



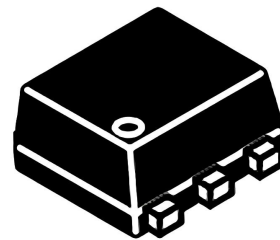
SSCNEMX1GSF

High Frequency High Gain DUAL NPN Power BJT

➤ Features

VCB	VCE	VEB	IC
60V	50V	7V	150mA

➤ Pin configuration



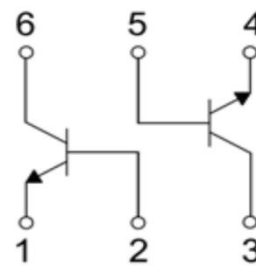
SOT-563

➤ 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

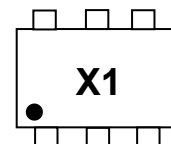
- General-purpose high-voltage amplifiers
- Gas discharge display drivers
- Medium power amplification and switching



Circuit Diagram

➤ Ordering Information

Device	Package	Shipping
SSCNEMX1GSF	SOT-563	3000/Reel



Marking(Top View)



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

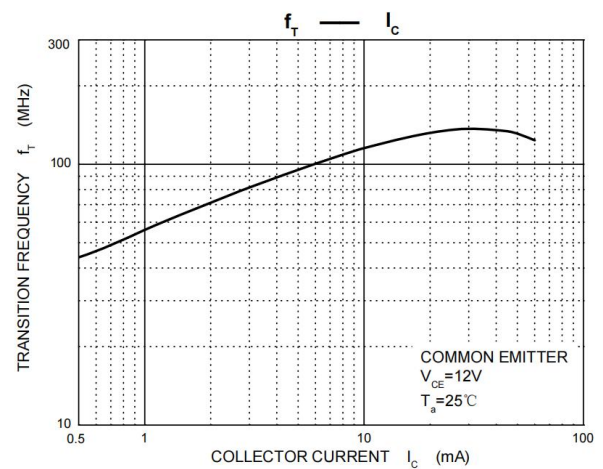
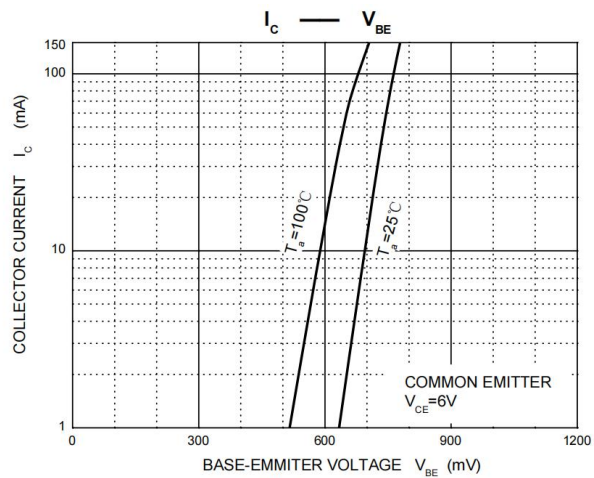
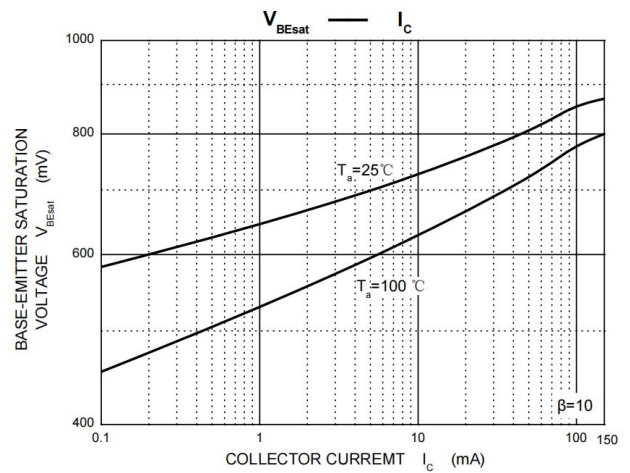
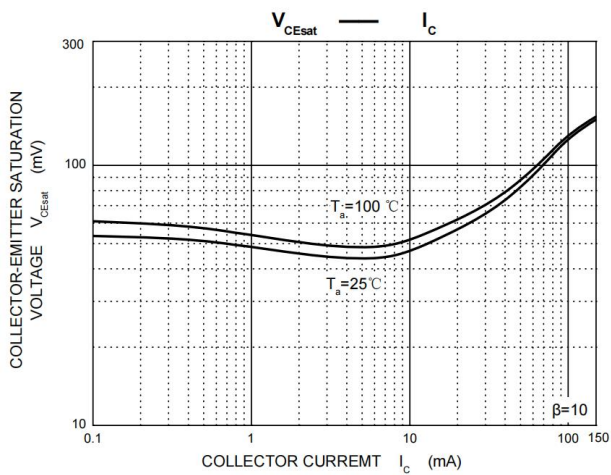
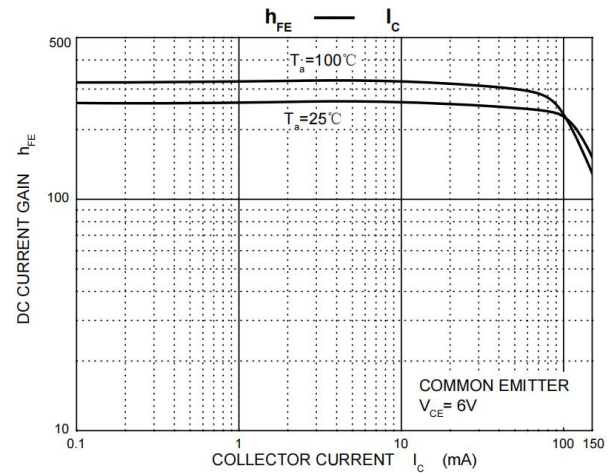
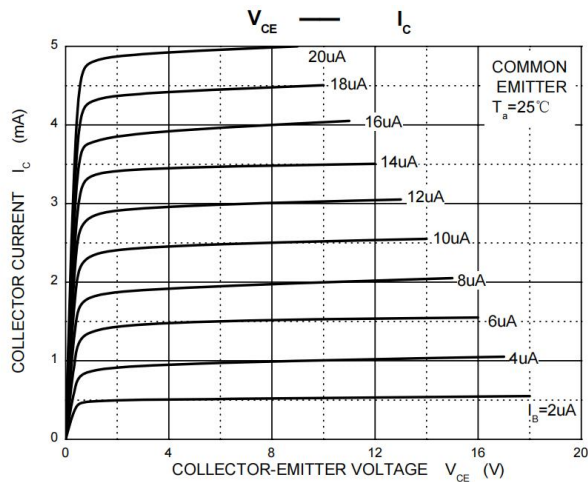
Parameter	Symbol	Value	Unit
Collector-Base Voltage	V_{CB0}	60	V
Collector- Emitter Voltage	V_{CE0}	50	V
Emitter-Base Voltage	V_{EB0}	7	V
Collector Current-Continuous	I_C	150	mA
Collector Power Dissipation	P_C	150	mW
Junction Temperature	T_J	-55 to 150	$^{\circ}\text{C}$
Storage Temperature	T_{STG}	-55 to 150	$^{\circ}\text{C}$

