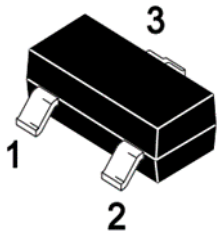
SSCNA42GS7

High Frequency High Gain NPN Power BJT

➢ Features

VCB	VCE	VEB	IC
300V	300V	5V	0.2A

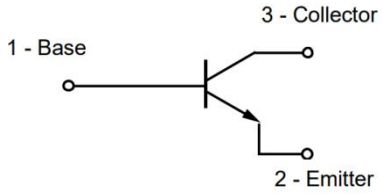
➢ Pin configuration



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.



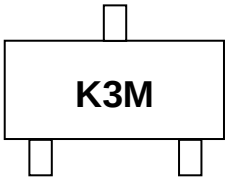
Circuit Diagram

➢ Applications

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

➢ Ordering Information

Device	Package	Shipping
SSCNA42GS7	SOT-323	3000/Reel



Marking (Top View)

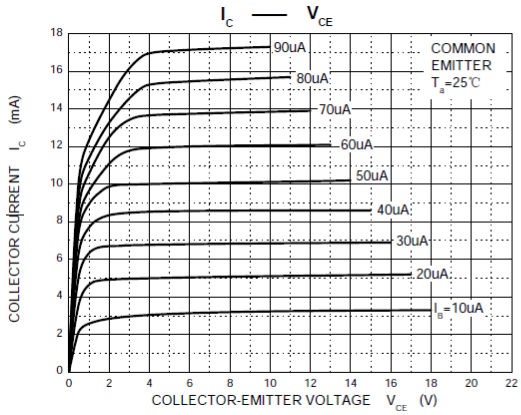
➢ Absolute Maximum Ratings(T_A=25℃ unless otherwise noted)

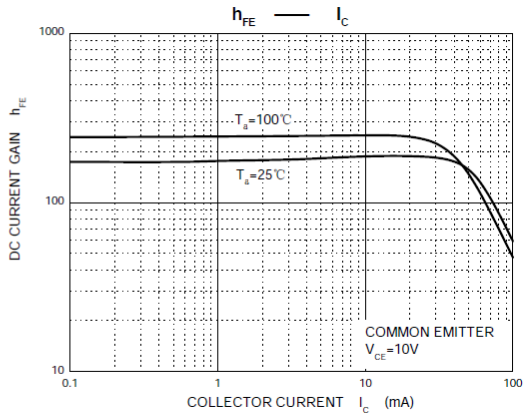
Parameter	Symbol	Value	Unit
Collector-Base Voltage	V_{CBO}	300	V
Collector- Emitter Voltage	V_{CEO}	300	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current-Continuous	I_C	200	mA
Collector Current-Peak	I_{CM}	500	mA
Collector Power Dissipation	P_C	300	mW
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	417	℃/W
Junction Temperature	T_J	-55 to 150	℃
Storage Temperature	T_{STG}	-55 to 150	℃

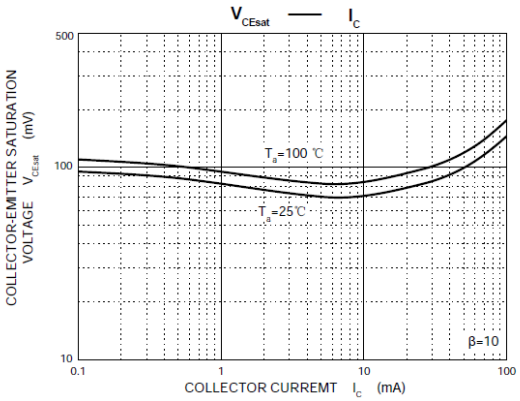
➢ Electrical Characteristics (T_A=25℃ unless otherwise noted)

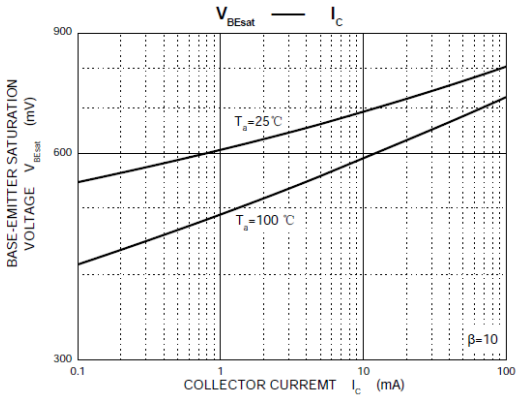
Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Collector-Base Breakdown Voltage	BV_{CBO}	I_C=0.1mA,I_E=0	300			V
Collector-emitter Breakdown Voltage	BV_{CEO}	I_C=1mA,I_B=0	300			V
Emitter -Base Breakdown Voltage	BV_{EBO}	I_E=0.1mA,I_C=0	5			V
Collector Cutoff Current	I_{CBO}	V_{CB}=200V,I_E=0			0.25	μA
Emitter Cutoff Current	I_{EBO}	V_{EB}=5V,I_C=0			0.1	μA
DC Current Gain	h_{FE}	V_{CE}=10V,I_C=1mA	60			
		V_{CE}=10V,I_C=10mA	100	200		
		V_{CE}=10V,I_C=30mA	75			
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	I_C=20mA,I_B=2mA			0.2	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	I_C=20mA,I_B=2mA			0.9	V
Transition frequency	f_T	V_{CE}=20V,I_C=10mA f=30MHz	50			MHz

