



SSCNA44GS6

High Frequency High Gain NPN Power BJT

➤ Features

VCB	VCE	VEB	IC
400V	400V	6V	200mA

➤ Description

This device is designed for general-purpose high-voltage amplifiers and gas discharge display drivers. It is Ideal for medium power amplification and switching.

➤ Applications

- Amplifying signal
- Electronic switch
- Oscillating circuit
- Variable resistance

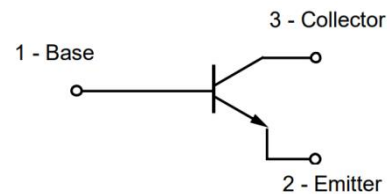
➤ Ordering Information

Device	Package	Shipping
SSCNA44GS6	SOT-23	3000/Reel

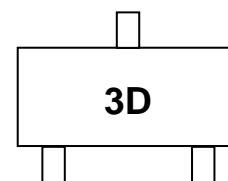
➤ Pin configuration



SOT-23



Circuit Diagram



Marking (Top View)



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

Parameter	Symbol	Value	Unit
Collector-Base Voltage	V_{CB0}	400	V
Collector- Emitter Voltage	V_{CEO}	400	V
Emitter-Base Voltage	V_{EBO}	6	V
Collector Current-Continuous	I_C	200	mA
Collector Current-Peak	I_{CM}	300	mA
Collector Power Dissipation	P_C	350	mW
Thermal Resistance From Junction to Ambient	$R_{\theta JA}$	357	$^\circ\text{C}/\text{W}$
Junction Temperature	T_J	-55 to 150	$^\circ\text{C}$
Storage Temperature	T_{STG}	-55 to 150	$^\circ\text{C}$

