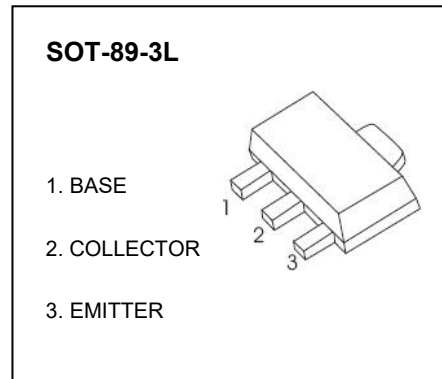


CST51-52-53S89

TRANSISTOR (PNP)



FEATURES

- NPN Complements to CST54,CST55,CST56
- Low Voltage
- High Current

APPLICATIONS

- Medium Power General Purposes
- Driver Stages of Audio Amplifiers

MAXIMUM RATINGS (T_a=25°C unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CB0}	Collector-Base Voltage	CST51	-45
		CST52	-60
		CST53	-100
V_{CEO}	Collector-Emitter Voltage	CST51	-45
		CST52	-60
		CST53	-80
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current	-1	A
P_C	Collector Power Dissipation	500	mW
R_{θJA}	Thermal Resistance From Junction To Ambient	250	°C/W
T_J, T_{stg}	Operation Junction and Storage Temperature Range	-55~+150	°C

ELECTRICAL CHARACTERISTICS (T_a=25°C unless otherwise specified)

