SSCN8050MGS6

High Frequency High Gain NPN Power BJT

➢ Features

VCB	VCE	VBE	VCESAT	IC
40V	25V	5V	500mV	800mA

➢ Description

This device is produced with advanced high carrier density technology, which is especially used to minimize saturation voltage drop. This device particularly suits low voltage applications such as portable equipment, power management and other battery powered circuits, and low in-line power dissipation are needed in a very small outline surface mount package. Excellent thermal and electrical capabilities.

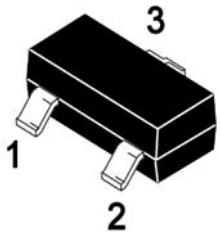
➢ Applications

- Supply line switching circuits
- Battery management application
- DC/DC converter applications

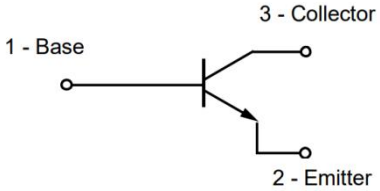
➢ Ordering Information

Device	Package	Shipping
SSCN8050MGS6	SOT-23	3000/Reel

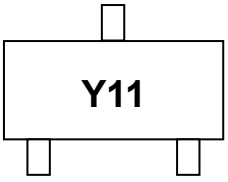
➢ Pin configuration



SOT-23



Circuit Diagram



Marking(Top View)

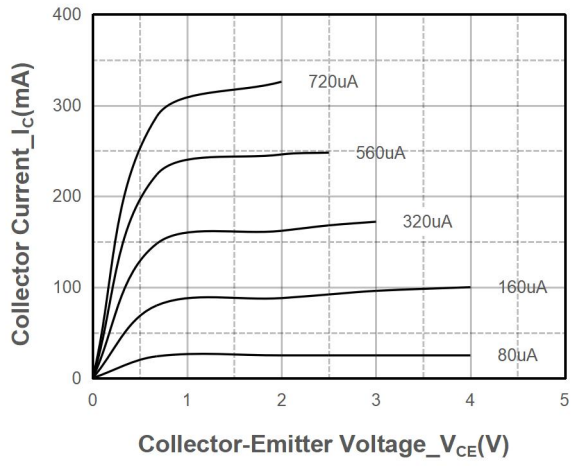
➢ Absolute Maximum Ratings(T_A=25℃ unless otherwise noted)

Parameter	Symbol	Value	Unit
Collector-Base Voltage	V_{CBO}	40	V
Collector- Emitter Voltage	V_{CEO}	25	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current-Continuous	I_C	800	mA
Collector Power Dissipation	P_C	200	mW
Junction Temperature	T_J	150	℃
Storage Temperature	T_{STG}	-55 to 150	℃

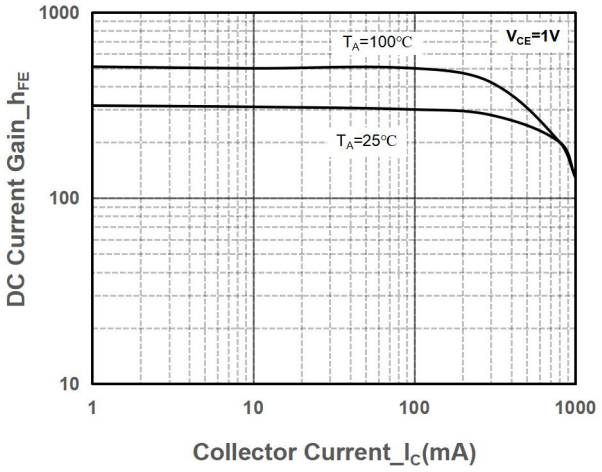
➢ Electrical Characteristics (T_A=25℃ unless otherwise noted)

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Collector-Base Breakdown Voltage	BV_{CBO}	I_C=0.1mA, I_E=0	40			V
Collector-emitter Breakdown Voltage	BV_{CEO}	I_C=1mA, I_B=0	25			V
Emitter -Base Breakdown Voltage	BV_{EBO}	I_E=0.1mA, I_C=0	5			V
Collector Cutoff Current	I_{CBO}	V_{CB}=35V, I_E=0			0.1	μA
EmitterCutoffCurrent	I_{EBO}	V_{EB}=4V, I_C=0			0.1	μA
DC Current Gain	h_{FE}	V_{CE}=1V, I_C=100mA	85		400	
Collector-Emitter Saturation Voltage	$V_{CE\ (sat)}$	I_C=800mA, I_B=80mA			0.5	V
Base-Emitter Saturation Voltage	$V_{BE\ (sat)}$	I_C=800mA, I_B=80mA			1.2	V
Transition frequency	f_T	V_{CE}=6V, I_C=20mA f=30MHz	150			MHz

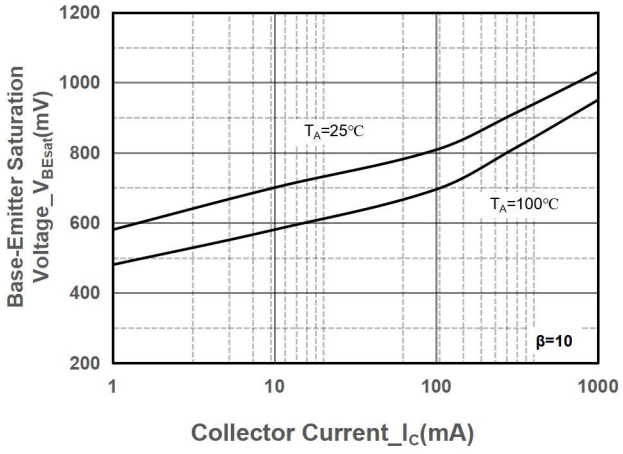
➢ Typical Performance Characteristics (T_A=25℃ unless otherwise noted)



