

SSCP005GN3
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

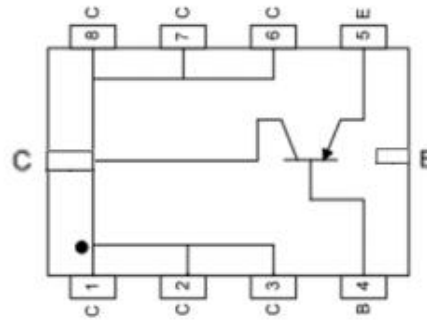
- Battery powered circuits
- Low in-line power dissipation circuits

➤ Ordering Information

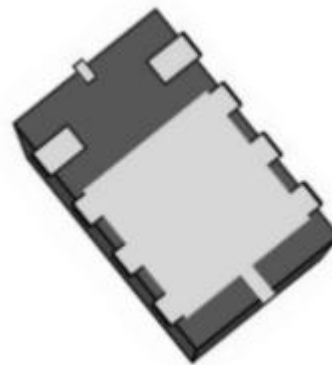
Device	Package	Shipping
SSCP005GN3	PDFN3X2-8L	3000/Reel

➤ Pin configuration

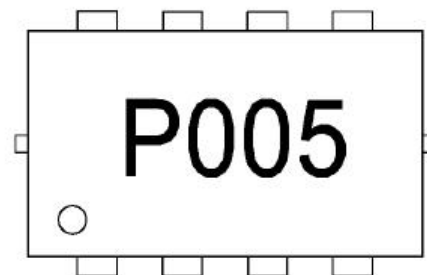
Top view



PDFN3X2-8L



Bottom view



Marking



➤ **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	44	$^{\circ}\text{C}/\text{W}$
$R_{\theta JA}$	Junction-to-Ambient Thermal Resistance@Note2	85	

