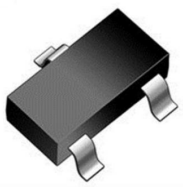
SSCN5551GS7

High Frequency High Gain NPN Power BJT

➢ Features

VCB	VCE	VEB	IC
180V	160V	6V	600mA

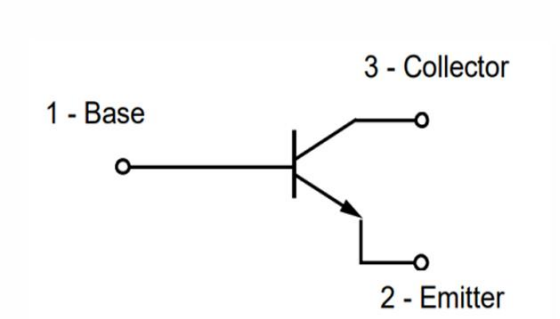
➢ Pin configuration



SOT-323

➢ 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.



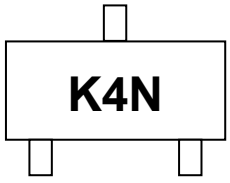
Circuit Diagram

➢ Applications

- General-purpose high-voltage amplifiers
- Gas discharge display drivers
- Medium power amplification and switching

➢ Ordering Information

Device	Package	Shipping
SSCN5551GS7	SOT-323	3000/Reel



Marking(Top View)

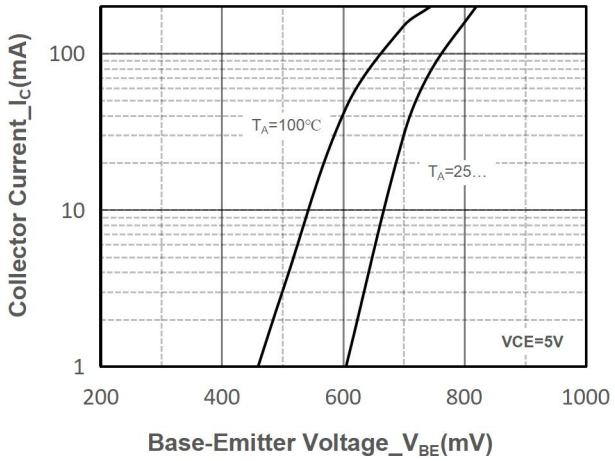
➢ Absolute Maximum Ratings(T_A=25℃ unless otherwise noted)

Parameter	Symbol	Value	Unit
Collector-Base Voltage	V_{CBO}	180	V
Collector- Emitter Voltage	V_{CEO}	160	V
Emitter-Base Voltage	V_{EBO}	6	V
Collector Current-Continuous	I_C	600	mA
Collector Power Dissipation	P_C	200	mW
Thermal Resistance From Junction To Ambient	$R_{\Theta JA}$	625	℃/W
Junction Temperature	T_J	-55 to 150	℃
Storage Temperature	T_{STG}	-55 to 150	℃

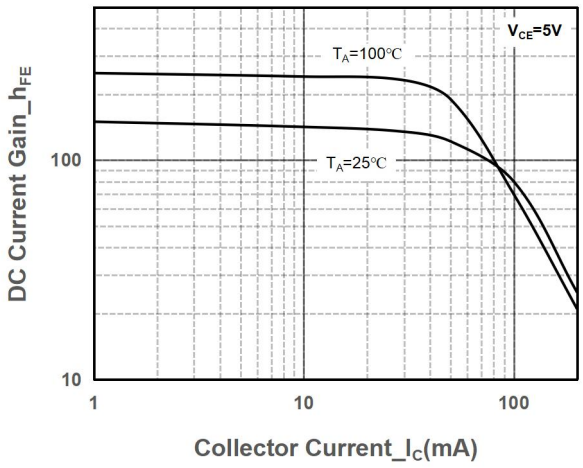
➢ Electrical Characteristics (T_A=25℃ unless otherwise noted)

