

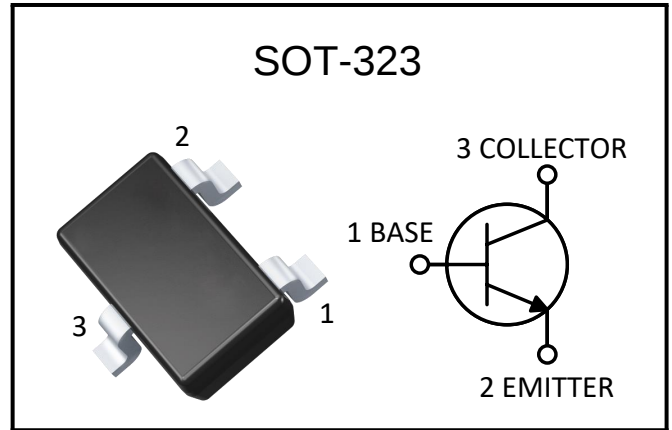
SS8050W

NPN Plastic-Encapsulate Transistor

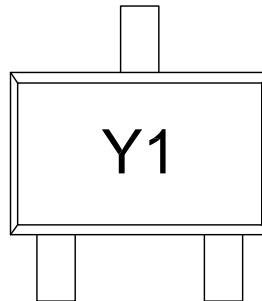
Features

- $V_{CE}=25V$
- $I_C=1.5A$
- Power amplifier applications.
- Complementary to SS8550W.

Package



Marking



Ordering information

Order code	Package	Marking	Base qty	Delivery mode
SS8050W	SOT-323	Y1	3K	Tape and reel

Absolute Maximum Ratings @ $T_A=25^{\circ}C$ unless otherwise noted

Symbol	Parameter	Value	Unit
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	1.5	A
P_C	Collector Power Dissipation	250	mW
$R_{\theta JA}$	Thermal resistance From junction to ambient	400	$^{\circ}C/W$
T_J, T_{stg}	Operation Junction And Storage Temperature Range	-55 to + 150	$^{\circ}C$



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Electrical Characteristics (T_A=+25°C, unless otherwise specified)

Symbol	Parameter	Test condition	Min.	Typ.	Max.	Unit
V _{(BR)CBO}	Collector-base breakdown voltage	I _C =100μA, I _E =0	40	—	—	V
V _{(BR)CEO}	Collector-emitter breakdown voltage	I _C =0.1mA, I _B =0	25	—	—	
V _{(BR)EBO}	Emitter-base breakdown voltage	I _E =100μA, I _C =0	5	—	—	
I _{CEO}	Collector cut-off current	V _{CE} =20V, I _B =0	—	—	0.1	uA
I _{CBO}	Collector cut-off current	V _{CB} =40V, I _E =0	—	—	0.1	
I _{EBO}	Emitter cut-off current	V _{EB} =5V, I _C =0	—	—	0.1	
h _{FE(1)}	DC current gain	V _{CE} =1V, I _C =100mA	120	—	400	
h _{FE(2)}	DC current gain	V _{CE} =1V, I _C =800mA	40	—	—	
V _{CE(sat)}	Collector-emitter saturation voltage	I _C =800mA, I _B =80mA	—	—	0.5	V
V _{BE(sat)}	Base-emitter saturation voltage	I _C =800mA, I _B =80mA	—	—	1.2	
f _T	Transition frequency	V _{CE} =10V, I _C =50mA, f=300MHZ	100	—	—	MHZ
C _{ob}	Collector output capacitance	V _{CB} =10V, I _E =0V, f=1MHZ	—	—	15	PF
h _{FE(1)} Rank	(120~200)	(200~350)	(300~400)			



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Typical Performance Characteristics ($T_J = 25^\circ\text{C}$, unless otherwise noted)

