



SSCP006GSB

High Frequency High Gain PNP Power BJT

➤ Features

VCE	VBE	VCESAT Typ.	IC
-40V	-8V	-150mV	-1.2A

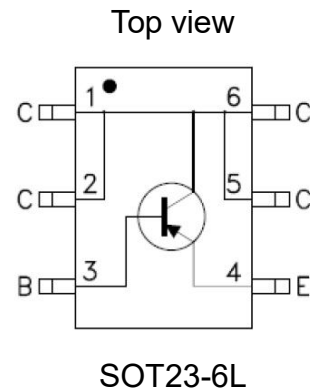
➤ Description

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.

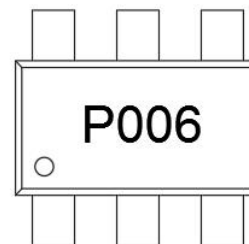
➤ Applications

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

➤ Pin configuration



Bottom view



➤ Ordering Information

Device	Package	Shipping
SSCP006GSB	SOT23-6L	3000/Reel



➤ **Absolute Maximum Ratings**($T_A=25^{\circ}\text{C}$ unless otherwise specified)

Symbol	Parameter	Ratings	Unit
V_{CBO}	Collector-Base Voltage	-50	V
V_{CEO}	Collector-Emitter Voltage	-40	V
V_{EBO}	Emitter-Base Voltage	-8	V
I_C	Collector Current@Note1	-1.2	A
	Collector Current@Note2	-1	
I_{CM}	Pulsed Collector Current@Note3	-4	A
P_D	Power Dissipation@Note1	1.2	W
	Power Dissipation@Note2	0.8	
T_A	Operation Temperature Range	-40 to 85	$^{\circ}\text{C}$
T_L	Lead Temperature	260	$^{\circ}\text{C}$
T_J, T_{STG}	Operation and Storage temperature range	-55 to 150	$^{\circ}\text{C}$

➤ **Thermal Resistance Ratings**

Symbol	Parameter	Maximum	Unit
$R_{\theta JA}$	Junction-to-Ambient Thermal Resistance@Note1	119	$^{\circ}\text{C}/\text{W}$
$R_{\theta JA}$	Junction-to-Ambient Thermal Resistance@Note2	166	



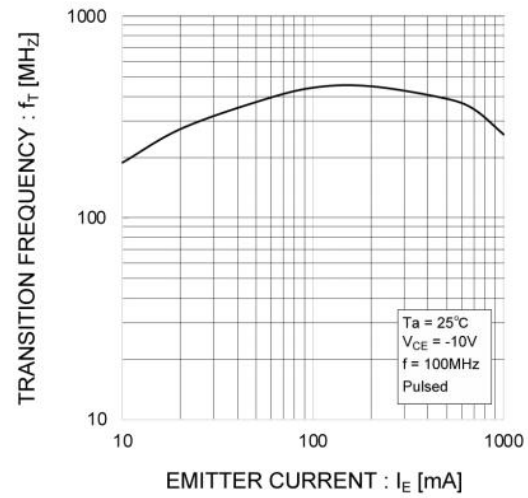
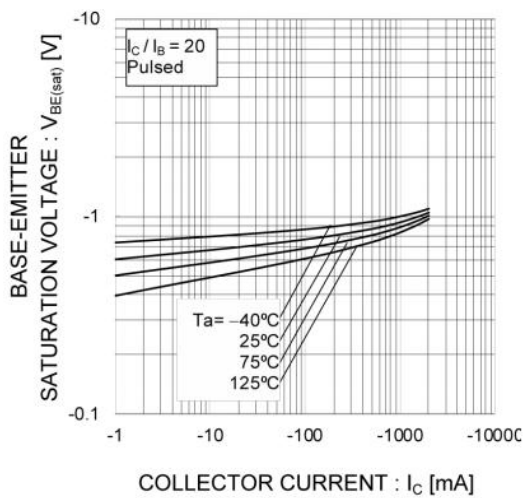
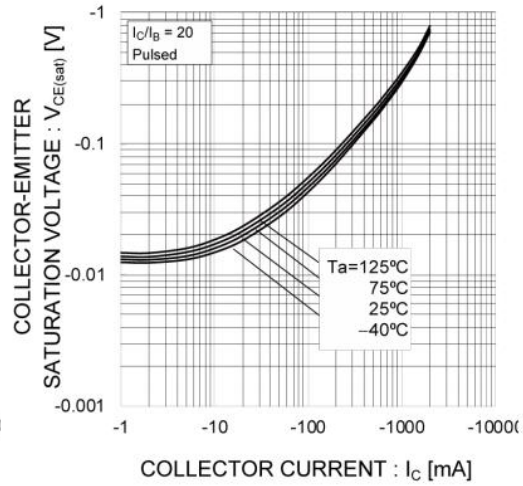
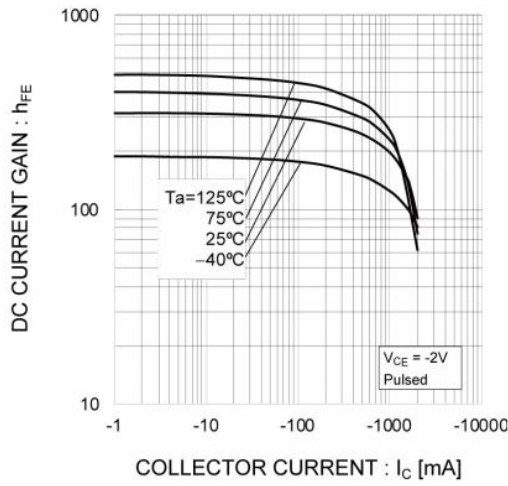
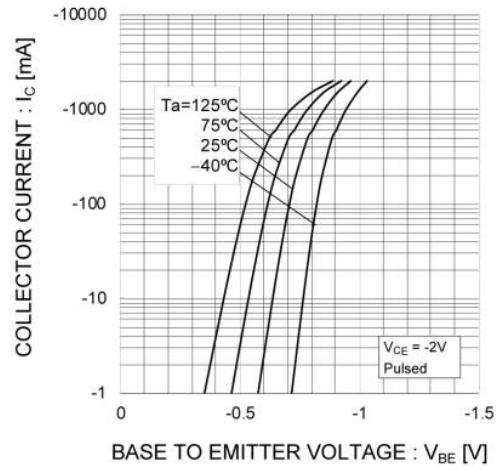
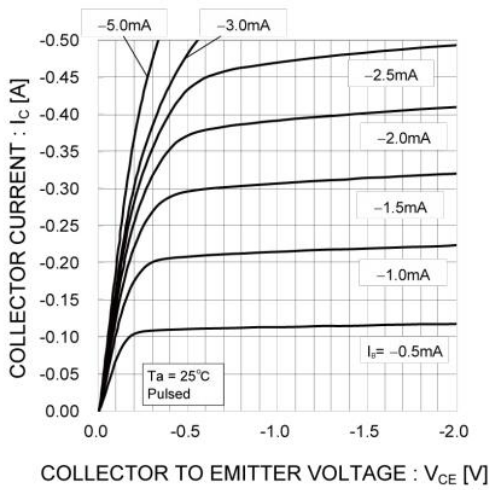
➤ **Electronics Characteristics**($T_A=25^{\circ}\text{C}$ unless otherwise specified)

