



## SSCP006GN2

### High Frequency High Gain PNP Power BJT

#### ➤ Features

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

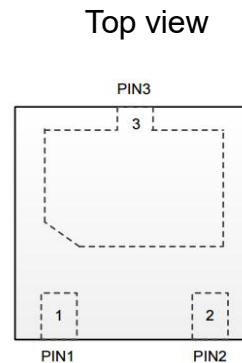
#### ➤ Description

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.

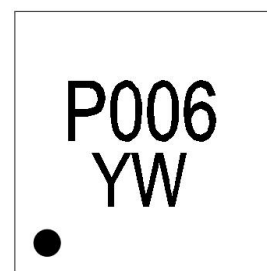
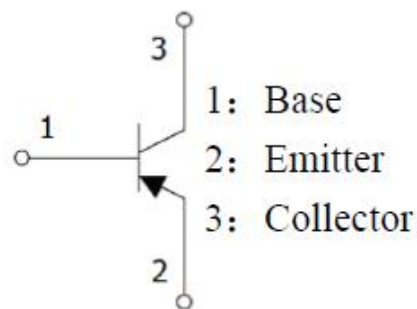
#### ➤ Applications

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

#### ➤ Pin configuration



DFN2X2



Marking

#### ➤ Ordering Information

Device	Package	Shipping
SSCP006GN2	DFN2X2	3000/Reel



➤ **Absolute Maximum Ratings**( $T_A=25^{\circ}\text{C}$  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	3.0	W
	Power Dissipation@Note2	1.5	
$T_A$	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	45	$^{\circ}\text{C}/\text{W}$
$R_{\theta JA}$	Junction-to-Ambient Thermal Resistance@Note2	86	