Figure 1 : Static Characteristic

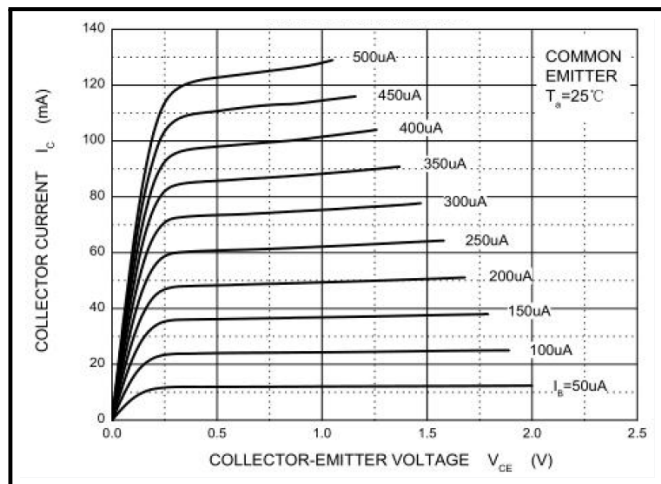


Figure 2 : $h_{FE} \sim I_C$

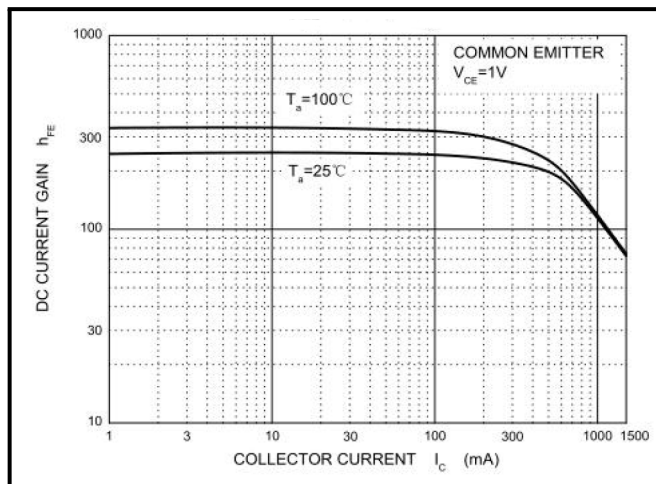


Figure 3 : $V_{CE(sat)} \sim I_C$

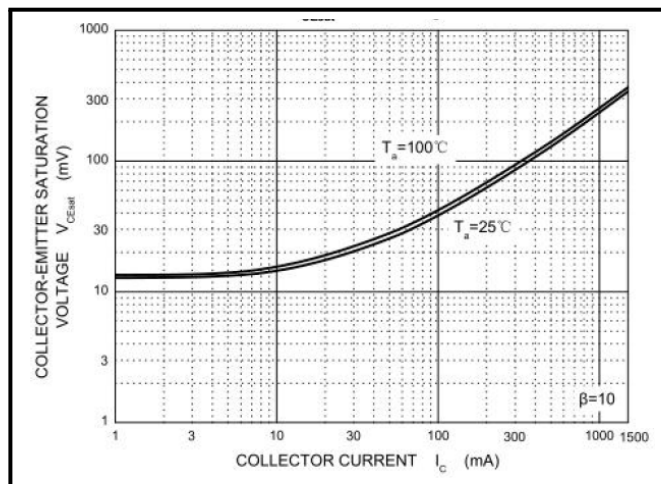
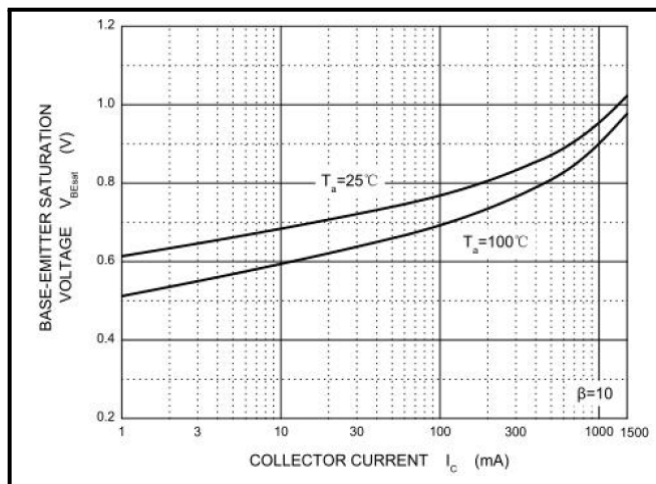


