



SSCP005GN3

High Frequency High Gain PNP Power BJT

➤ Features

VCE	VBE	VCESAT	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.

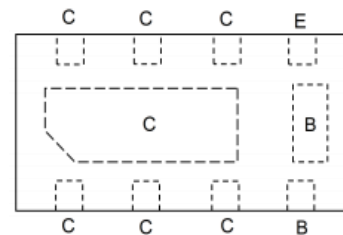
➤ Applications

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

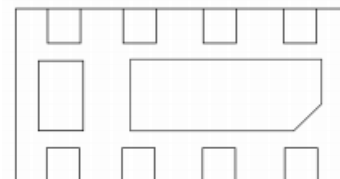
➤ Ordering Information

Device	Package	Shipping
SSCP005GN3	PDFN3X2-8L	3000/Reel

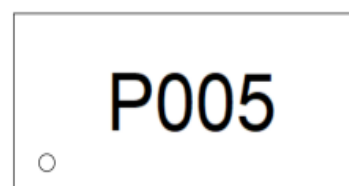
➤ Pin configuration



PDFN3X2-8L



Bottom view



Marking (Top View)

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

Parameter	Symbol	Value	Unit
Collector-Base Voltage	V_{CBO}	-40	V
Collector- Emitter Voltage	V_{CEO}	-40	V
Emitter-Base Voltage	V_{EBO}	-6	V
Collector Current-Continuous (Note1)	I_C	-3	A
Collector Current-Continuous (Note2)	I_C	-2	A
Peak Pulse Current (Note 3)	I_{CM}	-6	A
Collector Power Dissipation (Note1)	P_D	3.0	W
Linear Derating Factor (Note2)		1.5	
Operation Temperature Range	T_A	-40 to 85	$^{\circ}\text{C}$
Operating and Storage Temperature	T_J, T_{STG}	-55 to 150	$^{\circ}\text{C}$
Lead Temperature	T_L	260	$^{\circ}\text{C}$
Thermal resistance from junction to Lead (Note1)	$R_{\theta JL}$	44	$^{\circ}\text{C/W}$
Thermal resistance from junction to Lead (Note2)	$R_{\theta JL}$	85	$^{\circ}\text{C/W}$