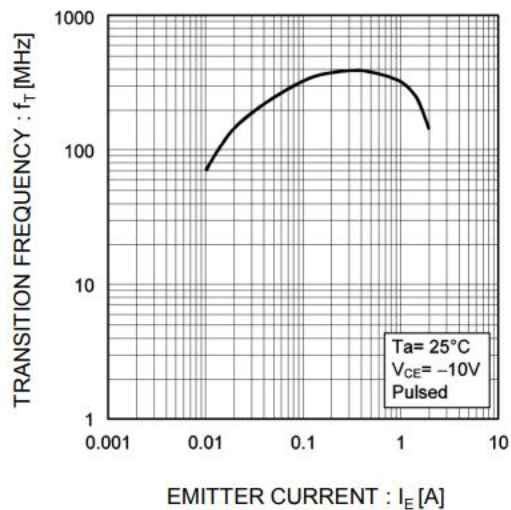
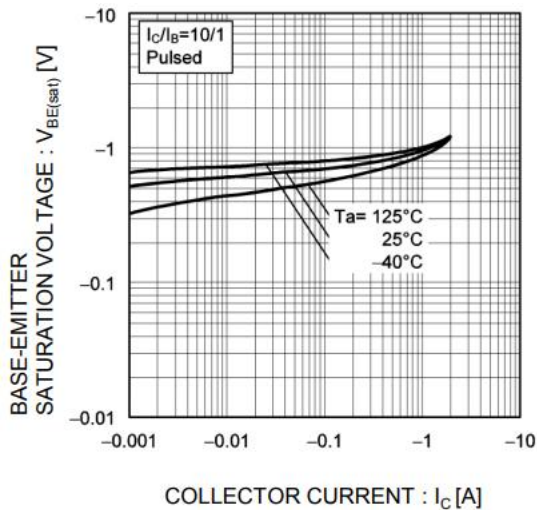
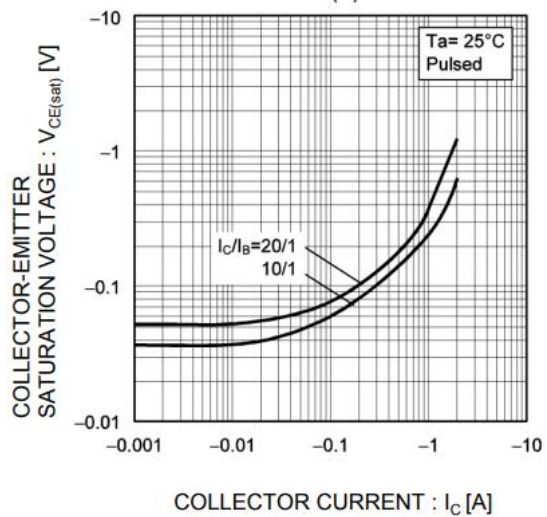
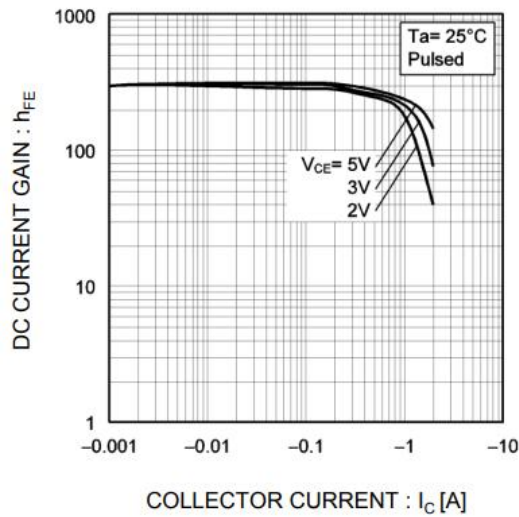
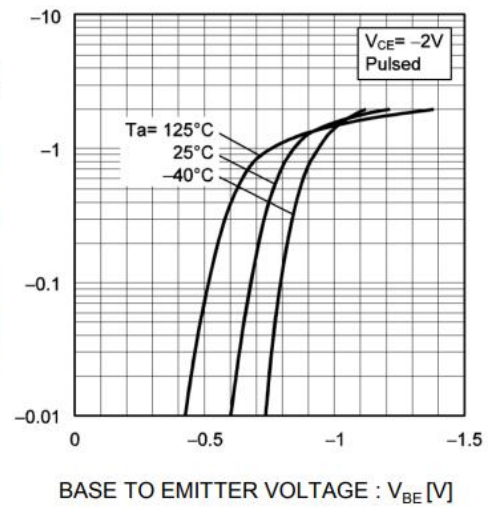
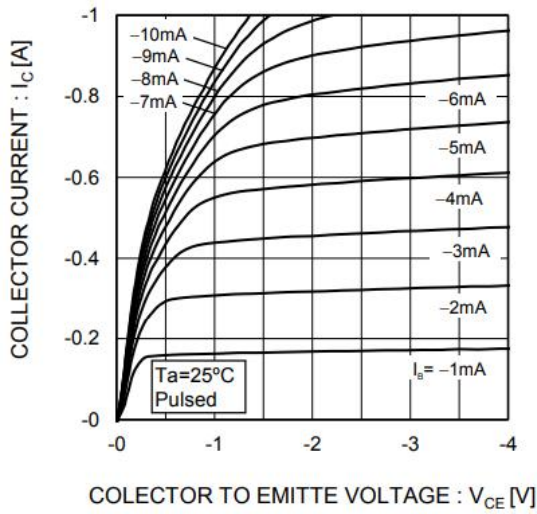
**➤ Electronics Characteristics**($T_A=25^{\circ}\text{C}$ unless otherwise specified)

