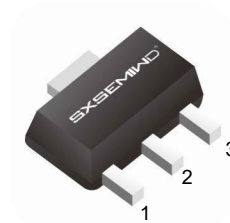


FEATURES

Audio amplifier
Flash unit of camera
Switching circuit

SOT-89-3L



1. BASE
2. COLLECTOR
3. EMITTER

MARKING :D965A

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

Symbol	Parameter	Value	Unit
V _{CB0}	Collector-Base Voltage	40	V
V _{CEO}	Collector-Emitter Voltage	30	V
V _{EBO}	Emitter-Base Voltage	7	V
I _C	Collector Current -Continuous	5	A
P _C	Collector Power Dissipation	750	mW
R _{θJA}	Thermal Resistance From Junction To Ambient	167	°C/W
T _J , T _{stg}	Operation Junction and Storage Temperature Range	-55~150	°C

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

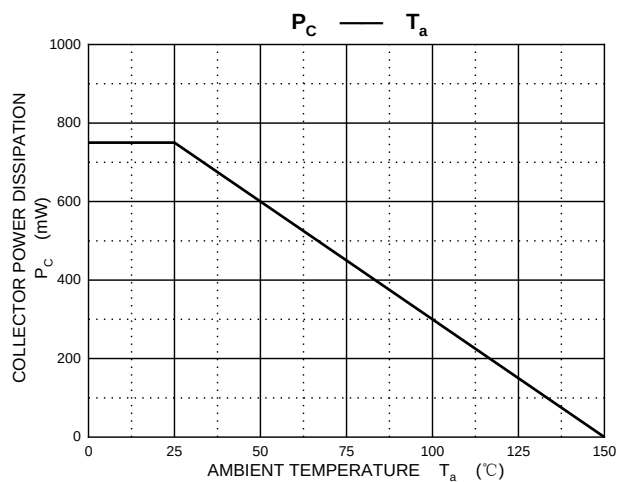
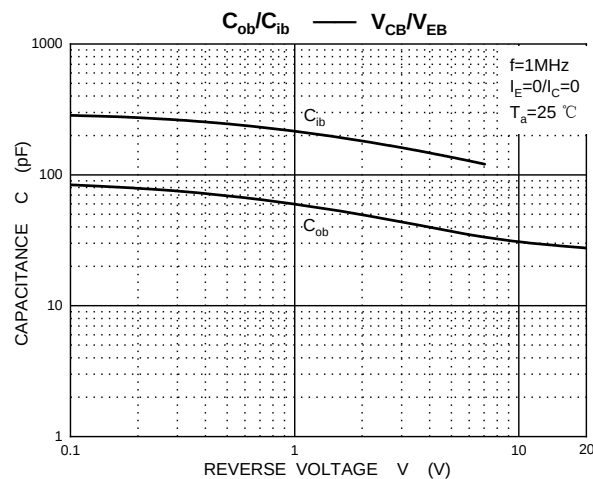
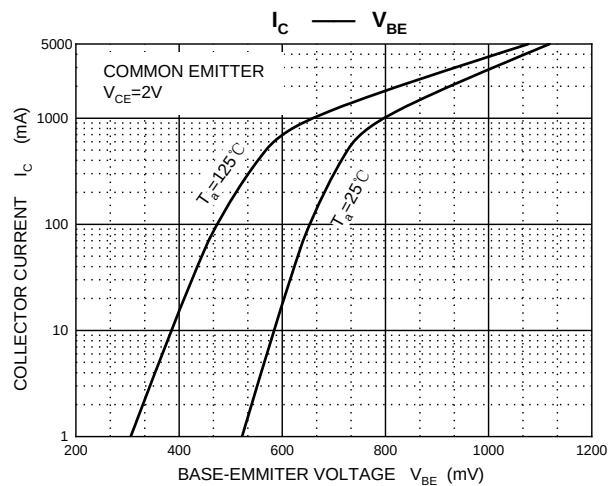
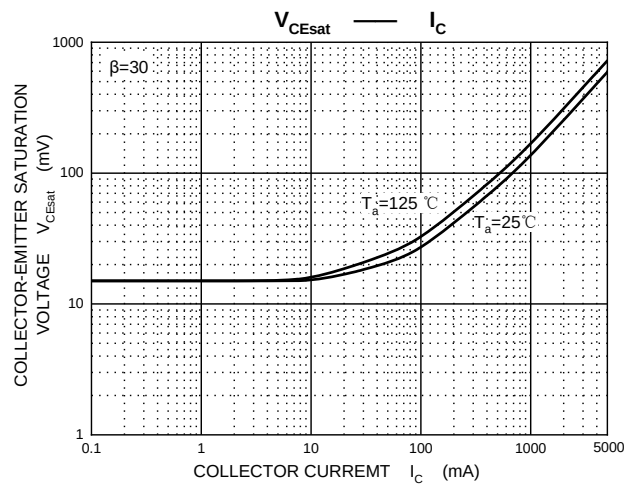
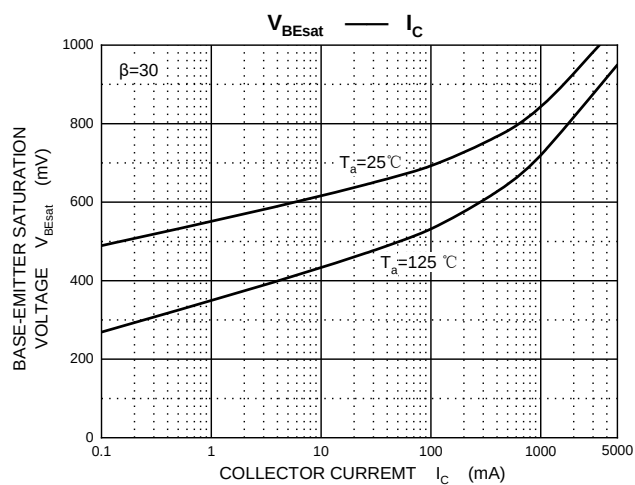
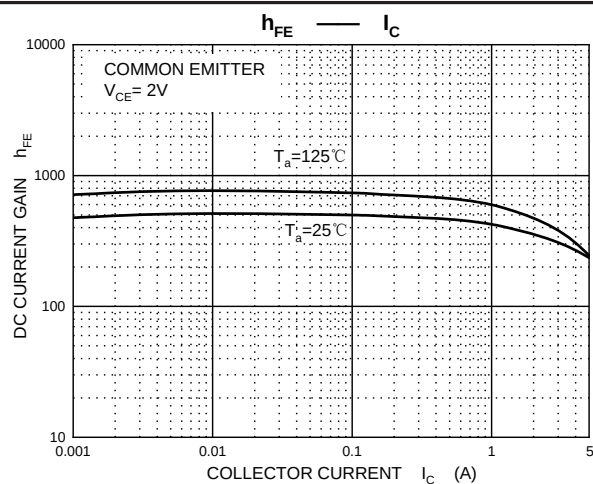
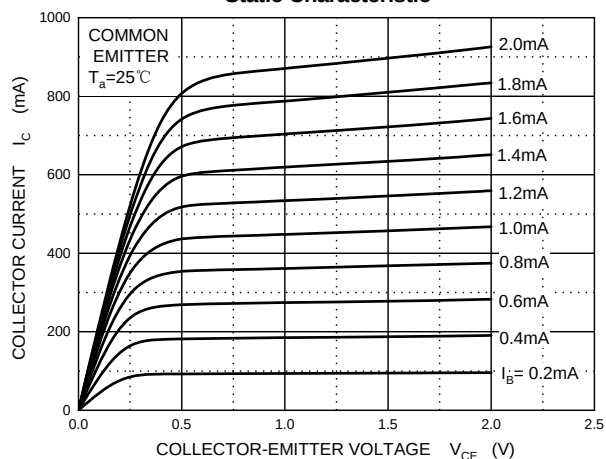
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	V _{(BR)CBO}	I _C =0.1mA, I _E =0	40			V
Collector-emitter breakdown voltage	V _{(BR)CEO}	I _C = 1mA, I _B =0	30			V
Emitter-base breakdown voltage	V _{(BR)EBO}	I _E = 10μA, I _C =0	7			V
Collector cut-off current	I _{CBO}	V _{CB} = 10V, I _E =0			0.1	μA
Emitter cut-off current	I _{EBO}	V _{EB} =7V, I _C =0			0.1	μA
DC current gain	h _{FE(1)}	V _{CE} = 2 V, I _C =1mA		200		
	h _{FE(2)}	V _{CE} = 2V, I _C = 500mA	230		800	
	h _{FE(3)}	V _{CE} = 2V, I _C =2A	150			
Collector-emitter saturation voltage	V _{CE(sat)}	I _C =3A, I _B =0.1A			1	V
Transition frequency	f _T	V _{CE} =6V, I _C =50mA		150		MHz
Out capacitance	C _{ob}	V _{CB} =20 V , I _E =0, f=1MHz			50	pF