Figure 4 : $V_{BE(sat)} \sim I_C$



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Typical Performance Characteristics ($T_J = 25^\circ\text{C}$, unless otherwise noted)

Figure 5 : I_C — V_{BE}

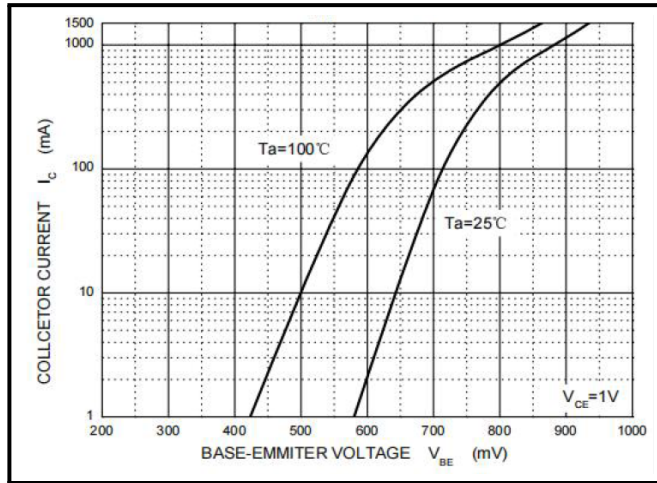


Figure 6 : C_{ob}/C_{ib} — V_{CB}/V_{EB}

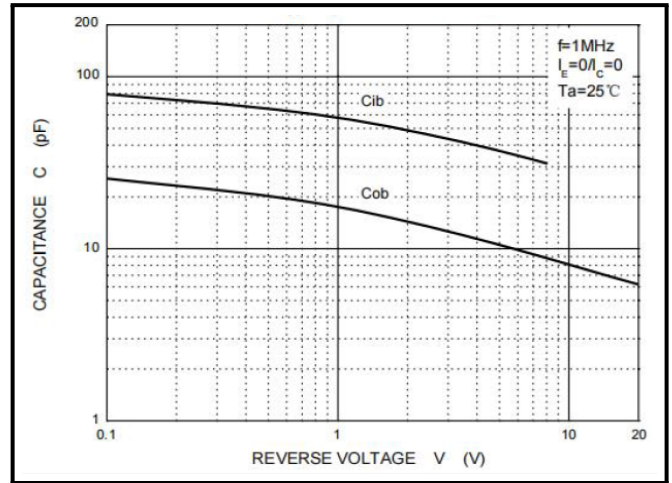


Figure 7 : f_T — I_C

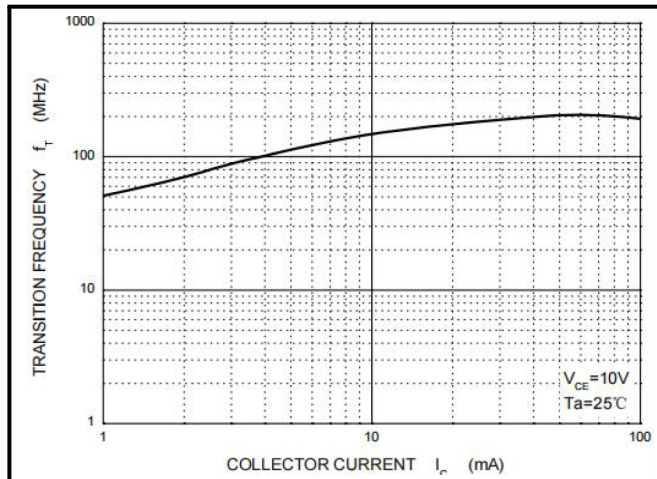
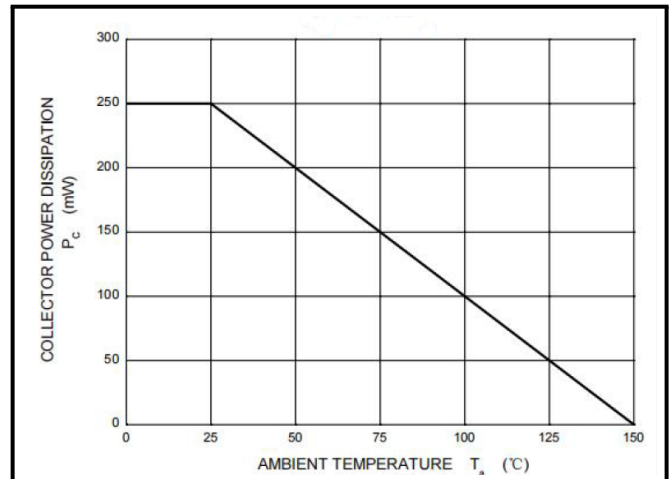


