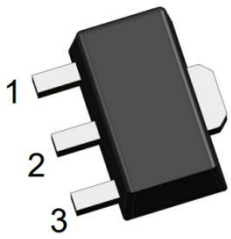
SSCNX5XGS3

NPN Plastic-Encapsulate Transistors

➢ Description

This product has the characteristics of high current and high-power consumption. It is universal and suitable for many different applications. It can be used for power amplifiers and switches that require collector currents up to 1A.

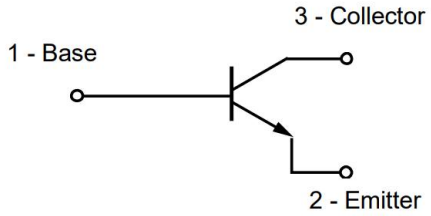
➢ Pin configuration



SOT-89-3L

➢ Features

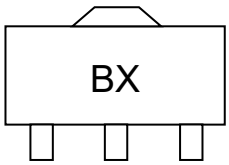
- Driver stages of audio amplifiers
- Linear voltage regulators
- Low-side switches
- Battery-driven devices
- Power management
- MOSFET drivers



Circuit Diagram

➢ Ordering Information

Device	Marking	Package	Shipping
SSCNX54GS3	BA	SOT-89-3L	1000/Reel
SSCNX5410GS3	BC		
SSCNX5416GS3	BD		
SSCNX55GS3	BE		
SSCNX5510GS3	BG		
SSCNX5516GS3	BM		
SSCNX56GS3	BH		
SSCNX5610GS3	BK		
SSCNX5616GS3	BL		



Marking (Top View)

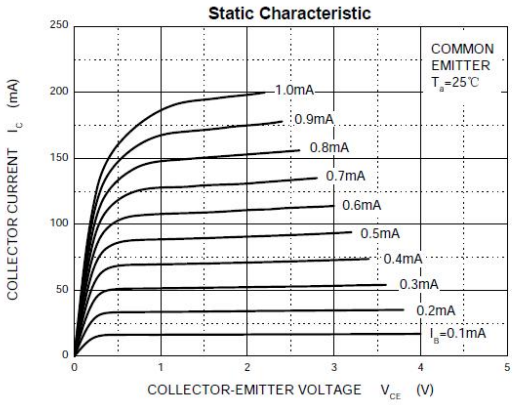
➢ Absolute Maximum Ratings (T_A=25℃ unless otherwise noted)

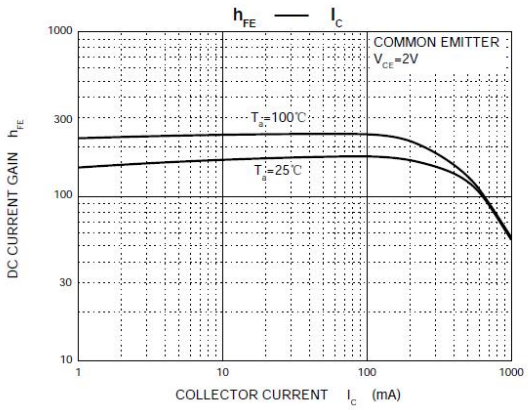
Parameter		Symbol	Value	Unit
Collector-Base Voltage	X54	V_{CBO}	45	V
	X55		60	
	X56		100	
Collector- Emitter Voltage	X54	V_{CEO}	45	V
	X55		60	
	X56		80	
Emitter-Base Voltage		V_{EBO}	5	V
Collector Current-Continuous		I_C	1	A
Base Current		I_B	0.1	A
Collector Power Dissipation		P_C	500	mW
Thermal Resistance From Junction To Ambient		$R_{\Theta JA}$	250	℃/W
Junction Temperature		T_J	150	℃
Storage Temperature		T_{STG}	-55 to 150	℃

