

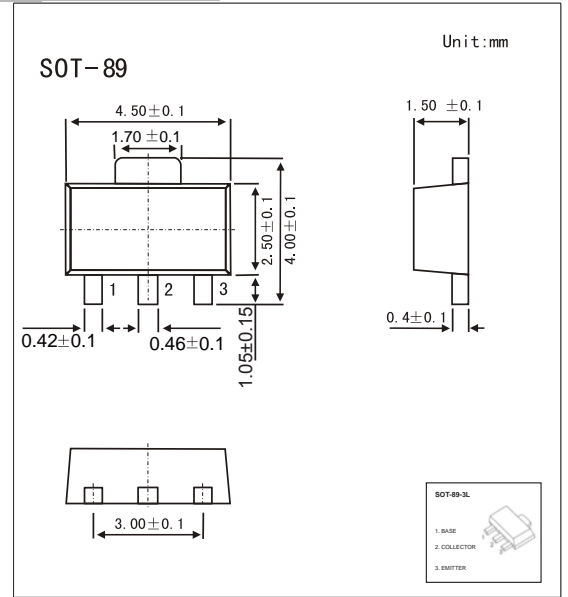
SOT-89 Plastic-Encapsulate Transistors

FEATURES

- Audio amplifier
- Flash unit of camera
- Switching circuit
- TRANSISTOR (NPN)

MECHANICAL DATA

- Case style: SOT-89 -3L molded plastic
- Mounting position: any



MAXIMUM RATINGS AND CHARACTERISTICS

@ 25°C Ambient Temperature (unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CBO}	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
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	167	°C/W
T_J	Junction Temperature	150	°C
T_{stg}	Storage Temperature	-55~150	°C

PACKAGE INFORMATION

Device	Package	Shipping
2SD965A	SOT-89	1000/Tape&Reel

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	$V_{(BR)EBO}$	$I_E=10\mu A, I_C=0$	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	$h_{FE(1)}$	$V_{CE}=2V, I_C=1mA$		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}	$V_{CB}=20V, I_E=0, f=1MHz$			50	pF

CLASSIFICATION OF $h_{FE(2)}$

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

MARKING: 965A