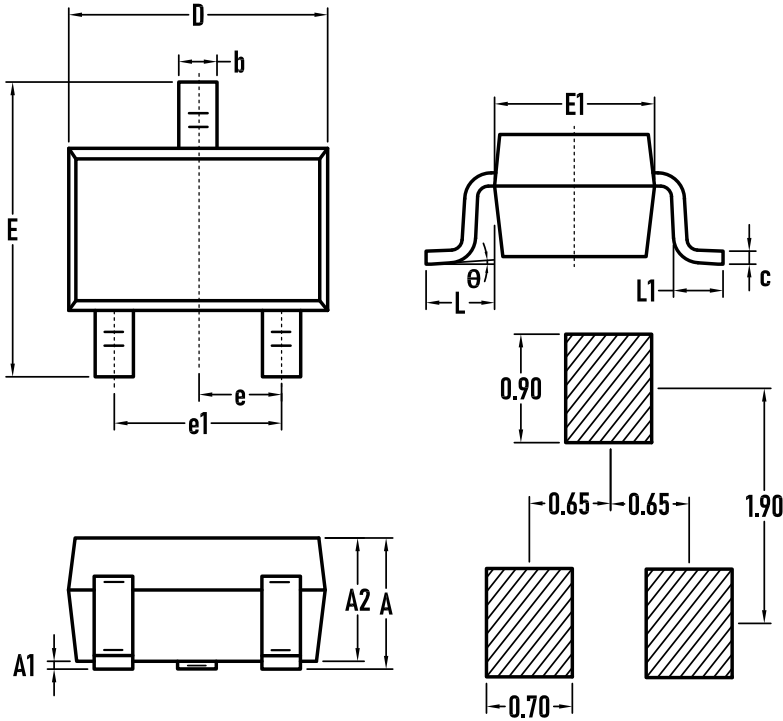
Figure 8 : P_C — T_a



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Outline Drawing - SOT-323



SYMBOL	MILLIMETER		
	MIN.	Typ.	MAX.
A	0.90	1.00	1.10
A1	0.00	0.05	0.10
A2	0.90	0.95	1.00
b	0.20	0.30	0.40
c	0.08	0.12	0.15
D	2.00	2.10	2.20
E	2.15	2.30	2.45
E1	1.15	1.25	1.35
e	0.650Typ.		
e1	1.20	1.30	1.40
L1	0.26	0.36	0.46
L	0.525REF		
θ	0°	4°	8°