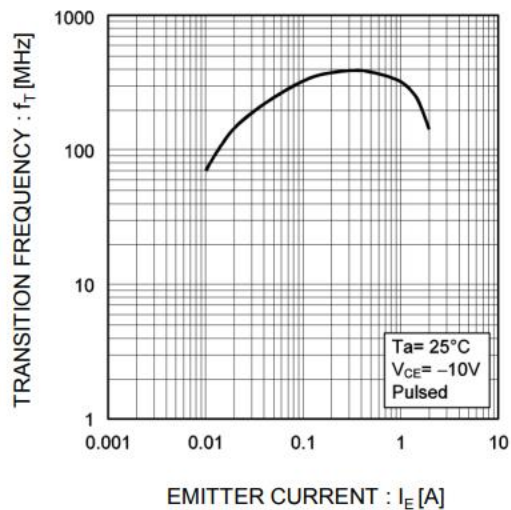
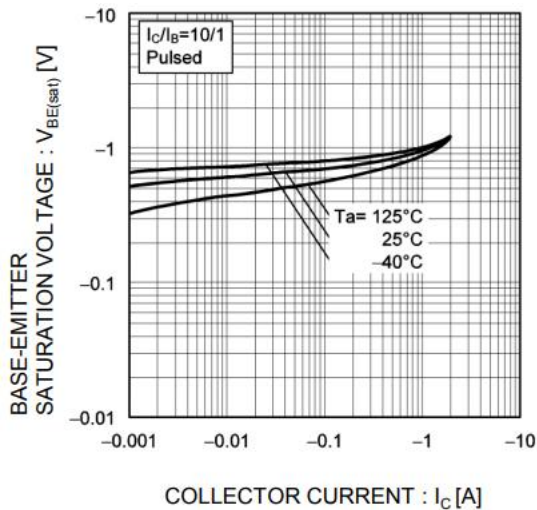
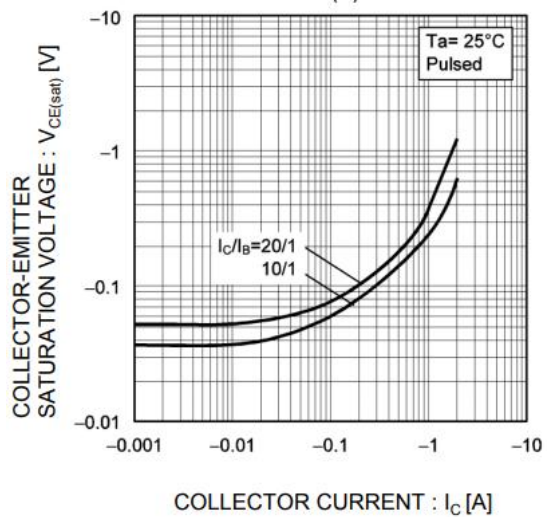
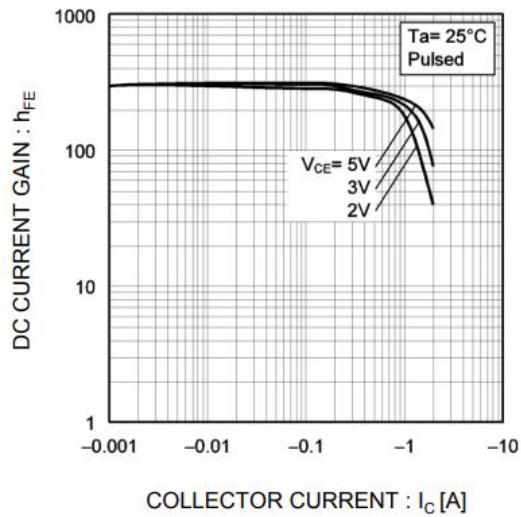
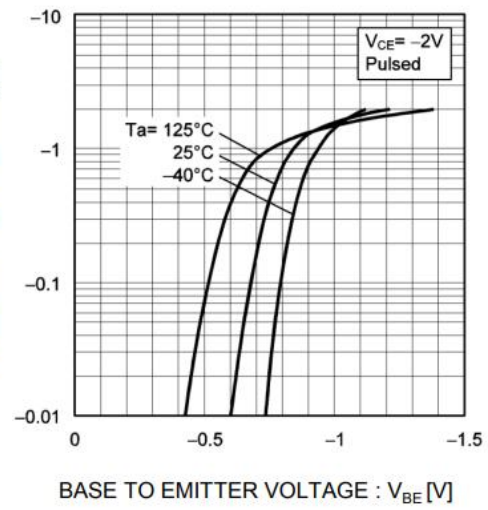
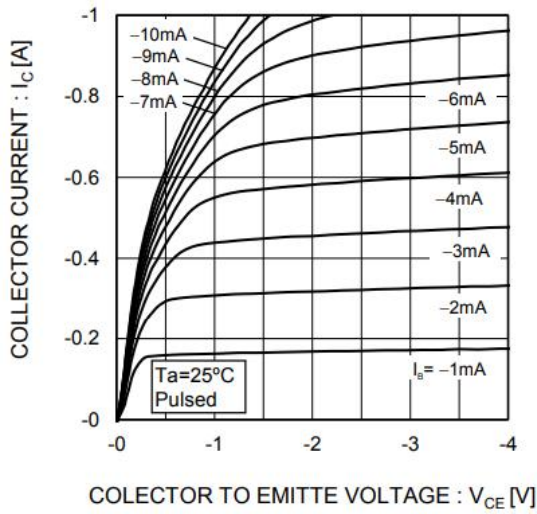
**➤ Electronics Characteristics**( $T_A=25^{\circ}\text{C}$  unless otherwise specified)