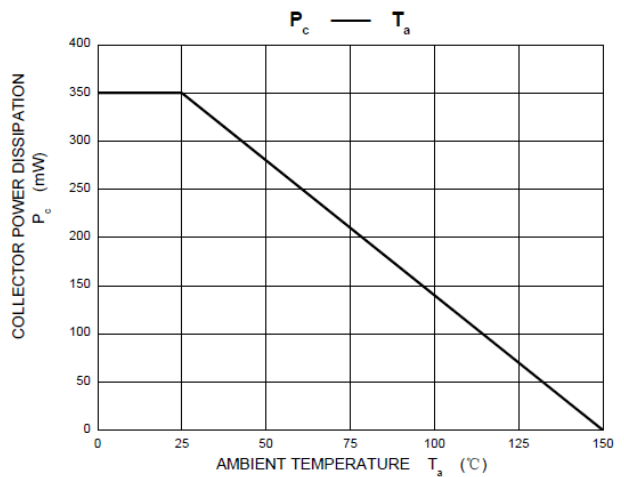
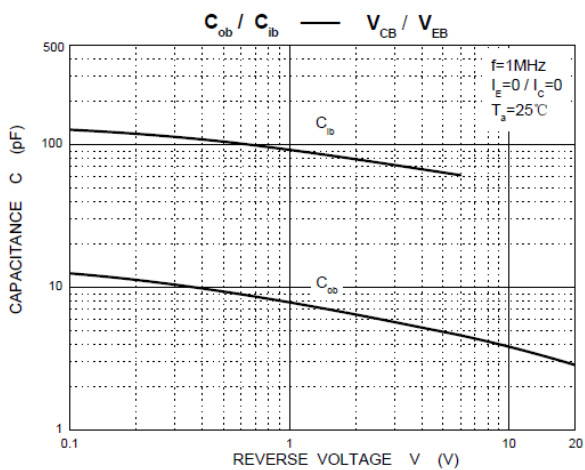
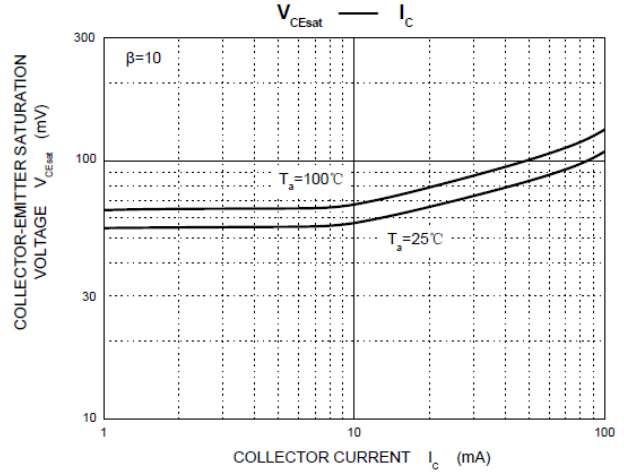
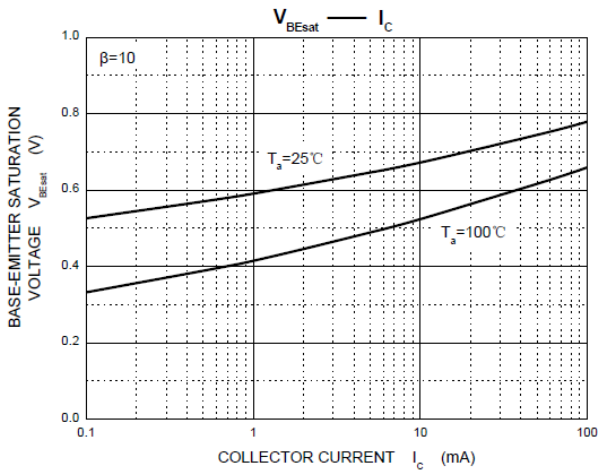
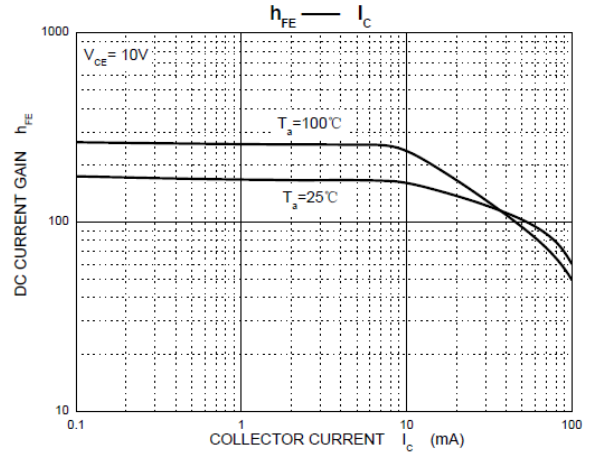
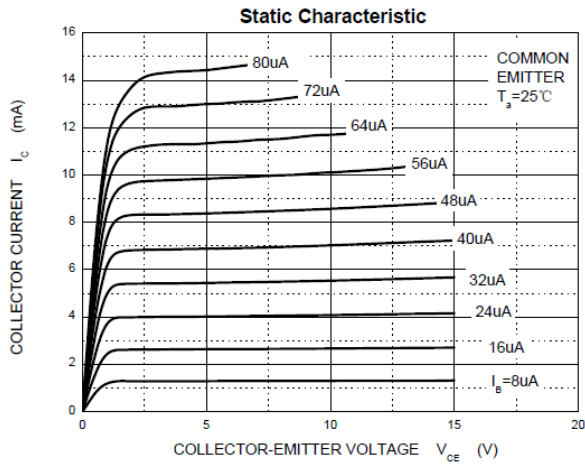
➤ **Electrical Characteristics** ($T_A=25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Collector-Base Breakdown Voltage	BV_{CB0}	$I_C=0.1\text{mA}, I_E=0$	400			V
Collector-emitter Breakdown Voltage	BV_{CEO}	$I_C=1\text{mA}, I_B=0$	400			V
Emitter -Base Breakdown Voltage	BV_{EBO}	$I_E=0.01\text{mA}, I_C=0$	6			V
Collector Cutoff Current	I_{CBO}	$V_{CB}=400\text{V}, I_E=0$			0.1	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=4\text{V}, I_C=0$			0.1	μA
DC Current Gain	h_{FE}^*	$V_{CE}=10\text{V}, I_C=1\text{mA}$	40			
		$V_{CE}=10\text{V}, I_C=10\text{mA}$	50		200	
		$V_{CE}=10\text{V}, I_C=50\text{mA}$	45			
		$V_{CE}=10\text{V}, I_C=100\text{mA}$	40			
Collector-Emitter Saturation Voltage	$V_{CE(sat)1}^*$	$I_C=1\text{mA}, I_B=0.1\text{mA}$			0.4	V
	$V_{CE(sat)2}^*$	$I_C=10\text{mA}, I_B=1\text{mA}$			0.5	V
	$V_{CE(sat)3}^*$	$I_C=50\text{mA}, I_B=5\text{mA}$			0.75	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}^*$	$I_C=10\text{mA}, I_B=1\text{mA}$			0.75	V
Collector Output Capacitance	C_{ob}	$V_{CB}=20\text{V}, I_E=0, f=1\text{MHz}$			7	pF
Emitter Input Capacitance	C_{ib}	$V_{EB}=0.5\text{V}, I_C=0, f=1\text{MHz}$			130	pF
Transition frequency	f_T	$V_{CE}=20\text{V}, I_C=10\text{mA}$ $f=30\text{MHz}$	50			MHz