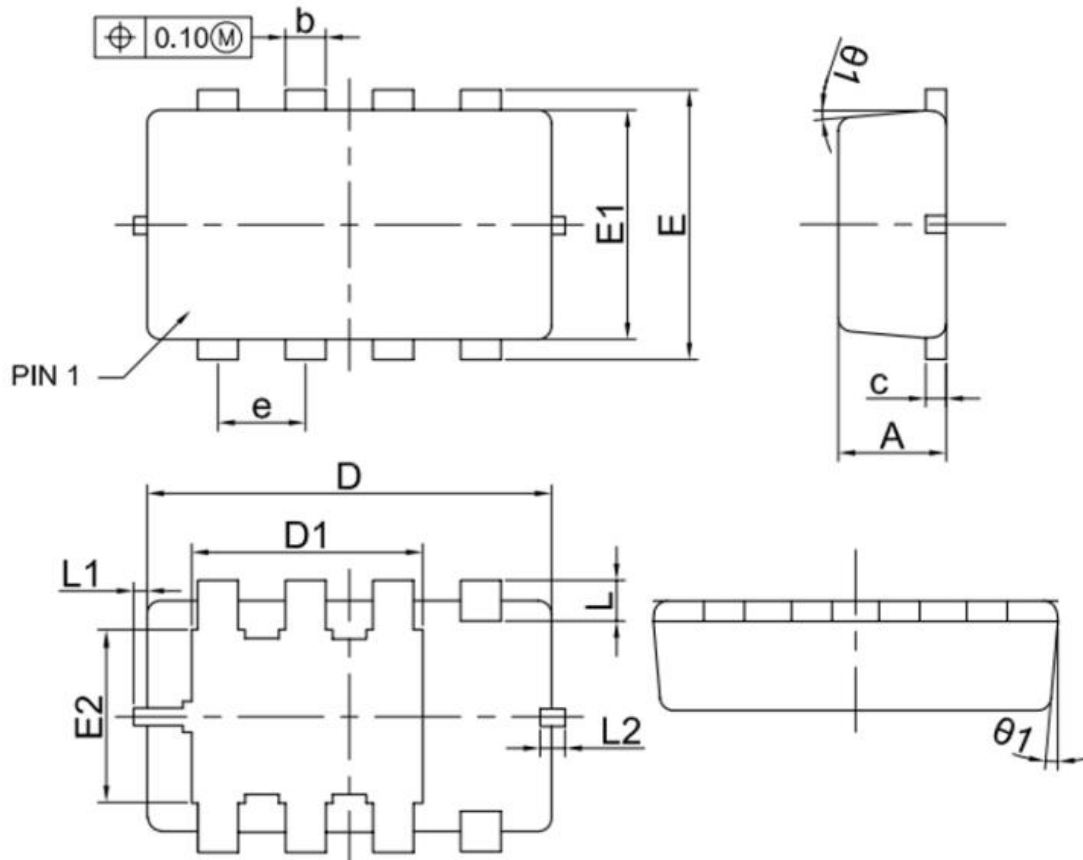
Symbol	Parameter	Test Conditions	Min	Typ.	Max	Unit
BVCBO	Collector-Base Breakdown Voltage	$I_C = -50\mu\text{A}$ $I_E = 0$	-40			V
BVCEO	Collector-Emitter Breakdown Voltage	$I_C = -1\text{mA}$ $I_B = 0$	-40			V
BVEBO	Emitter-Base Breakdown Voltage	$I_E = -1\mu\text{A}$ $I_C = 0$	-6			V
ICBO	Collector cut off current	$V_{CB} = -20\text{V}$ $I_E = 0$			-0.1	μA
IEBO	Emitter cut off current	$V_{EB} = -4\text{V}$ $I_C = 0$			-0.1	μA
HFE	DC Current Gain@Note3	$V_{CE} = -2\text{V}$ $I_C = -0.5\text{A}$	100	200	350	
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		Hz

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.	Typ.	Max.
A	0.70	0.80	0.90
b	0.24	0.30	0.35
c	0.08	0.15	0.20
D	2.90	3.00	3.05
D1	1.52	1.62	1.72
E	1.90	2.00	2.10
E1	1.60	1.70	1.75
E2	1.07	1.17	1.27
e	0.65 BSC		
L	0.20	0.30	0.40
L1	0.00	—	0.10
L2	0.184MAX		
θ_1	0°	5°	8°



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