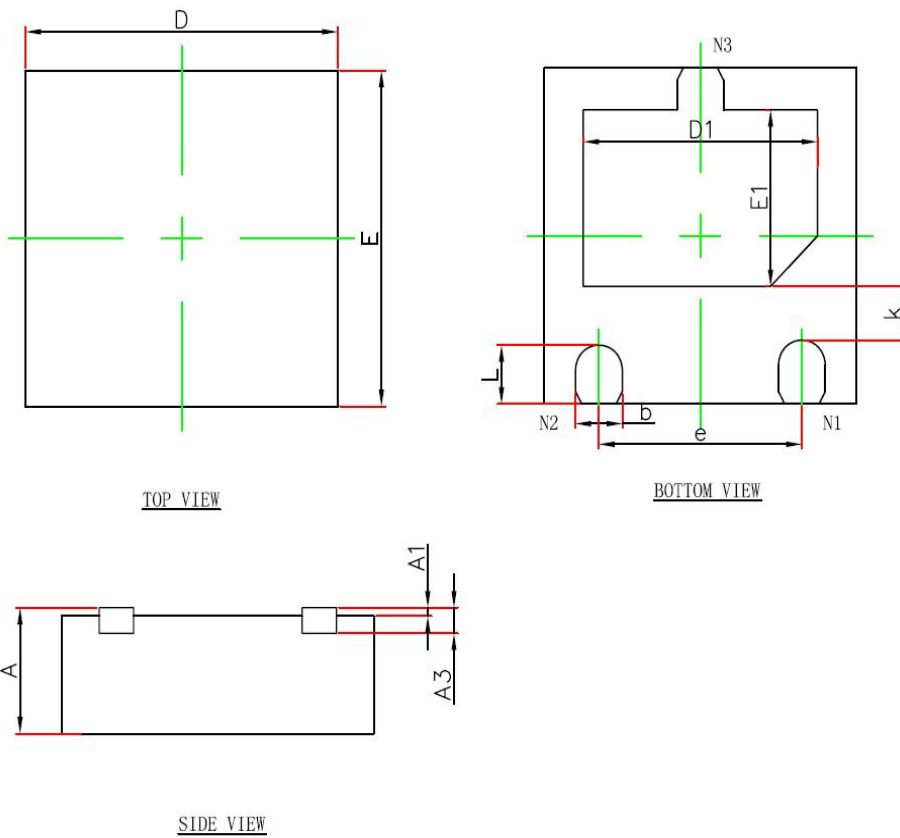
<b>Symbol</b>	<b>Parameter</b>	<b>Test Conditions</b>	<b>Min</b>	<b>Typ.</b>	<b>Max</b>	<b>Unit</b>
BVCBO	Collector-Base Breakdown Voltage	$I_C=-100\mu\text{A}$ $I_E=0$	-40			V
BVCEO	Collector-Emitter Breakdown Voltage	$I_C=-1\text{mA}$ $I_B=0$	-40			V
BVEBO	Emitter-Base Breakdown Voltage	$I_E=-100\mu\text{A}$ $I_C=0$	-6			V
ICBO	Collector cut off current	$V_{CB}=-30\text{V}$ $I_E=0$			-0.1	$\mu\text{A}$
IEBO	Emitter cut off current	$V_{EB}=-5\text{V}$ $I_C=0$			-0.1	$\mu\text{A}$
HFE	DC Current Gain@Note3	$V_{CE}=-2\text{V}$ $I_C=-0.5\text{A}$	100		400	
VCESAT	Collector-Emitter Saturation Voltage	$I_C=-1.5\text{A}$ $I_B=-80\text{mA}$			-0.2	V
VBESAT	Base-Emitter Saturation Voltage	$I_C=-1.5\text{A}$ $I_B=-80\text{mA}$			-1.2	V
$f_T$	Transition frequency	$V_{CE}=-5\text{V}$ , $I_E=-0.1\text{A}$ $f=10\text{MHz}$	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	Dimensions In Millimeters	
	Min.	Max.
A	0.550	0.650
A1	0.000	0.050
A3	0.152REF.	
D	1.924	2.076
E	1.924	2.076
D1	1.400	1.600
E1	0.950	1.150
K	0.220MIN.	
b	0.250	0.350
e	1.30(BSC)	
L	0.330	0.430



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