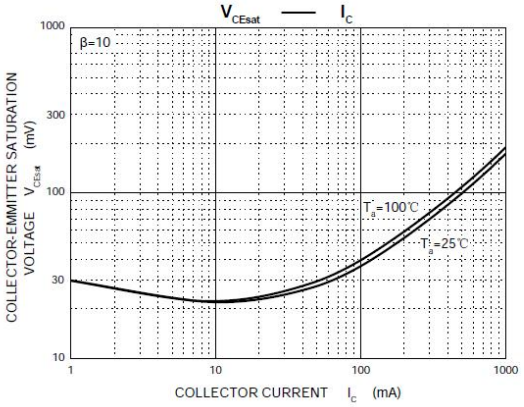
➢ Electrical Characteristics (T_A=25℃ unless otherwise noted)

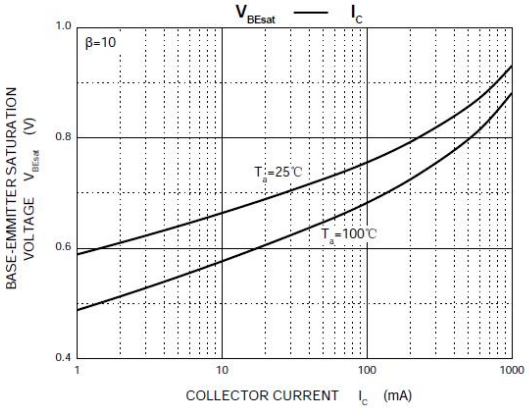
Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Collector-Base Breakdown Voltage						
X54	BV_{CBO}	I_C=100uA, I_E=0	45			V
X55			60			
X56			100			
Collector-emitter Breakdown Voltage						
X54	BV_{CEO}	I_C=10mA, I_B=0	45			V
X55			60			
X56			80			
Emitter -Base Breakdown Voltage	BV_{EBO}	I_E=10uA, I_C=0	5			V
Collector Cutoff Current	I_{CBO}	V_{CB}=30V, I_E=0			100	nA
Emitter Cutoff Current	I_{EBO}	V_{EB}=5V, I_C=0			100	nA
DC Current Gain	h_{FE1}	V_{CE}=2V, I_C=5mA	40			
DC Current Gain						
X54, X55, X56	h_{FE2}	V_{CE}=2V, I_C=150mA	63		250	
X5410, X5510, X5610			63		160	
X5416, X5516, X5616			100		250	
DC Current Gain	h_{FE3}	V_{CE}=2V, I_C=0.5A	25			
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	I_C=0.5A, I_B=50mA			0.5	V
Base-Emitter Voltage	V_{BE}	V_{CE}=2V, I_C=0.5A			1	V
Transition frequency	f_T	V_{CE}=5V, I_C=10mA f=100MHz		130		MHz

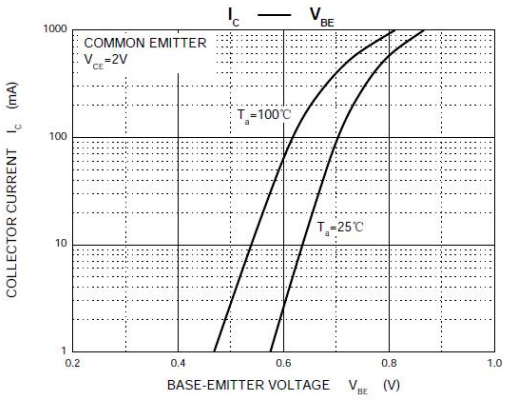
➢ Typical Performance Characteristics (T_A=25℃ unless otherwise noted)

