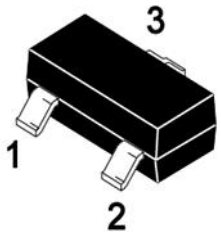
SSCN2222AGS7

High Frequency High Gain NPN Power BJT

➢ Features

VCB	VCE	VEB	IC
75V	40V	6V	600mA

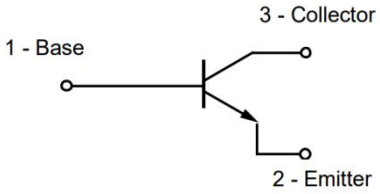
➢ Pin configuration



SOT-323

➢ Description

This product is general usage and suitable for many different applications. It can be used for medium power amplifiers and switches requiring collector currents up to 600 mA.



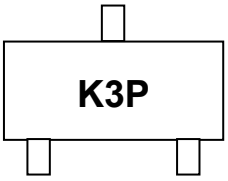
Circuit Diagram

➢ Applications

- Low current and high precision circuits such preamplifiers, oscillators, current mirror configuration
- Medium power amplification and switching

➢ Ordering Information

Device	Package	Shipping
SSCN2222AGS7	SOT-323	3000/Reel



Marking(Top View)

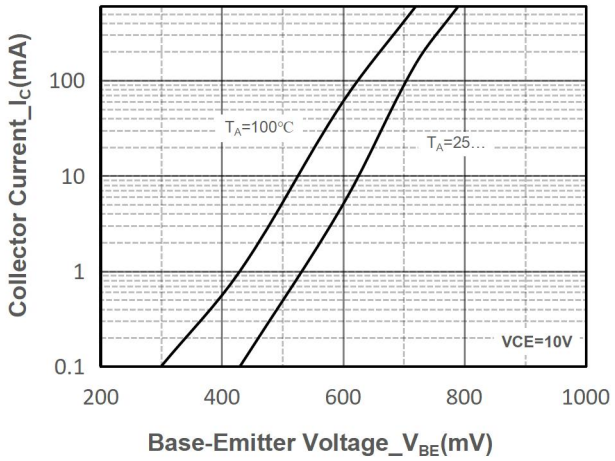
➢ Absolute Maximum Ratings(T_A=25℃ unless otherwise noted)

Parameter	Symbol	Value	Unit
Collector-Base Voltage	V_{CBO}	75	V
Collector- Emitter Voltage	V_{CEO}	40	V
Emitter-Base Voltage	V_{EBO}	6	V
Collector Current-Continuous	I_C	600	mA
Collector Power Dissipation	P_C	200	mW
Junction Temperature	T_J	150	℃
Storage Temperature	T_{STG}	-55 to 150	℃

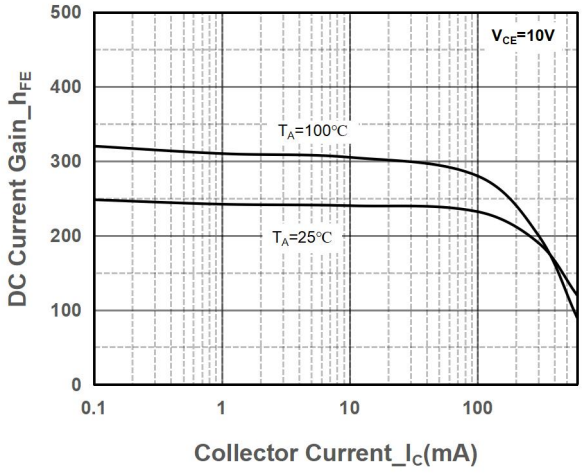
➢ Electrical Characteristics (T_A=25℃ unless otherwise noted)

