

TO-92 Plastic-Encapsulate Transistors

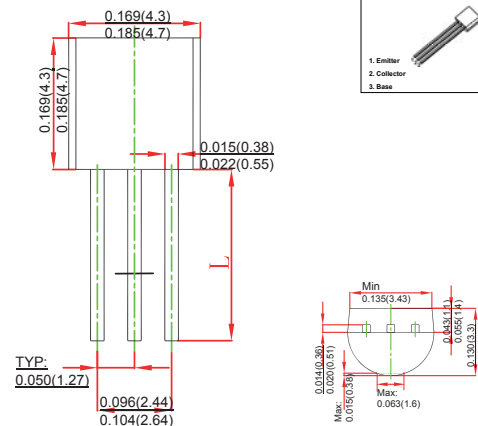
FEATURES

- Audio Amplifier
- Flash Unit of Camera
- Switching Circuit
- TRANSISTOR (NPN)

MECHANICAL DATA

- Case style:TO-92 molded plastic
- Mounting position:any

TO-92



MAXIMUM RATINGS AND CHARACTERISTICS

@ 25°C Ambient Temperature (unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	42	V
V_{CEO}	Collector-Emitter Voltage	22	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current -Continuous	5	A
P_C	Collector Power Dissipation	750	mW
$R_{\theta JA}$	Thermal Resistance from Junction to Ambient	166.7	°C /W
T_j	Junction Temperature	150	°C
T_{stg}	Storage Temperature	-55~+150	°C

ELECTRICAL CHARACTERISTICS $T_A=25$ unless otherwise specified

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=0.1mA, I_E=0$	42			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=1mA, I_B=0$	22			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=10\mu A, I_C=0$	6			V
Collector cut-off current	I_{CBO}	$V_{CB}=30V, I_E=0$			0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=6V, I_C=0$			0.1	μA
DC current gain	$h_{FE(1)}$	$V_{CE}=2V, I_C=0.15mA$	150			
	$h_{FE(2)}$	$V_{CE}=2V, I_C=500mA$	340		2000	
	$h_{FE(3)}$	$V_{CE}=2V, I_C=2A$	150			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=3000mA, I_B=100mA$			0.35	V
Transition frequency	f_T	$V_{CE}=6V, I_C=50mA, f=30MHz$		150		MHz

CLASSIFICATION OF $h_{FE(2)}$

Rank	R	T	V
Range	340-600	560-950	900-2000



RATINGS AND CHARACTERISTIC CURVES

Typical Characteristics