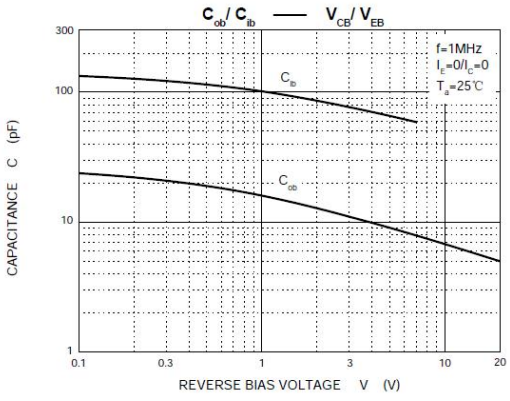


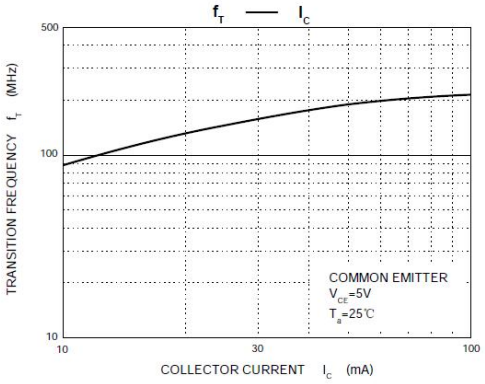


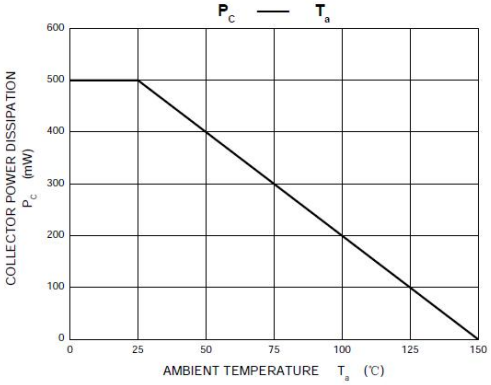






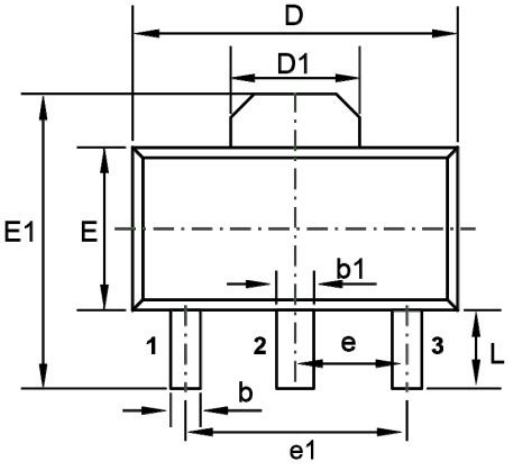




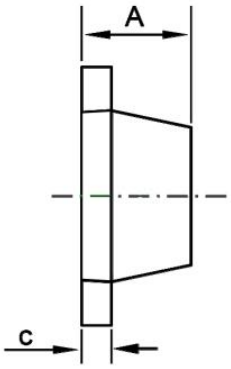


➢ Package Information

- **Mechanical Data**



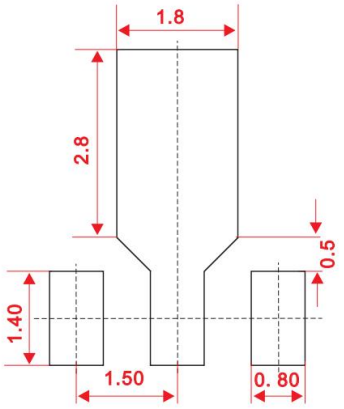
TOP VIEW



SIDE VIEW

DIM	Millimeters		
	Min.	Typ.	Max.
A	1.40	-	1.60
b	0.32	-	0.52
b1	0.40	-	0.58
c	0.35	-	0.44
D	4.40	-	4.60
D1		1.55 REF.	
E	2.30	-	2.60
E1	3.94	-	4.25
e		1.50	
e1		3.00	
L	0.90	-	1.20

- **Recommended Pad outline (Unit: mm)**



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