*Pulse test: pulse width $\leq 300\mu\text{s}$, duty cycle $\leq 2.0\%$.



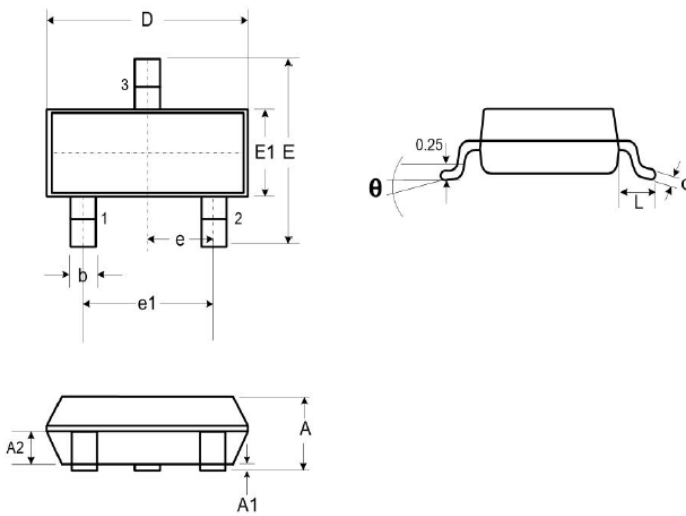
➤ Typical Performance Characteristics ($T_A=25^\circ\text{C}$ unless otherwise noted)





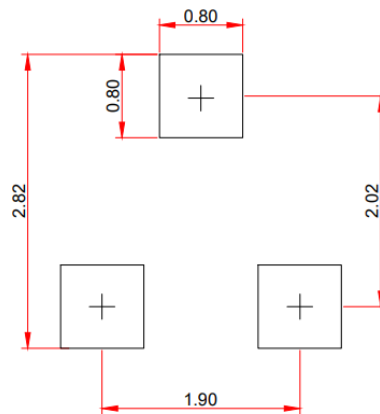
➤ **Package Information**

● **Mechanical Data**



DIM	Millimeters		
	Min.	Typ.	Max.
A	0.89	-	1.12
A1	0.01	-	0.10
A2	0.88	0.95	1.02
b	0.30	-	0.51
c	0.08	-	0.18
D	2.80	2.90	3.04
E	2.10	2.37	2.64
E1	1.20	1.30	1.40
e	1.90		
e1	0.95		
L	0.40	0.50	0.60
L1	0.55		
N	3		
θ	0°	-	8°

● **Recommended Pad outline (Unit: mm)**





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