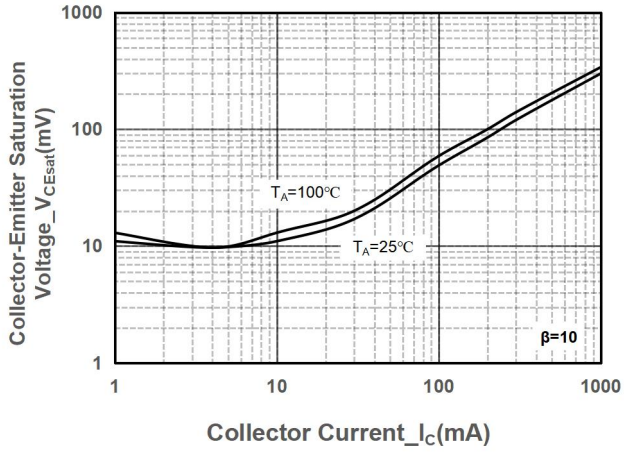
Collector Current vs. Collector-Emitter Voltage



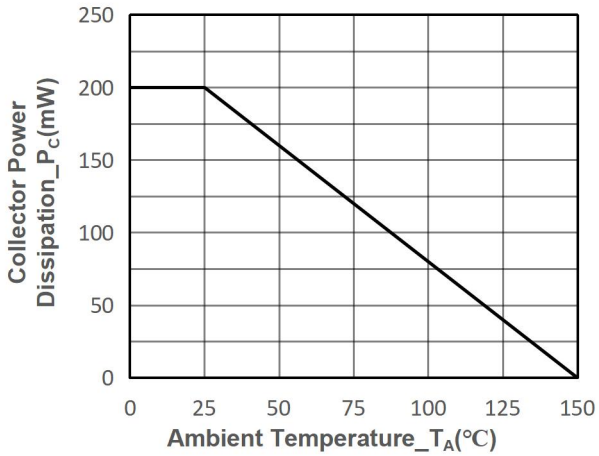
DC Current Gain vs. Collector Current



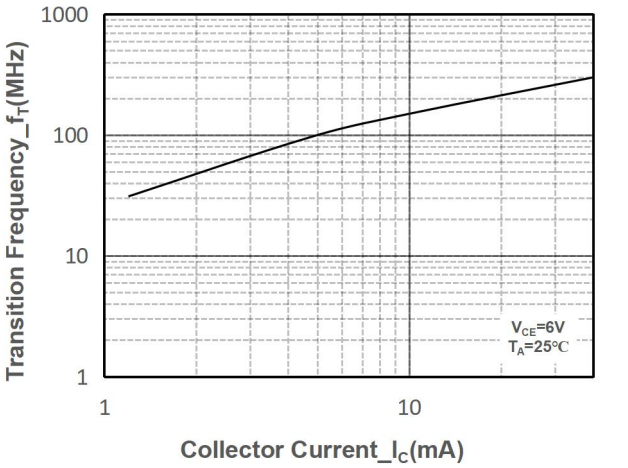
$V_{BE(sat)}$ vs. Collector Current



$V_{CE(sat)}$ vs. Collector Current

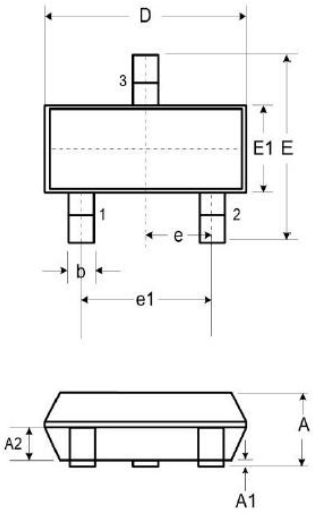


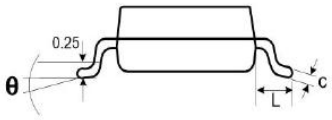
Power derating vs. Ambient temperature



Transition Frequency vs. Collector Current

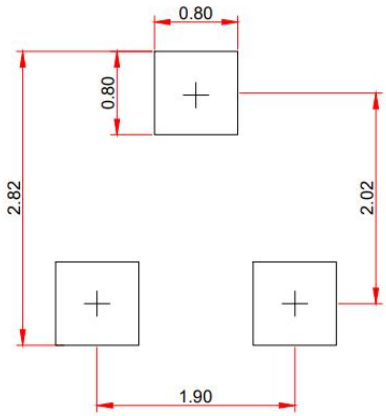
➢ Package Information





DIM	Millimeters		
	Min.	Typ.	Max.
A	0.89	-	1.12
A1	0.01	-	0.10
A2	0.88	0.95	1.02
b	0.30	-	0.51
c	0.08	-	0.18
D	2.80	2.90	3.04
E	2.10	2.37	2.64
E1	1.20	1.30	1.40
e1	1.90		
e	0.95		
L	0.40	0.50	0.60
L1	0.55		
N	3		
θ	0°	-	8°

Recommended Pad outline(Unit: mm)



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