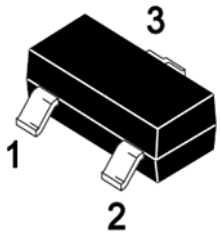
SSCN491GS6

NPN Switching Transistor

➢ Features

VCB	VCE	VEB	IC
80V	60V	5V	1000mA

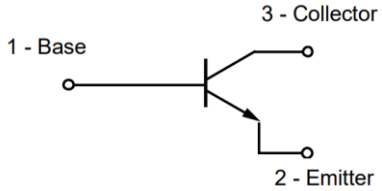
➢ Pin configuration



SOT-23

➢ Description

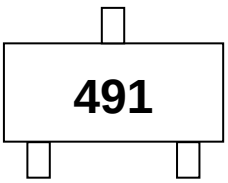
The NPN Transistor is designed for use in linear and switching applications. The device is housed in the SOT-23 package, which is designed for telephony and professional communication equipment.



Circuit Diagram

➢ Applications

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



Marking(Top View)

➢ Ordering Information

Device	Package	Shipping
SSCN491GS6	SOT-23	3000/Reel

➢ Absolute Maximum Ratings(T_A=25℃ unless otherwise noted)

Parameter	Symbol	Value	Unit
Collector-Base Voltage	V_{CBO}	80	V
Collector- Emitter Voltage	V_{CEO}	60	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current-Continuous	I_C	1	A
Peak Collector Current	I_{CM}	2	A
Collector Power Dissipation	P_C	250	mW
Thermal Resistance From Junction to Ambient	$R_{\theta JA}$	500	℃/W
Junction Temperature	T_J	-55 to 150	℃
Storage Temperature	T_{STG}	-55 to 150	℃

➢ Electrical Characteristics (T_A=25℃ unless otherwise noted)

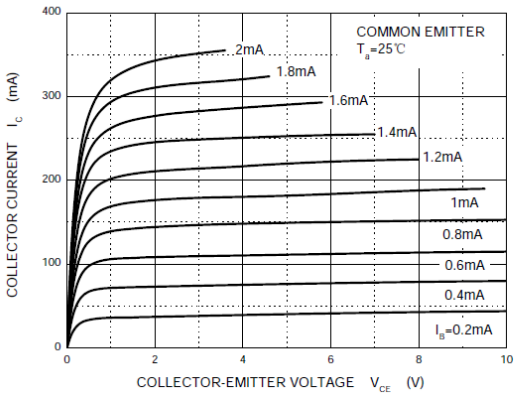
Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Collector-Base Breakdown Voltage	BV_{CBO}	I_C=100uA,I_E=0	80			V
Collector-emitter Breakdown Voltage	BV_{CEO}	I_C=10mA,I_B=0	60			V
Emitter -Base Breakdown Voltage	BV_{EBO}	I_E=100uA,I_C=0	5			V
Collector Cutoff Current	I_{CBO}	V_{CB}=60V, I_E=0			0.1	μA
Emitter Cutoff Current	I_{EBO}	V_{EB}=4V,I_C=0			0.1	μA
DC Current Gain	h_{FE}[1]	V_{CE}=5V,I_C=1mA	100			
		V_{CE}=5V,I_C=500mA	100		300	
		V_{CE}=5V,I_C=1A	80			
		V_{CE}=5V,I_C=2A	30			
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$[1]	I_C=500mA,I_B=50mA			0.25	V
		I_C=1A,I_B=100mA			0.5	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$[1]	I_C=1A,I_B=100mA			1.1	V
Transition frequency	f_T	V_{CE}=10V,I_C=50mA f=100MHz	150			MHz
Collector output capacitance	C_{ob}	V_{CB}=10V,f=1MHz			10	pF

Notes：

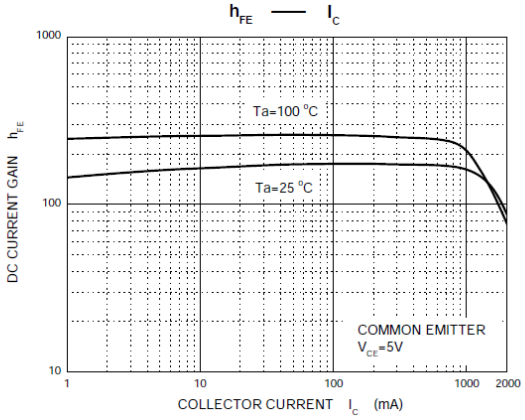
1. Measured under pulsed conditions, Pulse width=300μs, Duty cycle≤2%.