CLASSIFICATION OF h_{FE(2)}

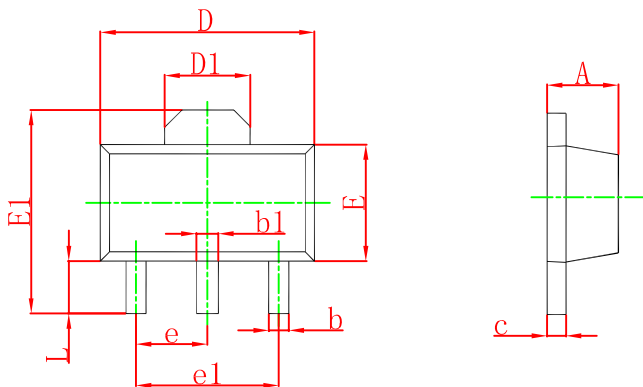
Rank	Q	R	S
Range	230-380	340-600	560-800

TYPICAL CHARACTERISTICS

Static Characteristic

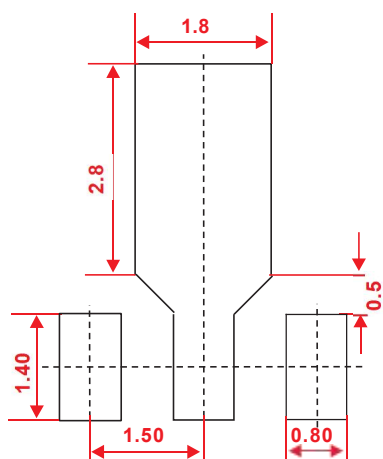


SOT-89-3L Package Outline Dimensions



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.