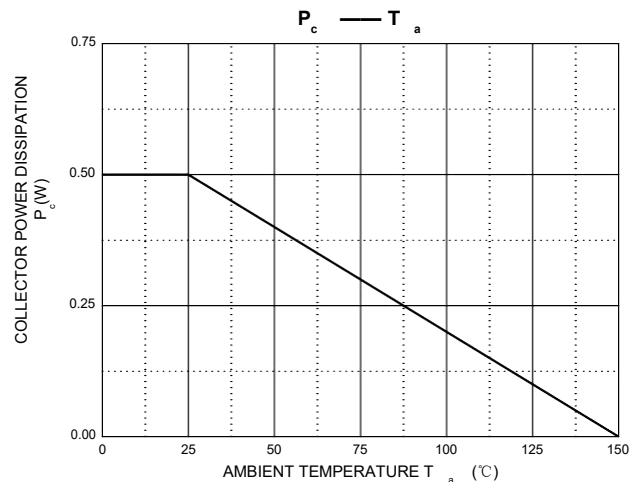
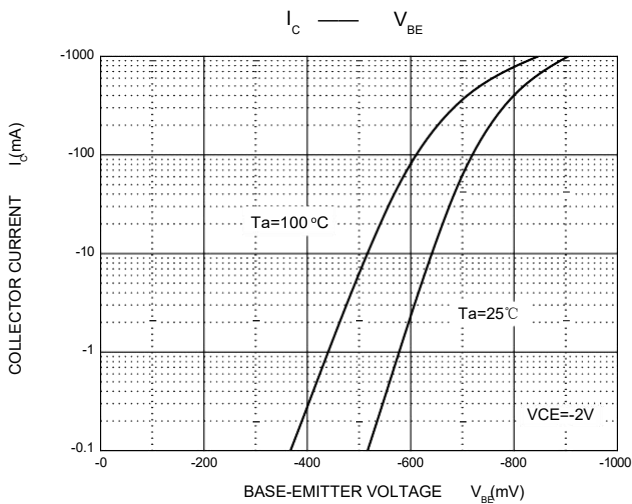
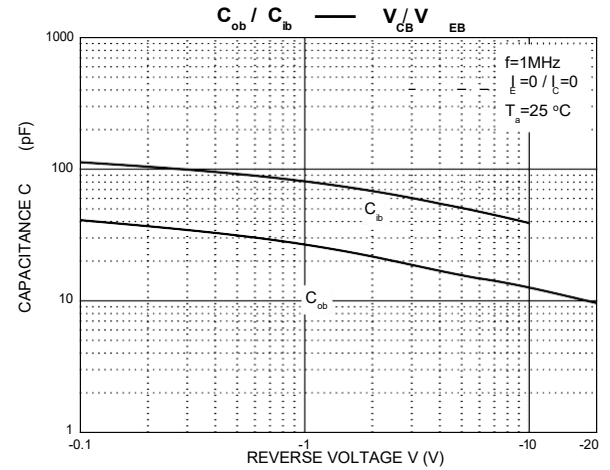
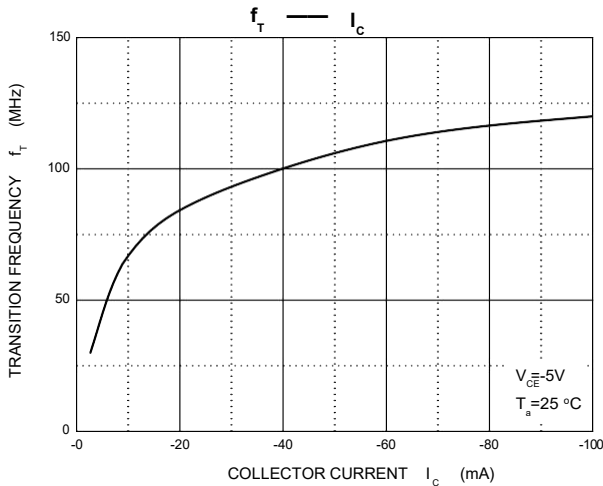
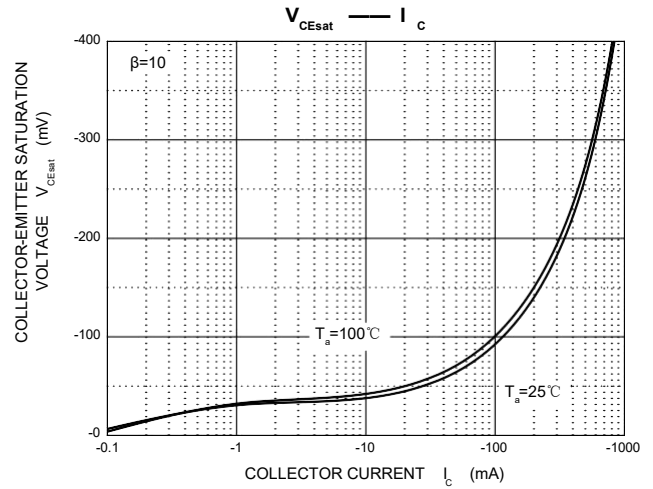
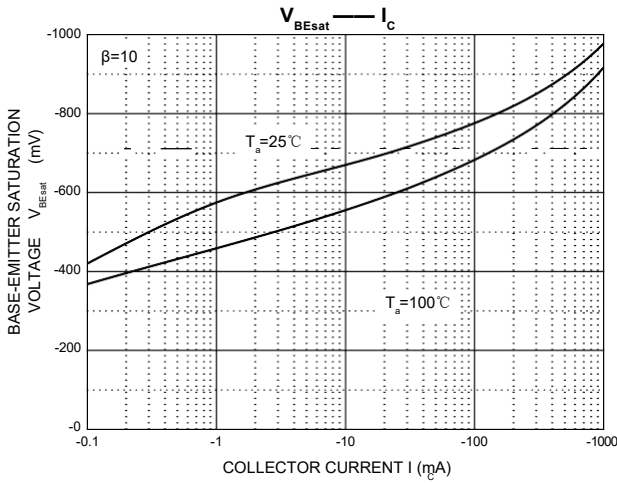
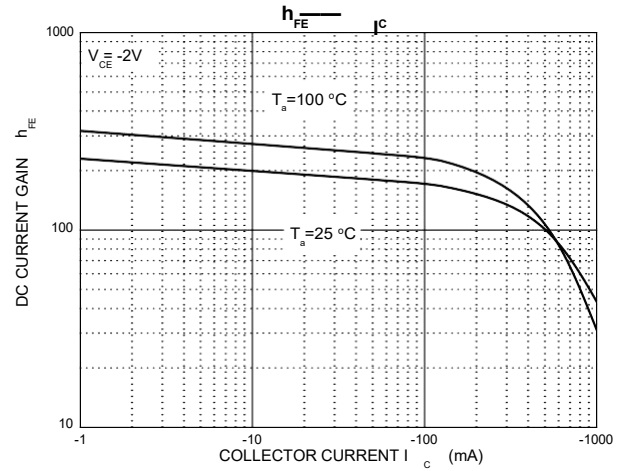
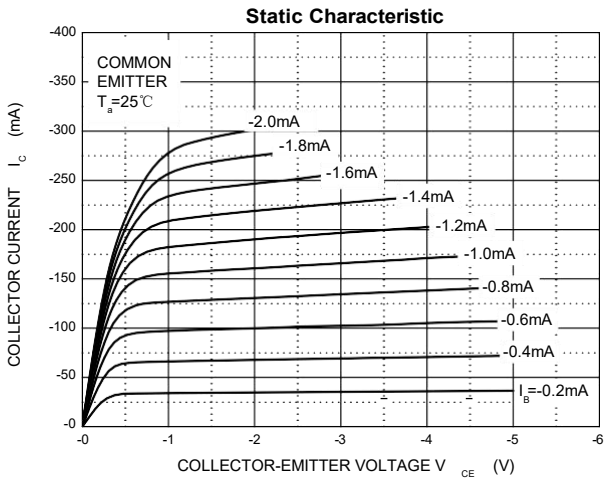
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit	
Collector-base breakdown voltage	V _{(BR)CBO}	I _C =-100μA, I _E =0	CST51	-45			V
			CST52	-60			
			CST53	-100			
Collector-emitter breakdown voltage	V _{(BR)CEO*}	I _C =-10mA, I _B =0	CST51	-45			V
			CST52	-60			
			CST53	-80			
Emitter-base breakdown voltage	V _{(BR)EBO}	I _E =-100μA, I _C =0	-5			V	
Collector cut-off current	I _{CBO}	V _{CB} =-30V, I _E =0			-0.1	μA	
Emitter cut-off current	I _{EBO}	V _{EB} =-5V, I _C =0			-0.1	μA	
DC current gain	h _{FE(1)*}	V _{CE} =-2V, I _C =-5mA	63				
	h _{FE(2)*}	V _{CE} =-2V, I _C =-150mA	63		250		
	h _{FE(3)*}	V _{CE} =-2V, I _C =-0.5A	40				
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		50		MHz	