➢ Typical Performance Characteristics (T_A=25℃ unless otherwise noted)

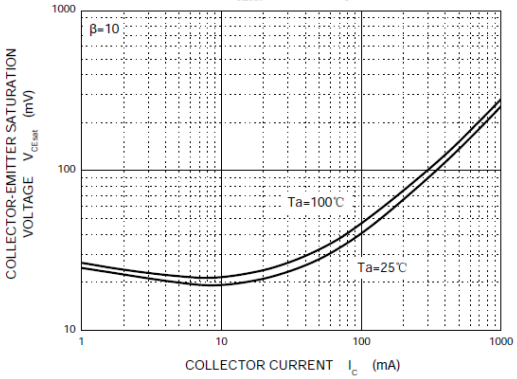
Static Characteristic



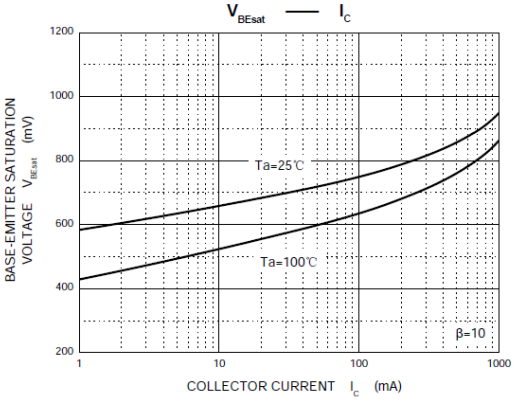
h_{FE} — I_C



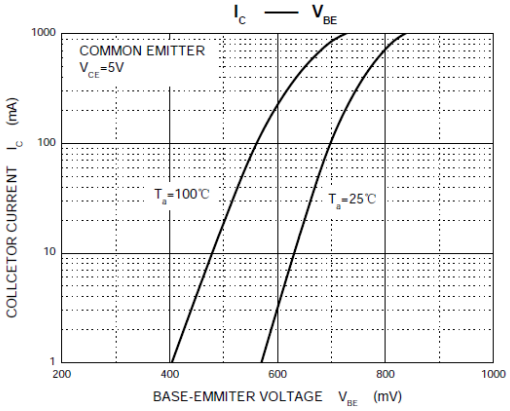
V_{CEsat} — I_C



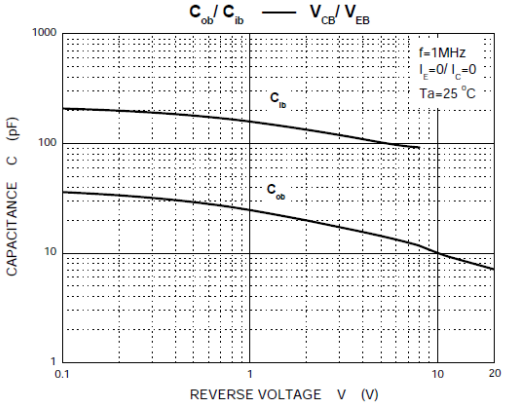
V_{BEsat} — I_C



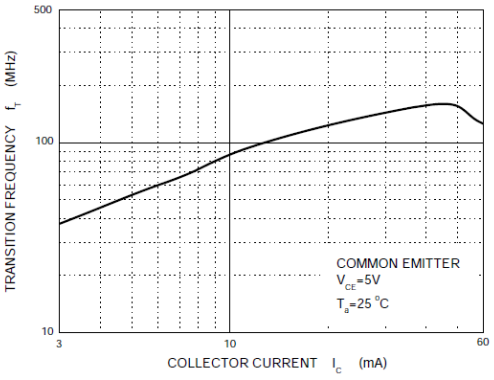
I_C — V_{BE}



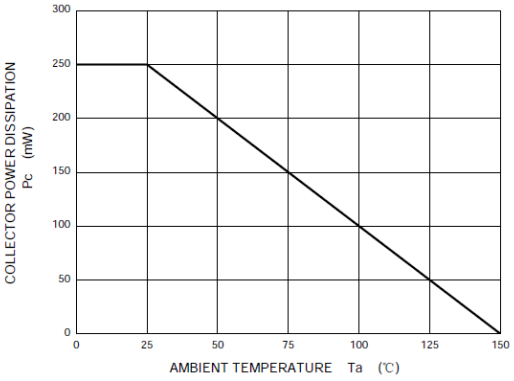
C_{ob} / C_{ib} — V_{CB} / V_{EB}



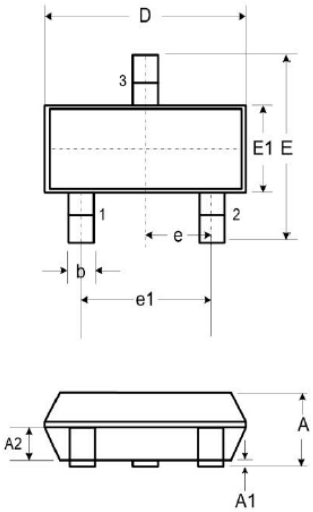
f_T — I_C

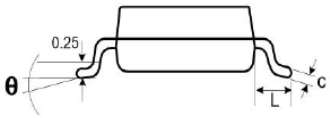


Pc — Ta



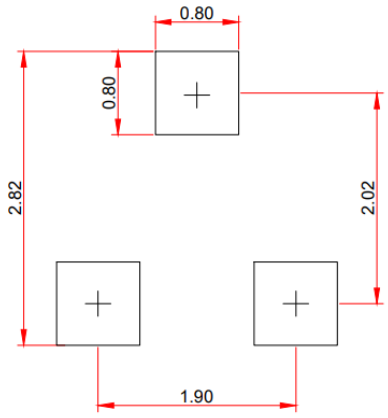
- **Package Information**





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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