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Collector-Base Breakdown Voltage	BV_{CBO}	I_C=0.1mA,I_E=0	75			V
Collector-emitter Breakdown Voltage	BV_{CEO}	I_C=1mA,I_B=0	40			V
Emitter -Base Breakdown Voltage	BV_{EBO}	I_E=0.1mA,I_C=0	6			V
Collector Cutoff Current	I_{CBO}	V_{CB}=60V,I_E=0			0.01	μA
Collector Cutoff Current	I_{CEX}	V_{CE}=60V, V_{BE}=3V			0.01	μA
Emitter Cutoff Current	I_{EBO}	V_{EB}=3V,I_C=0			0.01	μA
DC Current Gain	h_{FE1}	V_{CE}=10V,I_C=150mA	100		300	
	h_{FE2}	V_{CE}=10V,I_C=0.1mA	40			
	h_{FE3}	V_{CE}=10V,I_C=500mA	40			
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	I_C=500mA,I_B=50mA			1.0	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	I_C=500mA,I_B=50mA			2.0	V
Transition frequency	f_T	V_{CE}=20V,I_C=20mA f=100MHz	250			MHz
Delay Time	t_d	V_{CC}=30V,I_C=150mA, I_{B1}=15mA			10	ns
Rise Time	t_r	V_{CC}=30V,I_C=150mA, I_{B1}=15mA			25	ns
Storage Time	t_s	V_{CC}=30V,I_C=150mA, I_{B1}= I_{B2}=15mA			225	ns
Fall Time	t_f	V_{CC}=30V,I_C=150mA, I_{B1}= I_{B2}=15mA			60	ns

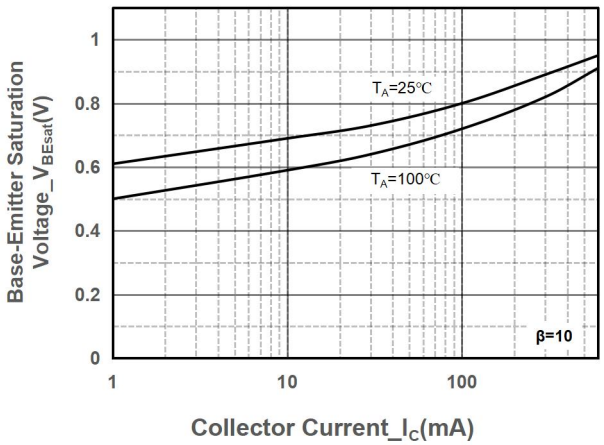
➢ Typical Performance Characteristics (T_A=25℃ unless otherwise noted)



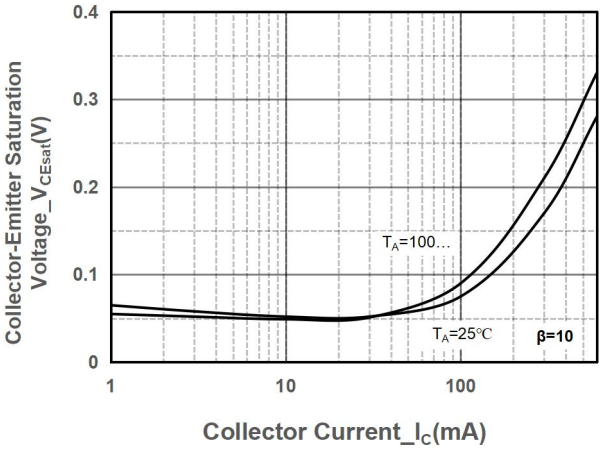
Collector Current vs. Base-Emitter Voltage



