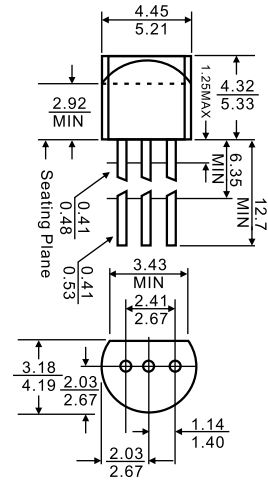




1. EMITTER
2. BASE
3. COLLECTOR

### TO-92



Dimensions in inches and (millimeters)

## Features

- ◇ Power dissipation

### MAXIMUM RATINGS ( $T_A=25^\circ\text{C}$ unless otherwise noted)

Symbol	Parameter	Value	Units
$V_{CBO}$	Collector-Base Voltage	-40	V
$V_{CEO}$	Collector-Emitter Voltage	-25	V
$V_{EBO}$	Emitter-Base Voltage	-6	V
$I_C$	Collector Current -Continuous	-800	mA
$P_C$	Collector Power Dissipation	625	mW
$T_J$	Junction Temperature	125	$^\circ\text{C}$
$T_{stg}$	Storage Temperature	-55-125	$^\circ\text{C}$

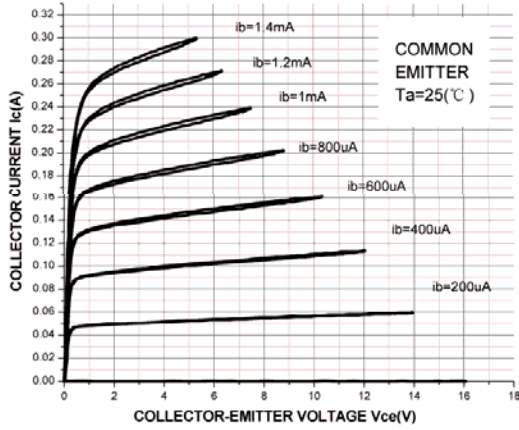
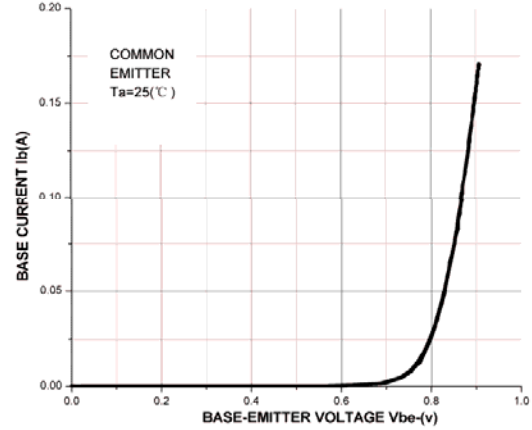
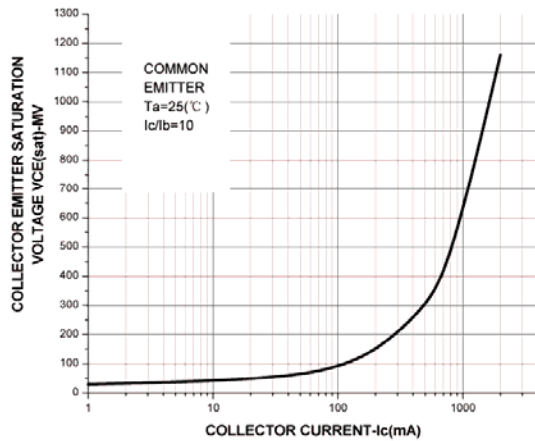
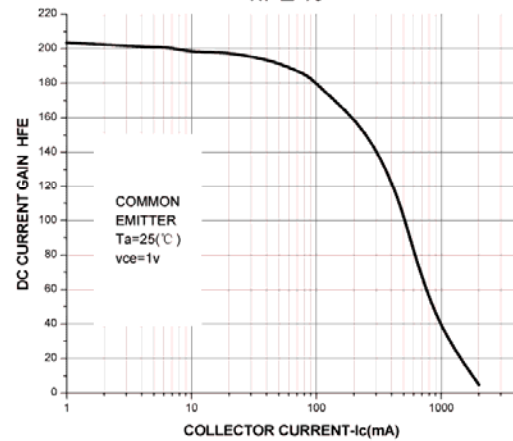
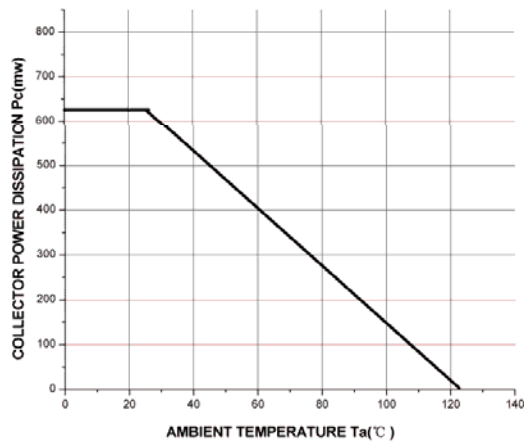
### ELECTRICAL CHARACTERISTICS ( $T_{amb}=25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	MAX	UNIT
Collector-base breakdown voltage	$V(BR)_{CBO}$	$I_C = -100\mu\text{A}$ , $I_E = 0$	-40		V
Collector-emitter breakdown voltage	$V(BR)_{CEO}^*$	$I_C = -0.1\text{mA}$ , $I_B = 0$	-25		V
Emitter-base breakdown voltage	$V(BR)_{EBO}$	$I_E = -100\mu\text{A}$ , $I_C = 0$	-6		V
Collector cut-off current	$I_{CBO}$	$V_{CB} = -35\text{V}$ , $I_E = 0$		-0.1	$\mu\text{A}$
Collector cut-off current	$I_{CEO}$	$V_{CE} = -20\text{V}$ , $I_B = 0$		-0.1	$\mu\text{A}$
DC current gain	$h_{FE(1)}$	$V_{CE} = -1\text{V}$ , $I_C = -5\text{mA}$	45		
	$h_{FE(2)}$	$V_{CE} = -1\text{V}$ , $I_C = -100\text{mA}$	80	400	
	$h_{FE(3)}$	$V_{CE} = -1\text{V}$ , $I_C = -800\text{mA}$	40		
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -800\text{mA}$ , $I_B = -80\text{mA}$		-0.5	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = -800\text{mA}$ , $I_B = -80\text{mA}$		-1.2	V
Transition frequency	$f_T$	$V_{CE} = -6\text{V}$ , $I_C = -20\text{mA}$ $f = 30\text{MHz}$	150		MHz

\*Pulse Test: pulse width  $\leq 300\mu\text{s}$ , duty cycle  $\leq 2\%$ .



## Typical Characteristics

**Ic-Vce**

**Ib-Vbe**

**Vcesat-Ic**

**hFE-Ic**

**Pc-Ta**


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