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Collector-Base Breakdown Voltage	BV_{CBO}	I_C=0.1mA, I_E=0	180			V
Collector-emitter Breakdown Voltage	BV_{CEO}	I_C=1mA, I_B=0	160			V
Emitter -Base Breakdown Voltage	BV_{EBO}	I_E=0.1mA, I_C=0	6			V
Collector Cutoff Current	I_{CBO}	V_{CB}=120V, I_E=0			0.05	μA
Emitter Cutoff Current	I_{EBO}	V_{EB}=4V, I_C=0			0.05	μA
DC Current Gain	h_{FE1}	V_{CE}=5V, I_C=1mA	80			
	h_{FE2}	V_{CE}=5V, I_C=10mA	100		300	
	h_{FE3}	V_{CE}=5V, I_C=50mA	30			
Collector-Emitter Saturation Voltage	$V_{CE\ (sat)1}$	I_C=10mA, I_B=1mA			0.15	V
	$V_{CE\ (sat)2}$	I_C=50mA, I_B=5mA			0.2	V
Base-Emitter Saturation Voltage	$V_{BE\ (sat)1}$	I_C=10mA, I_B=1mA			1.0	V
	$V_{BE\ (sat)2}$	I_C=50mA, I_B=5mA			1.0	V
Output Capacitance	Cob	VCB=10V, IE=0, f=1MHz			6	pF
Transition frequency	f_T	V_{CE}=10V, I_C=10mA f=100MHz	100		300	MHz

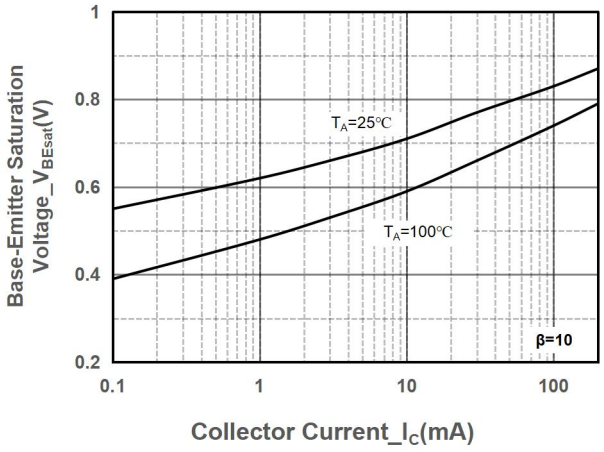
➢ Typical Performance Characteristics (T_A=25℃ unless otherwise noted)



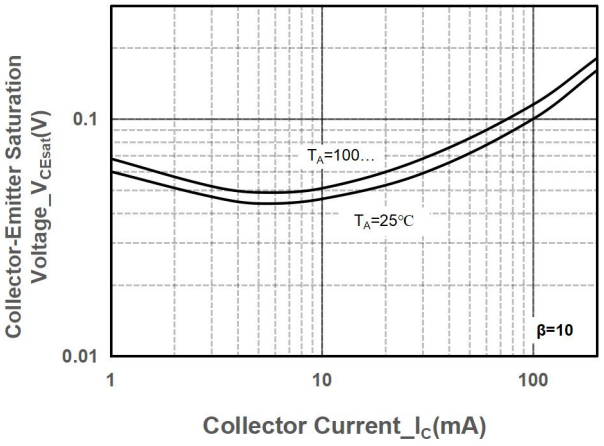
Collector Current vs. Base-Emitter Voltage