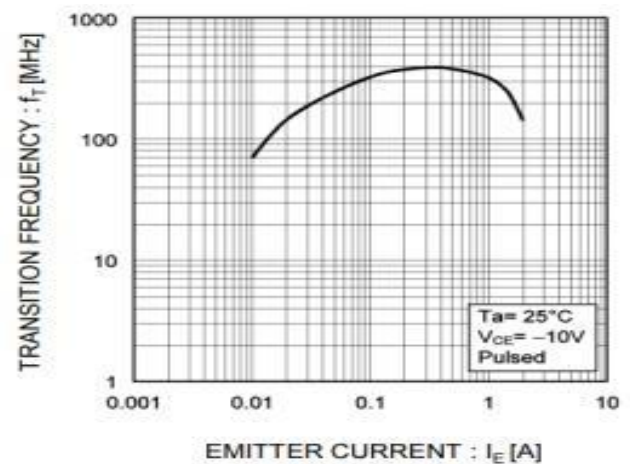
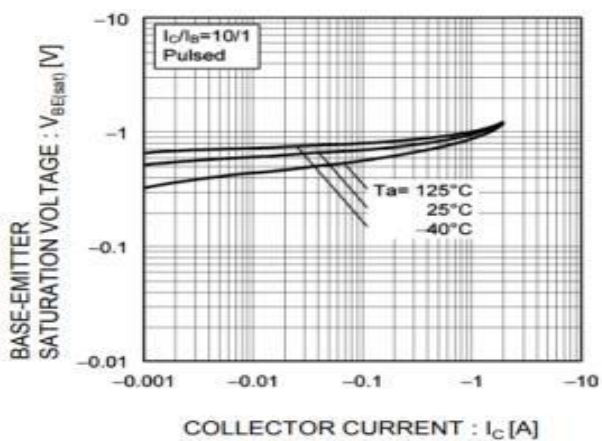
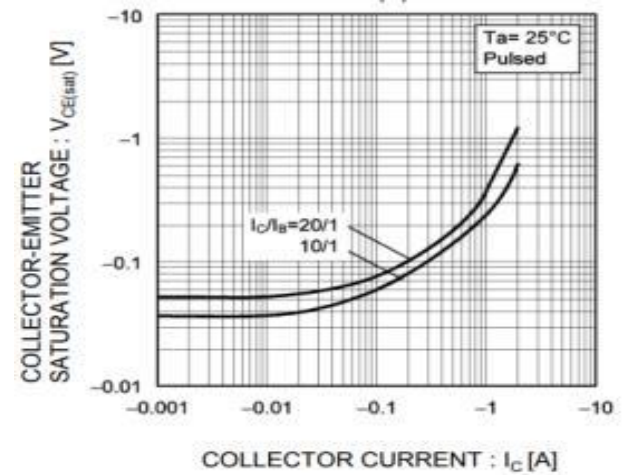
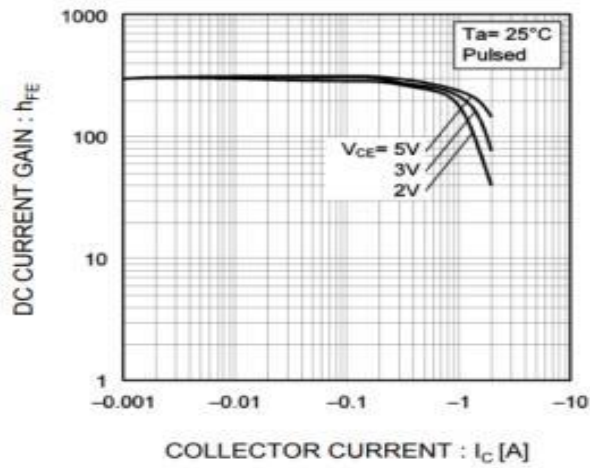
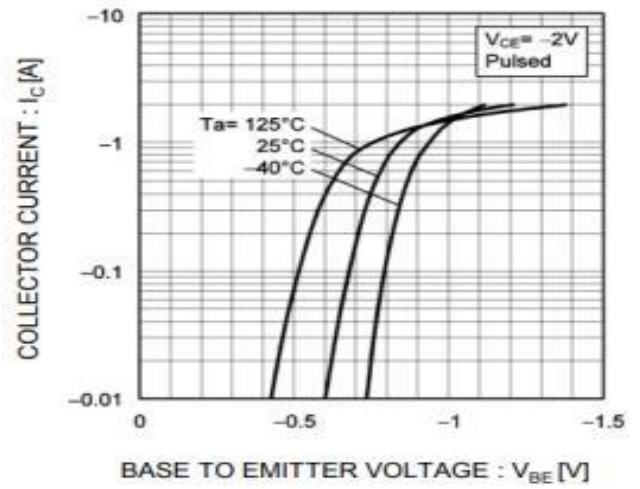
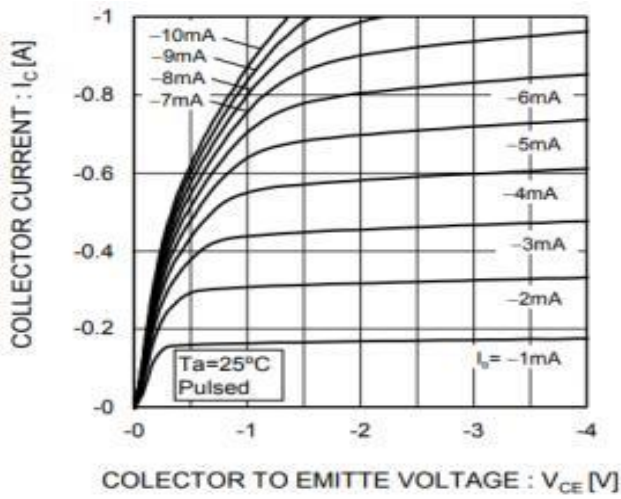
➤ Electrical Characteristics ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Collector-Base Breakdown Voltage	BV_{CBO}	$I_C = -50\mu\text{A}, I_E = 0$	-40			V
Collector-emitter Breakdown Voltage(Note5)	BV_{CEO}	$I_C = -1\text{mA}, I_B = 0$	-40			V
Emitter -Base Breakdown Voltage	BV_{EBO}	$I_E = -1\mu\text{A}, I_C = 0$	-6			V
Collector-base Cutoff Current	I_{CBO}	$V_{CB} = -20\text{V}, I_E = 0$			-0.1	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB} = -6\text{V}, I_C = 0$			-0.1	μA
DC Current Gain (Note3)	h_{FE}	$V_{CE} = -2\text{V}, I_C = -0.5\text{mA}$	100	200	350	
Collector-Emitter Saturation Voltage (Note3)	$V_{CE(sat)}$	$I_C = -1.5\text{A}, I_B = -80\text{mA}$			-0.2	V
Base-Emitter Saturation Voltage (Note3)	$V_{BE(sat)}$	$I_C = -1.5\text{A}, I_B = -80\text{mA}$			-1.2	V
Transition frequency	f_T	$V_{CE} = -5\text{V}, I_E = -100\text{mA}$ $f = 10\text{MHz}$		120		MHz