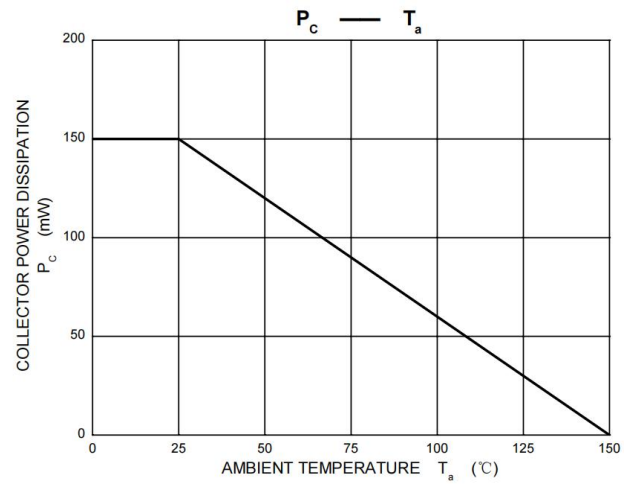
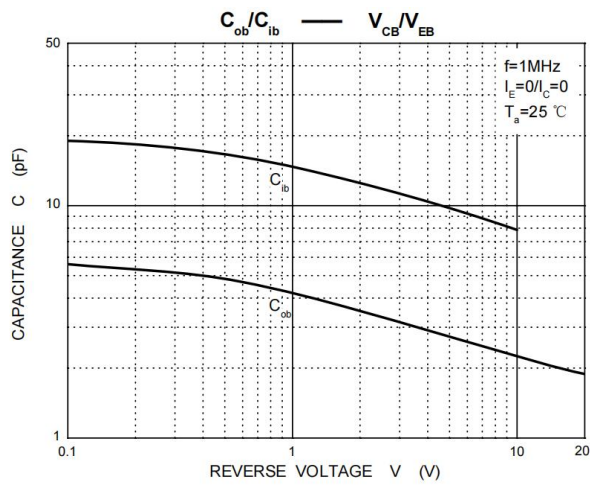
➤ **Electrical Characteristics** ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Collector-Base Breakdown Voltage	BV_{CB0}	$I_C=50\mu\text{A}$, $I_E=0$	60			V
Collector-emitter Breakdown Voltage	BV_{CE0}	$I_C=1\text{mA}$, $I_B=0$	50			V
Emitter -Base Breakdown Voltage	BV_{EB0}	$I_E=50\mu\text{A}$, $I_C=0$	7			V
Collector Cutoff Current	I_{CB0}	$V_{CB}=60\text{V}$, $I_E=0$			0.1	μA
Emitter Cutoff Current	I_{EB0}	$V_{EB}=7\text{V}$, $I_C=0$			0.1	μA
DC Current Gain	h_{FE}	$V_{CE}=6\text{V}$, $I_C=1\text{mA}$	120		560	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=50\text{mA}$, $I_B=5\text{mA}$			0.4	V
Transition frequency	f_T	$V_{CE}=12\text{V}$, $I_C=2\text{mA}$ $f=100\text{MHz}$		180		MHz
Collector output capacitance	C_{ob}	$V_{CB}=12\text{V}$, $I_E=0$ $f=1\text{MHz}$		2.0	3.5	pF



