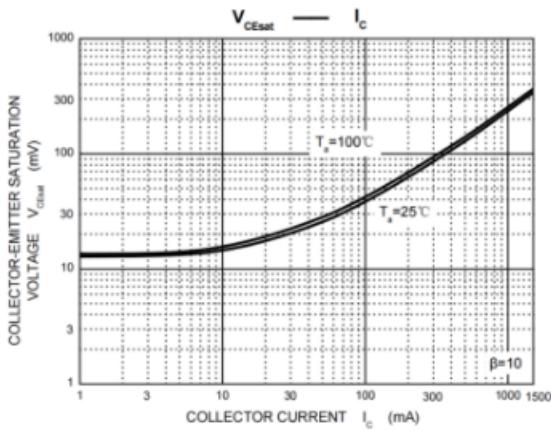
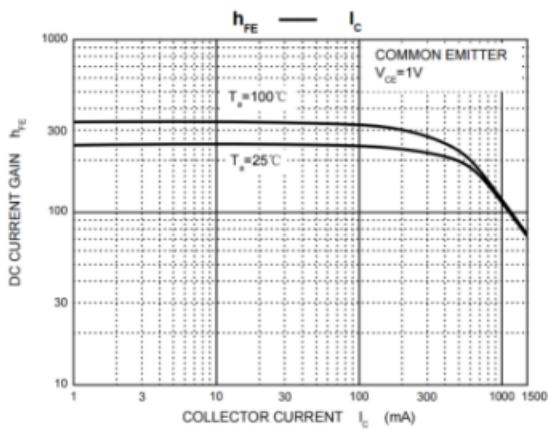
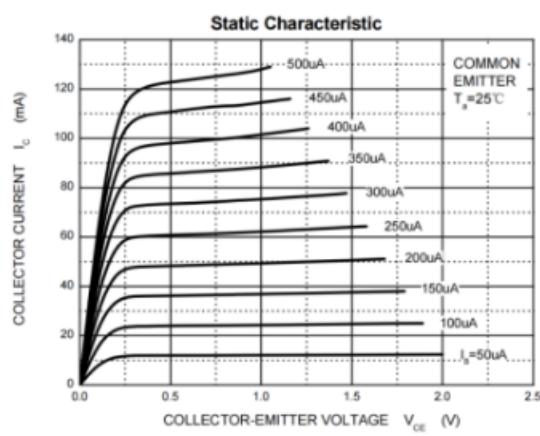
Electrical Characteristics $T_a = 25 \text{ } ^\circ\text{C}$

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	V_{CBO}	$I_c = 100 \mu\text{A}, I_E = 0$	40			V
Collector-emitter breakdown voltage	V_{CEO}	$I_c = 1\text{mA}, I_B = 0$	25			V
Emitter-base Breakdown voltage	V_{EBO}	$I_E = 100 \mu\text{A}, I_c = 0$	5			V
Collector-base cut-off current	I_{CBO}	$V_{CB} = 40\text{V}, I_E = 0$		0.1		μA
Collector-emitter cut-off current	I_{CEO}	$V_{CE} = 20\text{V}, I_B = 0$		1		μA
Emitter-base cut-off current	I_{EBO}	$V_{EB} = 5\text{V}, I_c = 0$		0.1		μA
DC current gain	h_{FE}	$V_{CE} = 1\text{V}, I_c = 100 \text{mA}$	120	400		
		$V_{CE} = 1\text{V}, I_c = 800 \text{mA}$	40			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_c = 800 \text{mA}, I_B = 80 \text{mA}$		0.5		V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_c = 800 \text{mA}, I_B = 80 \text{mA}$		1.2		V
Transition frequency	f_T	$V_{CE} = 10\text{V}, I_c = 50 \text{mA}, f = 30 \text{MHz}$	100			MHz