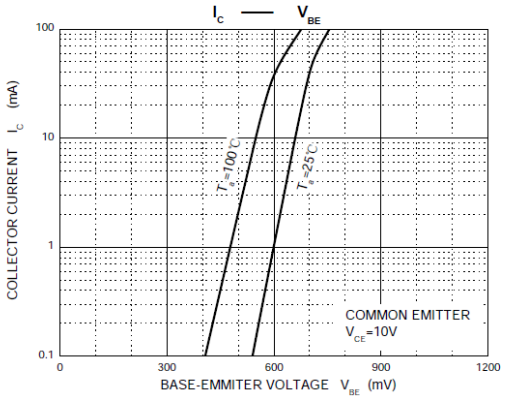
➢ Typical Performance Characteristics (T_A=25℃ unless otherwise noted)

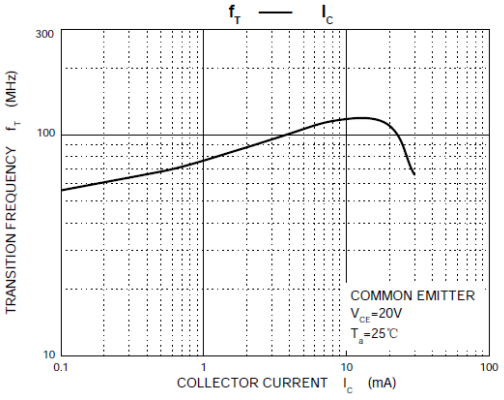


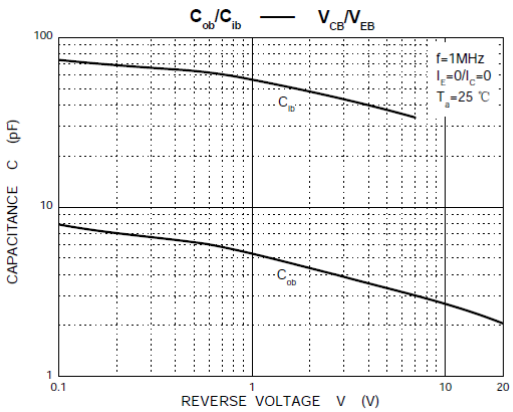


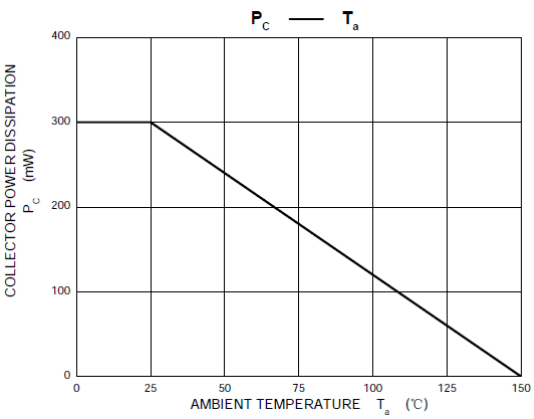






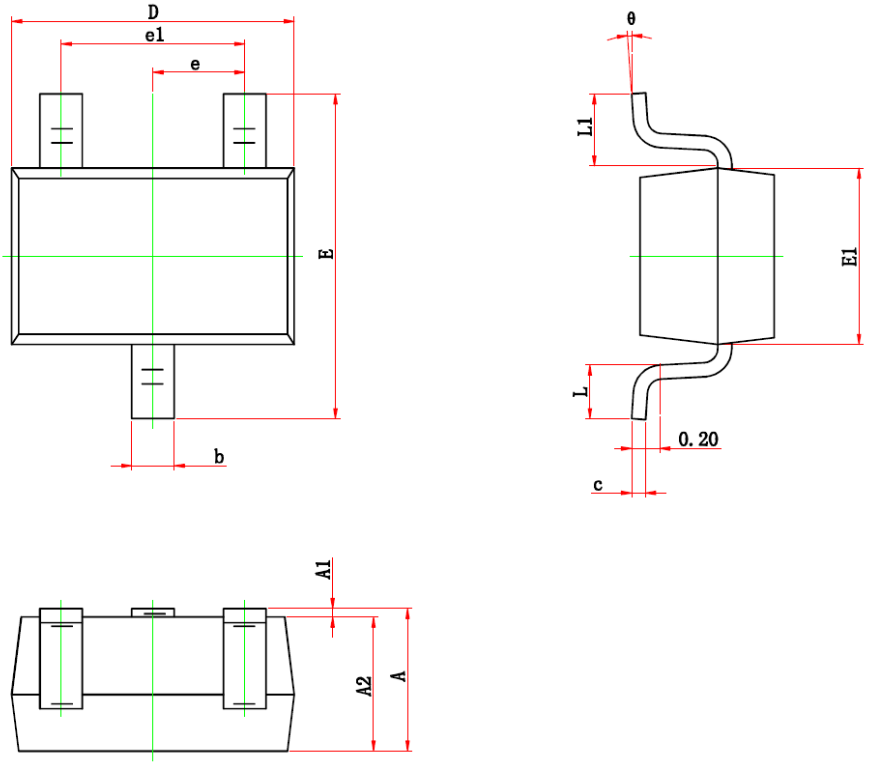






➢ Package Information

SOT-323



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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