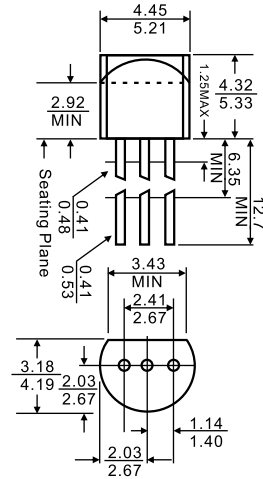




1. EMITTER
2. BASE
3. COLLECTOR

### TO-92



Dimensions in inches and (millimeters)

## Features

- ✦ Switching and amplification in high voltage Applications such as telephony
- ✦ Low current(max. 600mA)
- ✦ High voltage(max.130v)

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

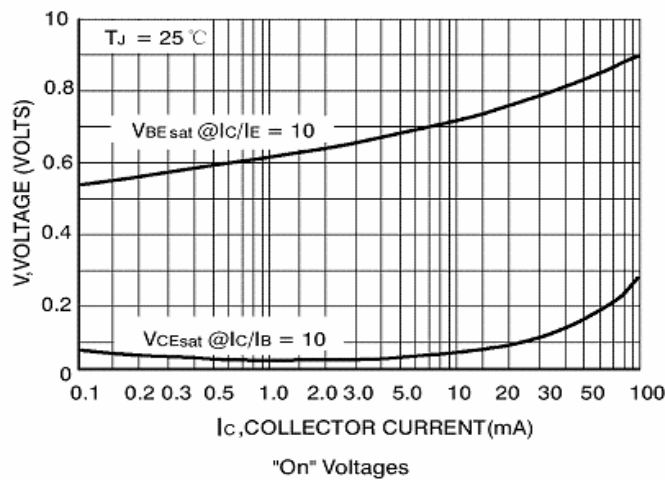
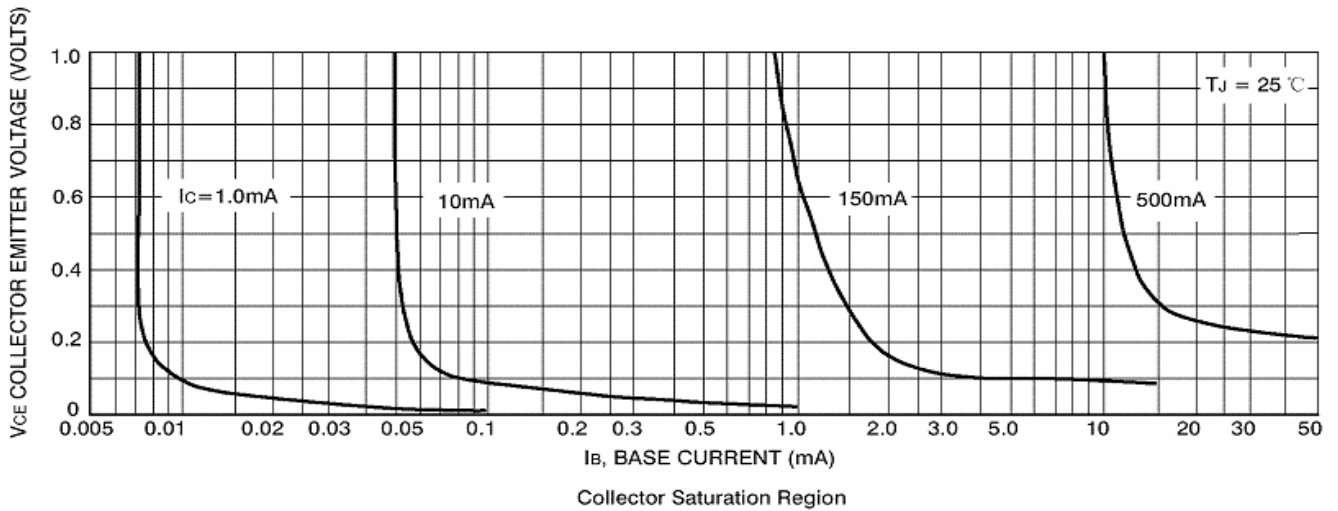
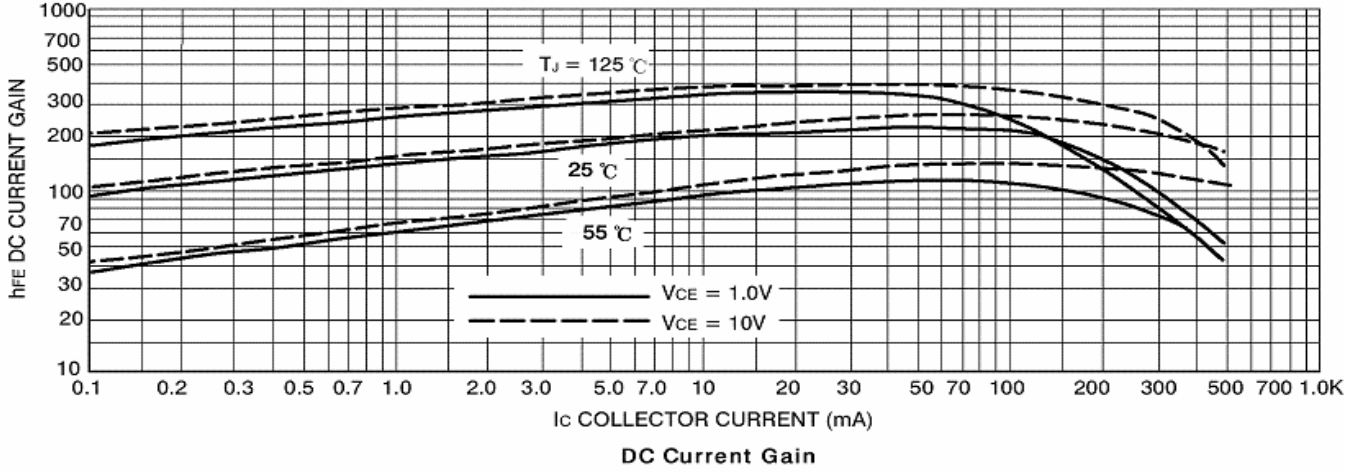
Symbol	Parameter	Value	Units
V <sub>CB0</sub>	Collector-Base Voltage	-130	V
V <sub>CEO</sub>	Collector-Emitter Voltage	-120	V
V <sub>EBO</sub>	Emitter-Base Voltage	-5	V
I <sub>C</sub>	Collector Current -Continuous	-0.6	A
P <sub>C</sub>	Collector Power Dissipation	0.625	W
T <sub>j</sub>	Junction Temperature	150	°C
T <sub>stg</sub>	Storage Temperature	-55-150	°C

