

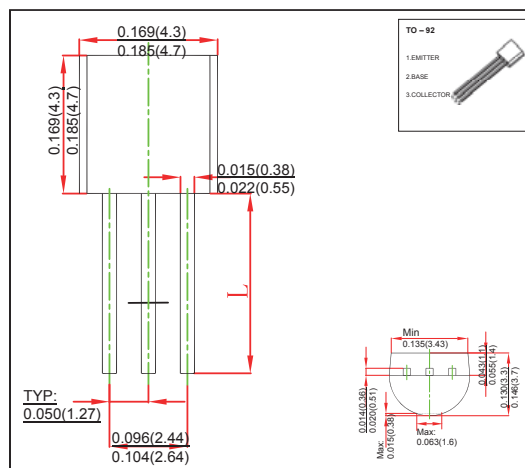
## TO-92 Plastic-Encapsulate Transistors

### FEATURES

- Switching and amplification in high voltage
- Applications such as telephony
- Low current
- High voltage
- NPN Transistors

### MECHANICAL DATA

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



### MAXIMUM RATINGS AND CHARACTERISTICS

@ 25°C Ambient Temperature (unless otherwise noted)

Parameter	Symbol	Value	Unit
Collector-Base Voltage	$V_{CBO}$	350	V
Collector-Emitter Voltage	$V_{CEO}$	350	V
Emitter-Base Voltage	$V_{EBO}$	6	V
Collector Current -Continuous	$I_C$	0.5	A
Collector Power Dissipation	$P_D$	625	mW
Thermal Resistance from Junction to Ambient	$R_{KJA}$	200	°C /W
Junction Temperature	$T_j$	150	°C
Storage Temperature	$T_{stg}$	-55 ~+150	°C

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=0.1mA, I_E=0$	350			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=1mA, I_B=0$	3			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=0.01mA, I_C=0$				V
Collector cut-off current	$I_{CBO}$	$V_{CB}=250V, I_E=0$			0.05	μA
Emitter cut-off current	$I_{EBO}$	$V_{EB}=5V, I_C=0$			0.05	μA
DC current gain	$h_{FE}$	$V_{CE}=10V, I_C=1mA$	2			
		$V_{CE}=10V, I_C=10mA$	3			
		$V_{CE}=10V, I_C=30mA$	3		200	
		$V_{CE}=10V, I_C=50mA$	2		200	
		$V_{CE}=10V, I_C=100mA$	1			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=10mA, I_B=1mA$			0.3	V
		$I_C=50mA, I_B=5mA$			1	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=10mA, I_B=1mA$			0.75	
		$I_C=20mA, I_B=2mA$			0.85	
		$I_C=30mA, I_B=3mA$			0.9	V
Base-emitter voltage	$V_{BE}$	$V_{CE}=10V, I_C=100mA$			2	V
Transition frequency	$f_T$	$V_{CE}=20V, I_C=10mA, f=20MHz$			200	M
Collector output capacitance	$C_{ob}$	$V_{CB}=20V, I_E=0, f=1MHz$			6	pF

\*Pulse test: pulse width ≤300μs, duty cycle ≤ 2.0%.