Symbol	Parameter	Test Conditions	Min	Typ.	Max	Unit
BVCBO	Collector-Base Breakdown Voltage	$I_C=-0.1\text{mA}$ $I_E=0$	-50			V
BVCEO	Collector-Emitter Breakdown Voltage	$I_C=-1\text{mA}$ $I_B=0$	-40			V
BVEBO	Emitter-Base Breakdown Voltage	$I_E=-0.1\text{mA}$ $I_C=0$	-8			V
ICBO	Collector cut off current	$V_{CB}=-35\text{V}$ $I_E=0$			-0.1	μA
IEBO	Emitter cut off current	$V_{EB}=-4\text{V}$ $I_C=0$			-0.1	μA
HFE	DC Current Gain@Note3	$V_{CE}=-1\text{V}$ $I_C=-0.1\text{A}$	200	250	350	
VCESAT	Collector-Emitter Saturation Voltage	$I_C=-0.8\text{A}$ $I_B=-80\text{mA}$		-0.15	-0.25	V
VBESAT	Base-Emitter Saturation Voltage	$I_C=-0.8\text{A}$ $I_B=-80\text{mA}$		-0.9	-1.2	V
f_T	Transition frequency	$V_{CE}=-6\text{V}$, $I_C=-20\text{mA}$ $f=30\text{MHz}$	150			MHz

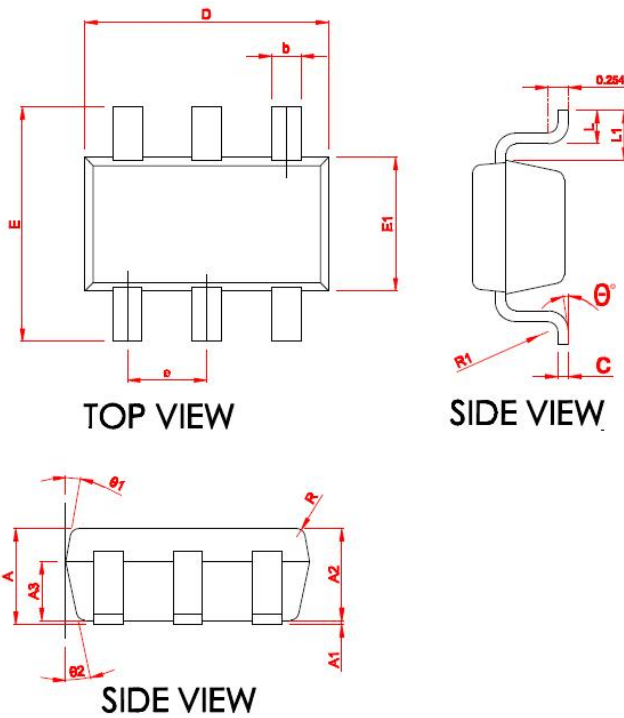
Notes:

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		
* theta	0	--	8°
theta1	8°	10°	12°
theta2	10°	12°	14°

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