SSCP005GSB

High Frequency High Gain PNP Power BJT

➢ Features

VCE	VBE	VCESAT Typ.	IC
-40V	-6V	-150mV	-3A

➢ Description

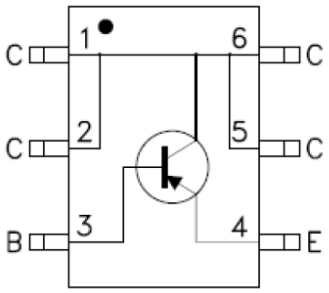
This device is produced with advanced high carrier density technology, which is especially used to minimize saturation voltage drop. This device particularly suits low voltage applications such as portable equipment, power management and other battery powered circuits, and low in-line power dissipation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

➢ Applications

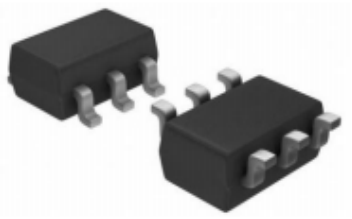
- Battery powered circuits
- Low in-line power dissipation circuits
- Power regulator

➢ Pin configuration

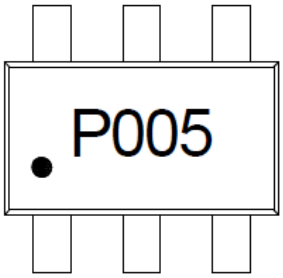
Top view



SOT23-6L



Bottom view



Marking

➢ Ordering Information

Device	Package	Shipping
SSCP005GSB	SOT23-6L	3000/Reel

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

Symbol	Parameter	Ratings	Unit
V_{CBO}	Collector-Base Voltage	-40	V
V_{CEO}	Collector-Emitter Voltage	-40	V
V_{EBO}	Emitter-Base Voltage	-6	V
I_C	Collector Current@Note1	-3	A
	Collector Current@Note2	-2	
I_{CM}	Pulsed Collector Current@Note3	-6	A
P_D	Power Dissipation@Note1	1.2	W
	Power Dissipation@Note2	0.8	
T_A	Operation Temperature Range	-40 to 85	℃
T_L	Lead Temperature	260	℃
T_J,T_{STG}	Operation and Storage temperature range	-55 to 150	℃

➢ Thermal Resistance Ratings

Symbol	Parameter	Maximum	Unit
$R_{\theta JA}$	Junction-to-Ambient Thermal Resistance@Note1	109	℃/W
$R_{\theta JA}$	Junction-to-Ambient Thermal Resistance@Note2	160	

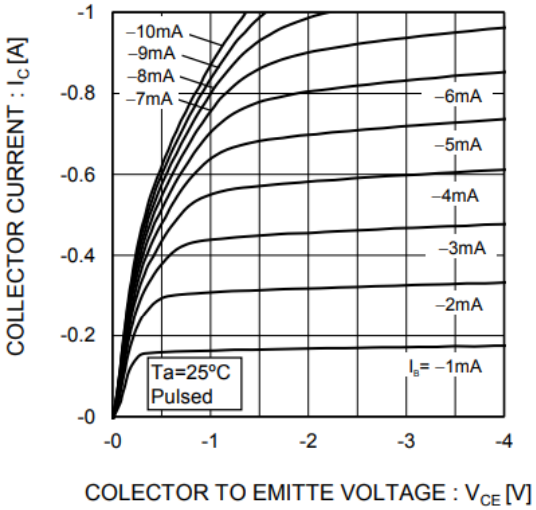
➢ **Electronics Characteristics**(T_A=25℃ unless otherwise specified)

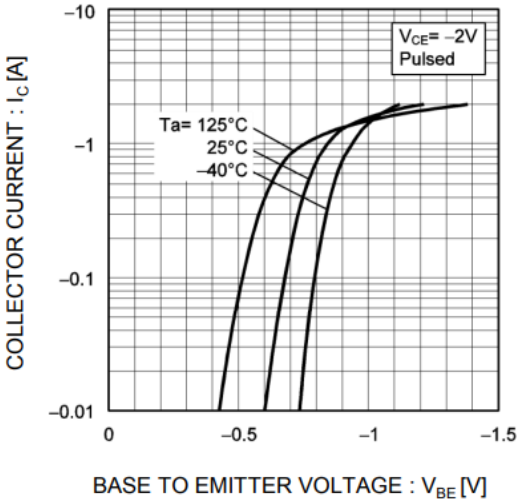
Symbol	Parameter	Test Conditions	Min	Typ.	Max	Unit
BVCBO	Collector-Base Breakdown Voltage	IC=-50uA IE=0	-40			V
BVCEO	Collector-Emitter Breakdown Voltage	IC=-1mA IB=0	-40			V
BVEBO	Emitter-Base Breakdown Voltage	IE=-1uA IC=0	-6			V
ICBO	Collector cut off current	VCB=-20V IE=0			-0.1	uA
IEBO	Emitter cut off current	VEB=-4V IC=0			-0.1	uA
HFE	DC Current Gain@Note3	VCE=-2V IC=-0.5A	100	200	350	
VCESAT	Collector-Emitter Saturation Voltage	IC=-1.5A IB=-80mA			-0.2	V
VBESAT	Base-Emitter Saturation Voltage	IC=-1.5A IB=-80mA			-1.2	V
f_T	Transition frequency	VCE=-5V , IE=-0.1A f=10MHz	50	80		MHz