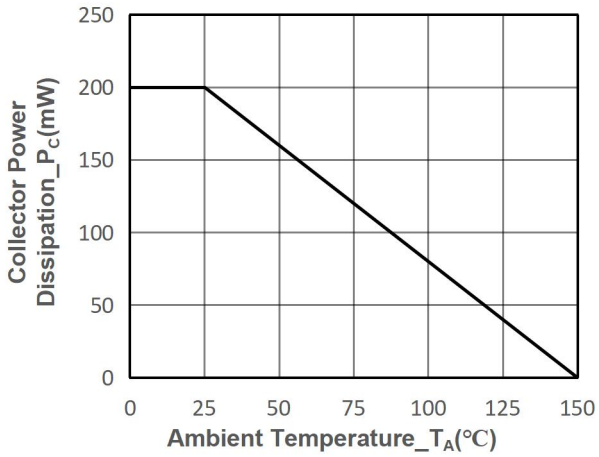
DC Current Gain vs. Collector Current



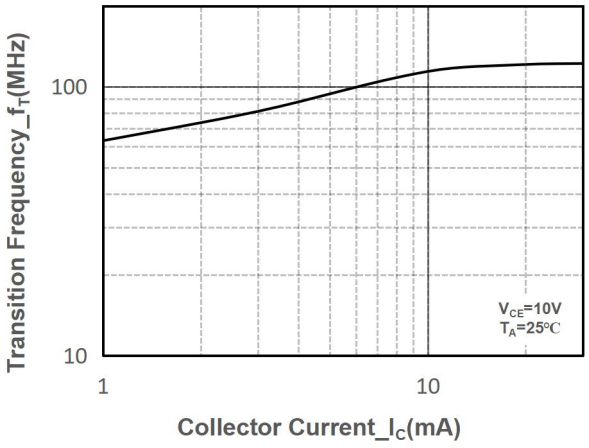
$V_{BE(sat)}$ vs. Collector Current



$V_{CE(sat)}$ vs. Collector Current



Power derating vs. Ambient temperature



Transition Frequency vs. Collector Current

➢ Package Information

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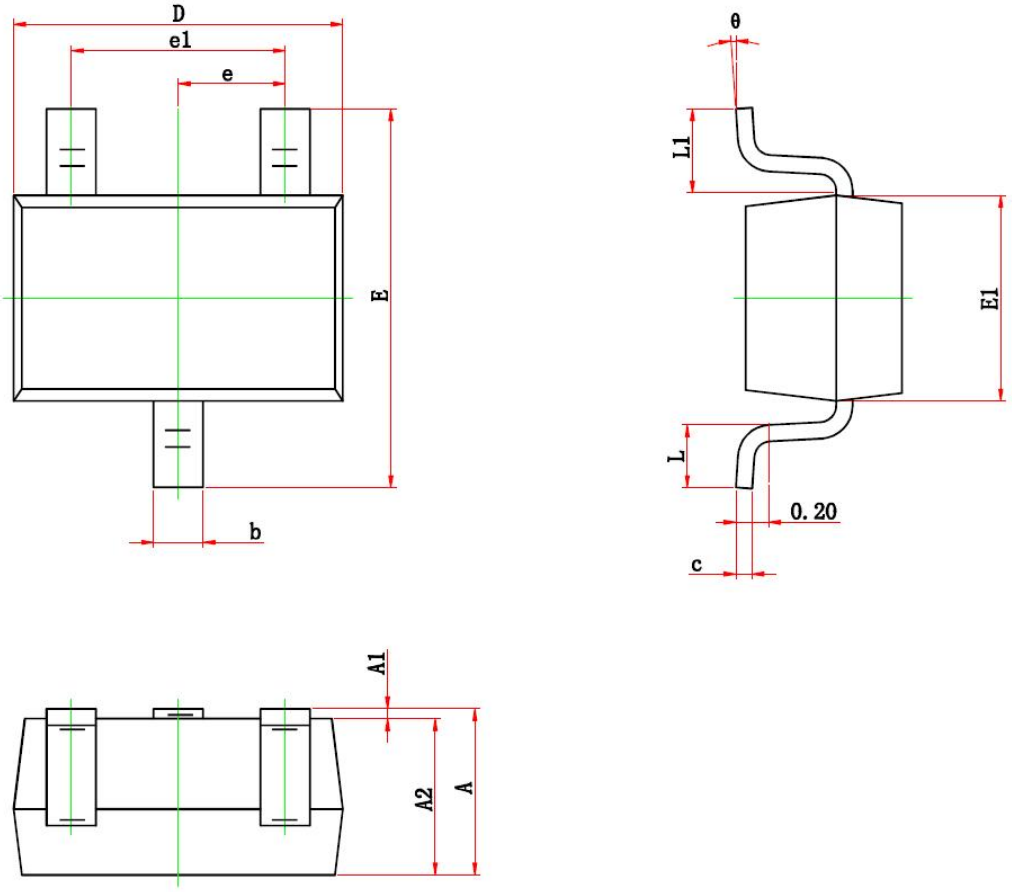

Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.900	1.100	0.035	0.043
A1	0.000	0.100	0.000	0.004
A2	0.900	1.000	0.035	0.039
b	0.200	0.400	0.008	0.016
c	0.080	0.150	0.003	0.006
D	2.000	2.200	0.079	0.087
E	2.150	2.450	0.085	0.096
E1	1.150	1.350	0.045	0.053
e	0.650 TYP.		0.026 TYP.	
e1	1.200	1.400	0.047	0.055
L	0.260	0.460	0.010	0.018
L1	0.525 REF.		0.021 REF.	
θ	0°	8°	0°	8°

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