* Pulse Test

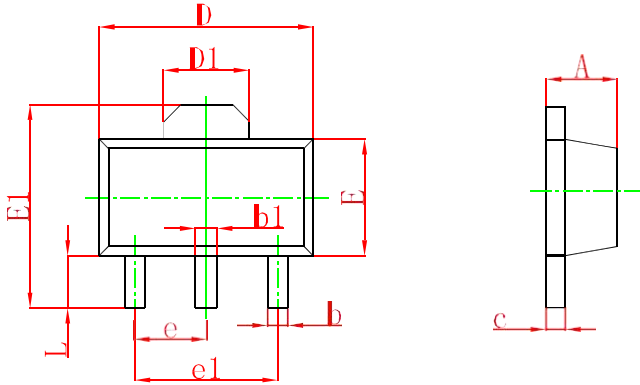
CLASSIFICATION OF h_{FE(2)}

RANK	CST51	CST51-10	CST51-16
	CST52	CST52-10	CST52-16
	CST53	CST53-10	CST53-16
RANGE	63–250	63–160	100–250

Typical Characteristics

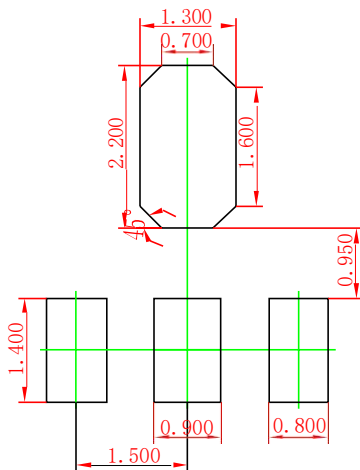


SOT-89-3L Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	1.400	1.600	0.055	0.063
b	0.320	0.520	0.013	0.020
b1	0.400	0.580	0.016	0.023
c	0.350	0.440	0.014	0.017
D	4.400	4.600	0.173	0.181
D1	1.550 REF.		0.061 REF.	
E	2.300	2.600	0.091	0.102
E1	3.940	4.250	0.155	0.167
e	1.500 TYP.		0.060 TYP.	
e1	3.000 TYP.		0.118 TYP.	
L	0.900	1.200	0.035	0.047

SOT-89-3L 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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