### 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	-130			V
Collector-emitter breakdown voltage	V <sub>(BR)CEO</sub>	I <sub>C</sub> =-1mA, I <sub>B</sub> =0	-120			V
Emitter-base breakdown voltage	V <sub>(BR)EBO</sub>	I <sub>E</sub> = -10μA, I <sub>C</sub> =0	-5			V
Collector cut-off current	I <sub>CBO</sub>	V <sub>CB</sub> = -100 V, I <sub>E</sub> =0			-0.1	μA
Emitter cut-off current	I <sub>EBO</sub>	V <sub>EB</sub> = -3 V, I <sub>C</sub> =0			-0.1	μA
DC current gain	h <sub>FE1</sub>	V <sub>CE</sub> = -5 V, I <sub>C</sub> =-1mA	30			
	h <sub>FE2</sub>	V <sub>CE</sub> = -5 V, I <sub>C</sub> = -10mA	40		180	
	h <sub>FE3</sub>	V <sub>CE</sub> = -5 V, I <sub>C</sub> =-50mA	40			
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> = -10mA, I <sub>B</sub> = -1mA			-0.2	V
	V <sub>CE(sat)</sub>	I <sub>C</sub> = -50mA, I <sub>B</sub> = -5mA			-0.5	V
Base-emitter saturation voltage	V <sub>BE(sat)</sub>	I <sub>C</sub> = -10mA, I <sub>B</sub> = -1mA			-1	V
	V <sub>BE(sat)</sub>	I <sub>C</sub> = -50mA, I <sub>B</sub> = -5mA			-1	V
Transition frequency	f <sub>T</sub>	V <sub>CE</sub> =-10V, I <sub>C</sub> =-10mA f =30MHz	100			MHz
Collector output capacitance	C <sub>ob</sub>	V <sub>CB</sub> =-10V, I <sub>E</sub> =0, f=1MHz			6	pF



### Typical Characteristics



Package	Packing	Quantity	Box	Box Size(mm)	Carton	Carton Size(mm)
TO-92	Bulk	1000pcs/BP	10,000pcs	245×170×100	100,000pcs	525×375×270
TO-92	Tape	2000pcs/TP	2000pcs	333×162×43	20,000pcs	350×340×250