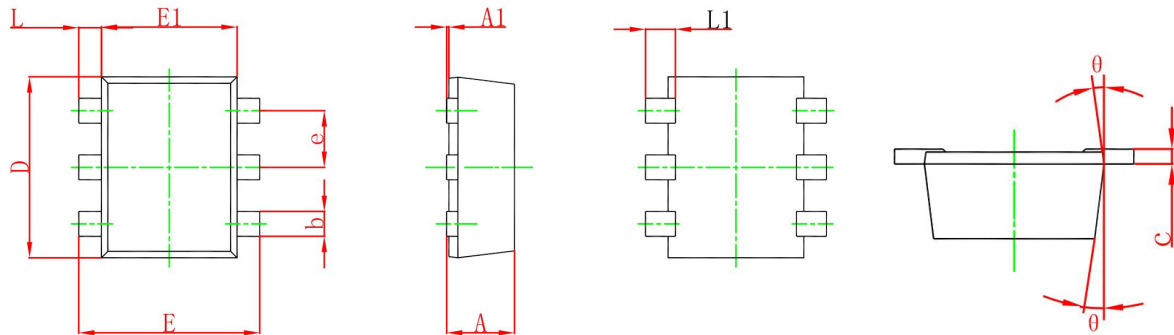
➤ Typical Performance Characteristics ($T_A=25^\circ\text{C}$ unless otherwise noted)





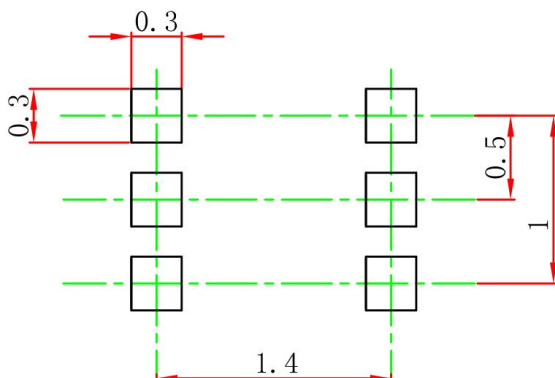
➤ Package Information

SOT-563



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.525	0.600	0.021	0.024
A1	0.000	0.050	0.000	0.002
e	0.450	0.550	0.018	0.022
c	0.090	0.160	0.004	0.006
D	1.500	1.700	0.059	0.067
b	0.170	0.270	0.007	0.011
E1	1.100	1.300	0.043	0.051
E	1.500	1.700	0.059	0.067
L	0.100	0.300	0.004	0.012
L1	0.200	0.400	0.008	0.016
θ	7° ⁰ REF.		7° ⁰ REF.	

➤ SOT-563 Suggested Pad Layout



Note:

1. Controlling dimension: in millimeters.
2. General tolerance: $\pm 0.05\text{mm}$.
3. The pad layout is for reference purposes only.



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