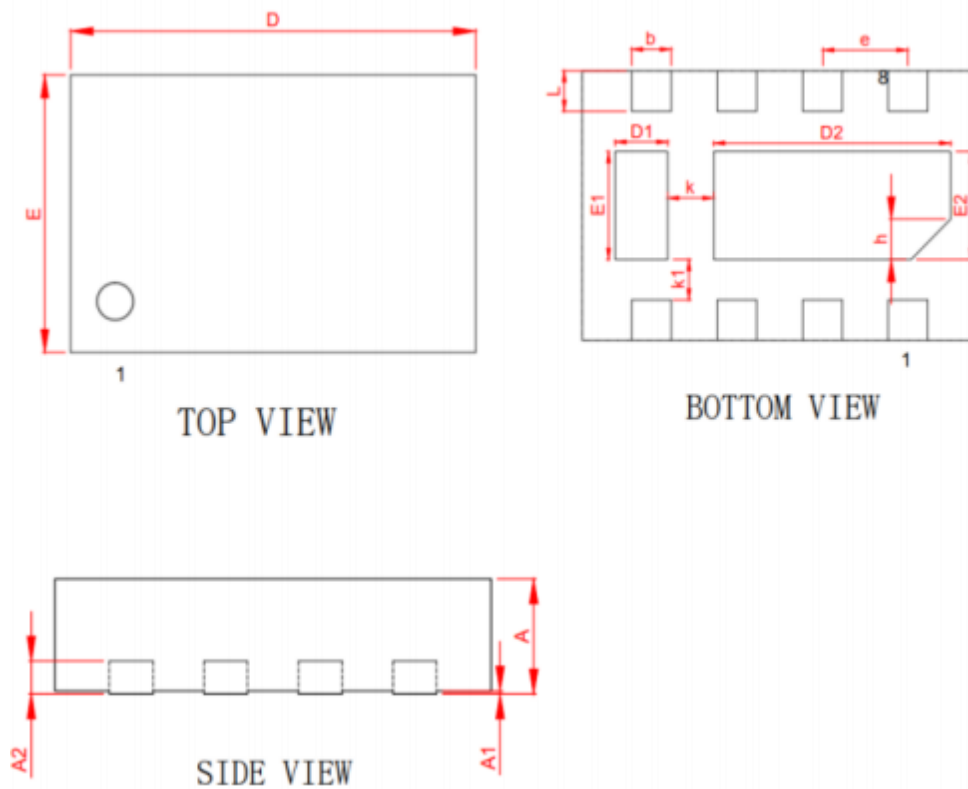
Note :

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. Measured under pulsed conditions. Pulse width $\leq 300\mu\text{s}$. Duty cycle $\leq 2\%$.

➤ **Typical Performance Characteristics**



● Package Information



Symbol	Dimensions in Millimeters		
	Min.	Typ.	Max.
A	0.70	0.75	0.80
A1	0.00	0.02	0.05
b	0.25	0.30	0.35
A2	0.203 BSC		
D	2.90	3.00	3.10
E	1.90	2.00	2.10
E1	0.75	0.80	0.85
E2	0.75	0.80	0.85
D1	0.35	0.40	0.45
D2	1.75	1.80	1.85
e	0.65 REF		
L	0.25	0.30	0.35
h	BSC 0.42		
K1	0.30	0.35	0.40
K2	0.25	0.30	0.35



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