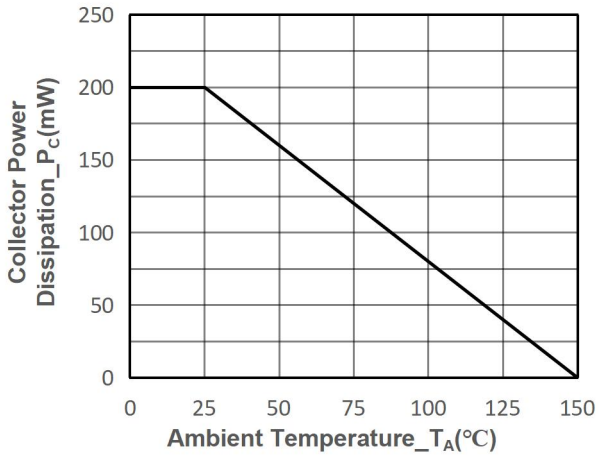
DC Current Gain vs. Collector Current



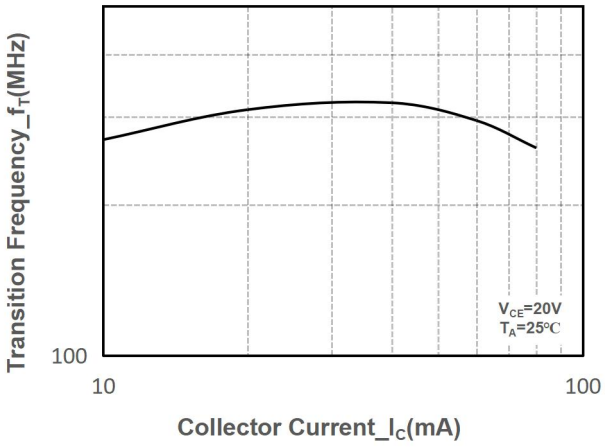
$V_{BE(sat)}$ vs. Collector Current



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

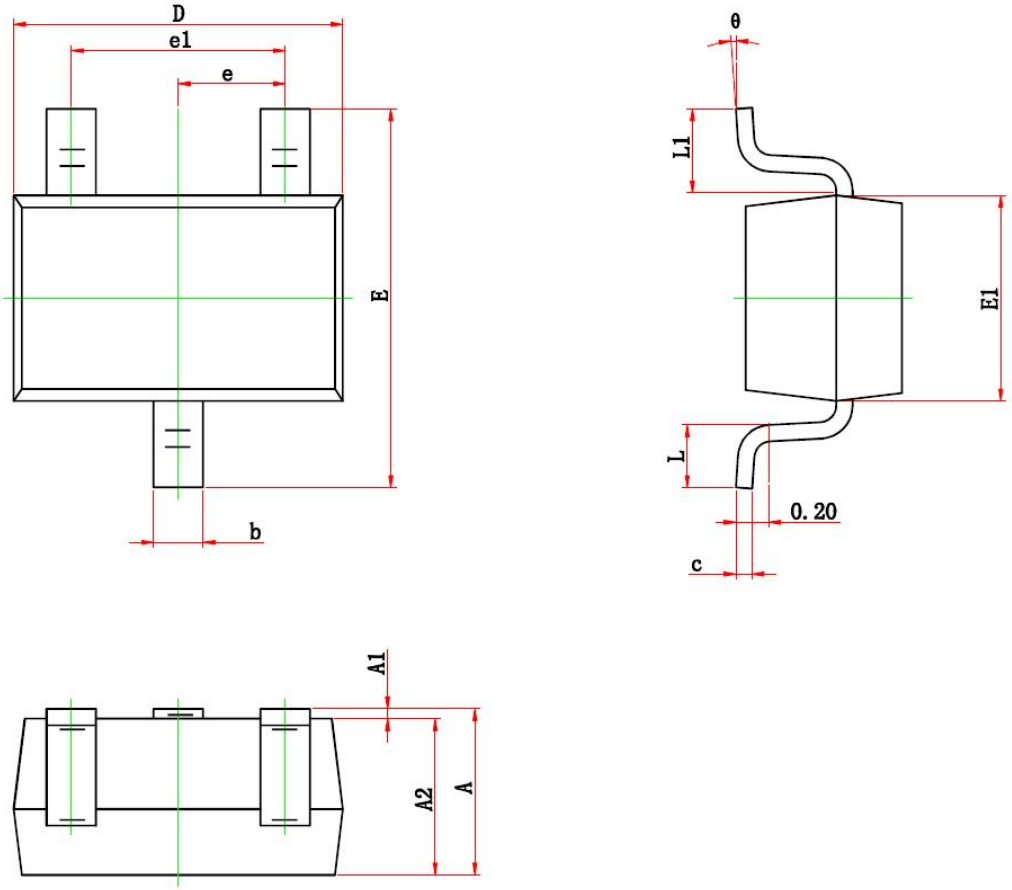


Power derating vs. Ambient temperature



Transition Frequency vs. Collector Current

➢ Package Information



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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