hFE(1) Classification

Type	SS8050
Range	200-350

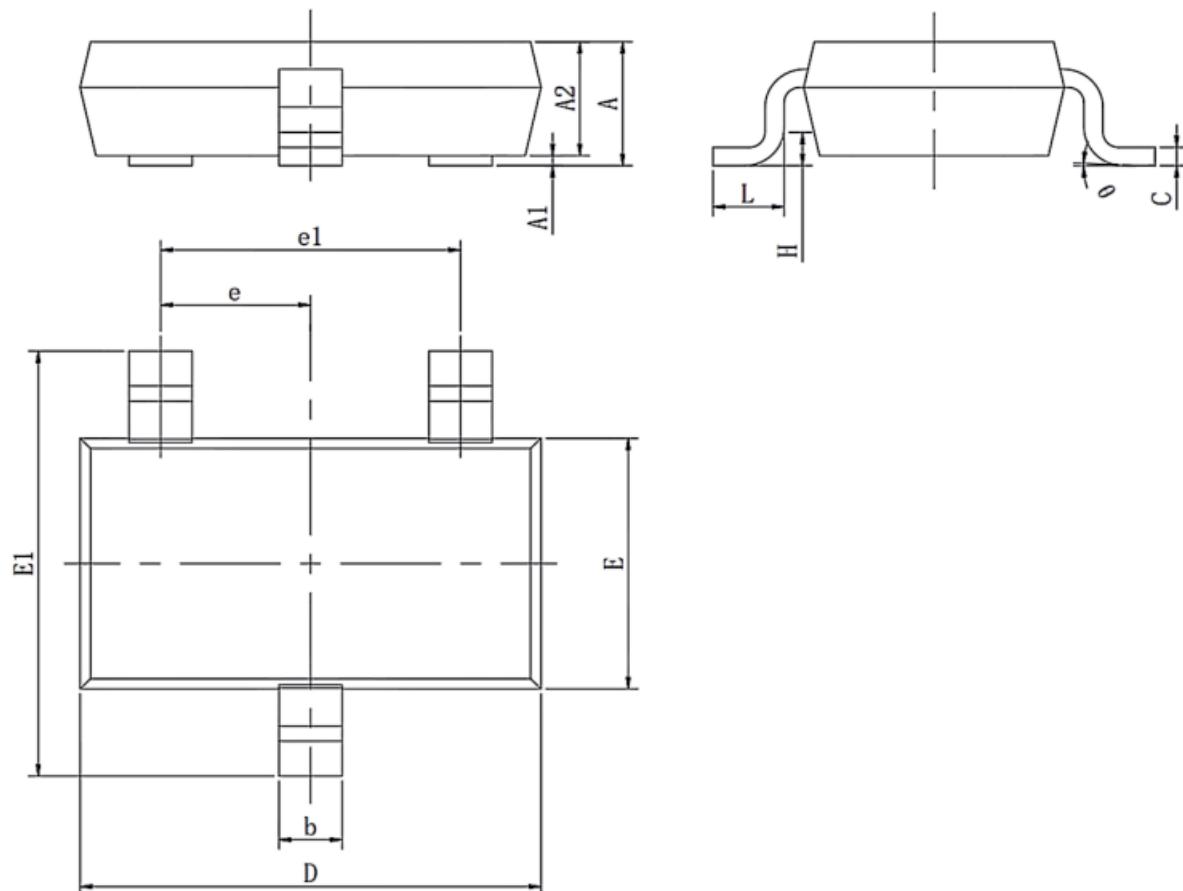
Typical Characteristics



Outline Dimensions

SOT-23

Unit : mm



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
C	0.080	0.200	0.003	0.008
D	2.800	3.020	0.110	0.119
E	1.200	1.400	0.047	0.055
E1	2.250	2.550	0.089	0.100
e	0.95 (BSC)		0.037(BSC)	
e1	1.90 (BSC)		0.075(BSC)	
L	0.300	0.500	0.012	0.020
θ	0°	8°	0°	8°

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