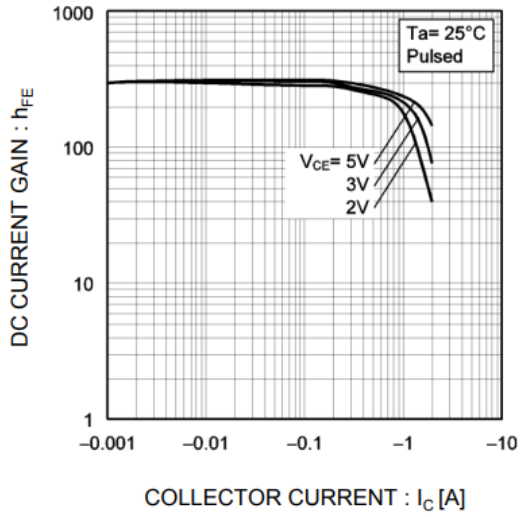
Notes:

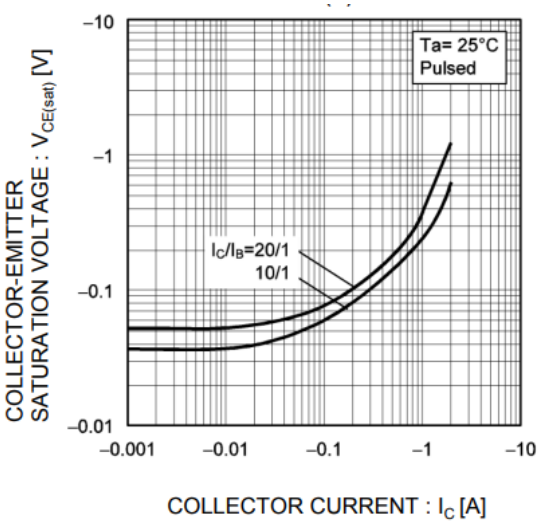
1. Surface mounted on FR-4 Board using 1 square inch pad size, 1oz copper.
2. Surface mounted on FR-4 Board using minimum pad size, 1oz copper.
3. Pulse width=300us, Duty Cycle<2%.

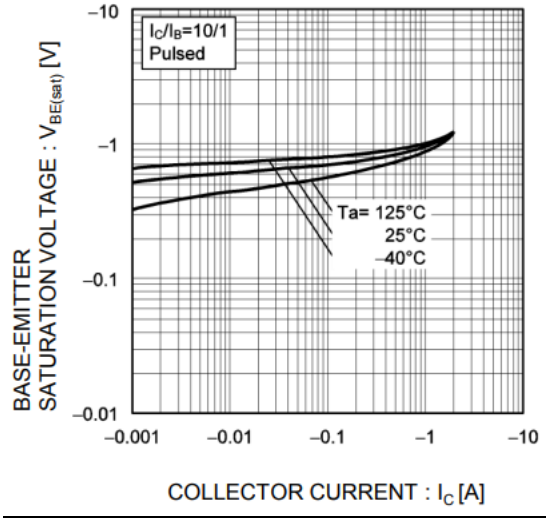
➢ Typical Performance Characteristics

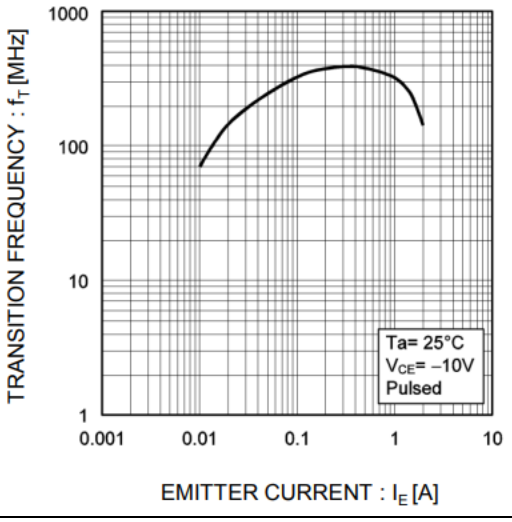




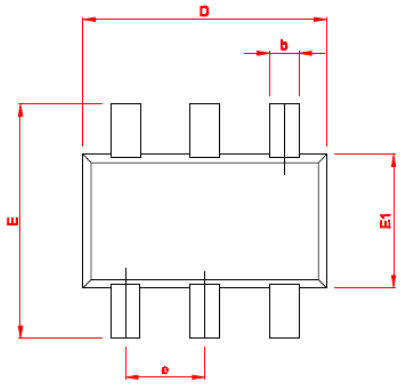


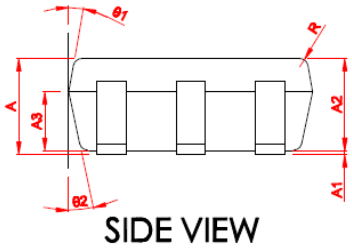






➢ Package Information





SYMBOL	MILLIMETER		
	MIN	NOM	MAX
A	1.06	1.15	1.24
* A1	0.01	0.05	0.09
* A2	1.05	1.10	1.15
A3	0.65	0.70	0.75
* b	0.30	0.35	0.45
* c	0.117	0.127	0.157
* D	2.87	2.92	2.97
* E	2.72	2.80	2.88
* E1	1.55	1.60	1.65
* e	0.90	0.95	1.00
* L	0.32	0.40	0.48
* L1	0.55	0.60	0.65
R	0.10 REF		
R1	0.12 REF		
* θ	0	--	8°
θ1	8°	10°	12°
θ2	10°	12°	14°

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