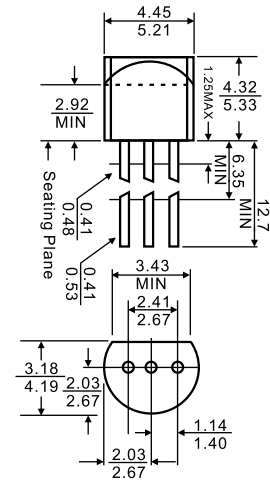




1. EMITTER
2. BASE
3. COLLECTOR

### TO-92



## Features

- ✧ Switching and amplification in high voltage
- ✧ Applications such as telephony
- ✧ Low current(max. 600mA)
- ✧ High voltage(max.180V)

### MAXIMUM RATINGS (T<sub>A</sub>=25°C unless otherwise noted)

Symbol	Parameter	Value	Units
V <sub>CB0</sub>	Collector-Base Voltage	180	V
V <sub>CEO</sub>	Collector-Emitter Voltage	160	V
V <sub>EBO</sub>	Emitter-Base Voltage	6	V
I <sub>C</sub>	Collector Current -Continuous	0.6	A
P <sub>C</sub>	Collector Power Dissipation	0.625	W
T <sub>j</sub>	Junction Temperature	150	°C
T <sub>stg</sub>	Storage Temperature	-55-150	°C

Dimensions in inches and (millimeters)

### ELECTRICAL CHARACTERISTICS(T<sub>amb</sub>=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	V <sub>(BR)CBO</sub>	I <sub>C</sub> =100μA, I <sub>E</sub> =0	180			V
Collector-emitter breakdown voltage	V <sub>(BR)CEO</sub> *	I <sub>C</sub> = 1mA, I <sub>B</sub> =0	160			V
Emitter-base breakdown voltage	V <sub>(BR)EBO</sub>	I <sub>E</sub> = 10μA, I <sub>C</sub> =0	6			V
Collector cut-off current	I <sub>CB0</sub>	V <sub>CB</sub> = 120V, I <sub>E</sub> =0			50	nA
Emitter cut-off current	I <sub>EBO</sub>	V <sub>EB</sub> = 4V, I <sub>C</sub> =0			50	nA
DC current gain	h <sub>FE1</sub> *	V <sub>CE</sub> =5V, I <sub>C</sub> =1mA	80			
	h <sub>FE2</sub> *	V <sub>CE</sub> =5V, I <sub>C</sub> =10mA	80		250	
	h <sub>FE3</sub>	V <sub>CE</sub> =5V, I <sub>C</sub> =50mA	30			
Collector-emitter saturation voltage	V <sub>CEsat</sub> *	I <sub>C</sub> =10mA, I <sub>B</sub> =1mA			0.15	V
		I <sub>C</sub> =50mA, I <sub>B</sub> =5mA			0.2	
Base-emitter saturation voltage	V <sub>BEsat</sub> *	I <sub>C</sub> =10mA, I <sub>B</sub> = 1mA			1	V
		I <sub>C</sub> =50mA, I <sub>B</sub> = 5mA			1	
Transition frequency	f <sub>T</sub>	V <sub>CE</sub> =10V, I <sub>C</sub> =10mA, f=100MHz	100		300	MHz
Collector output capacitance	C <sub>ob</sub>	V <sub>CB</sub> =10V, I <sub>E</sub> =0, f=1MHz			6	pF
Input capacitance	C <sub>ib</sub>	V <sub>BE</sub> =0.5V, I <sub>C</sub> =0, f=1MHz			20	pF
Noise figure	NF	V <sub>CE</sub> =5V, I <sub>C</sub> =0.25mA, f=10Hz to 15.7KHz, R <sub>S</sub> =1kΩ			8	dB

\*Pulse test

## Typical Characteristic

