

## TO-92 Plastic-Encapsulate Transistors

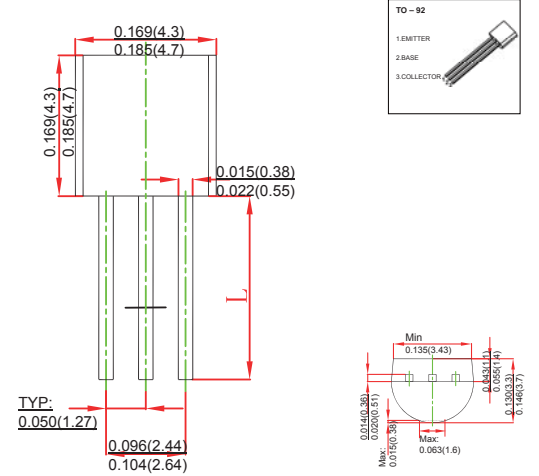
### FEATURES

- Power dissipation
- TRANSISTOR (PNP)

### MECHANICAL DATA

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

### TO-92



## MAXIMUM RATINGS AND CHARACTERISTICS

@ 25°C Ambient Temperature (unless otherwise noted)

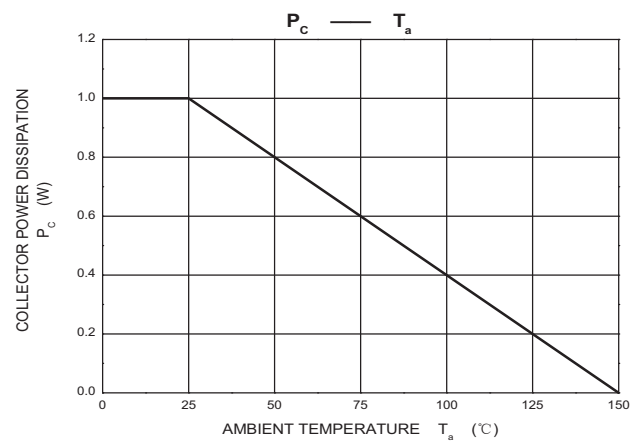
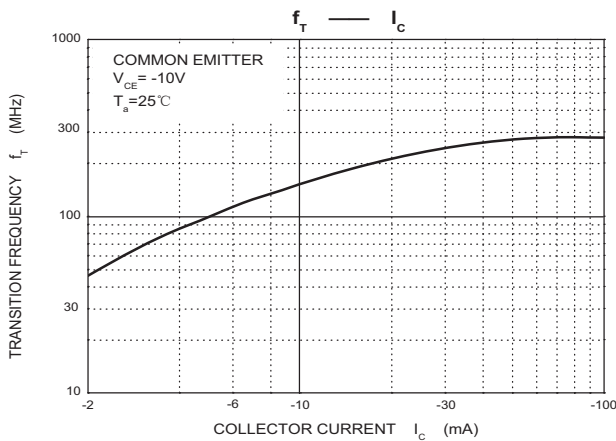
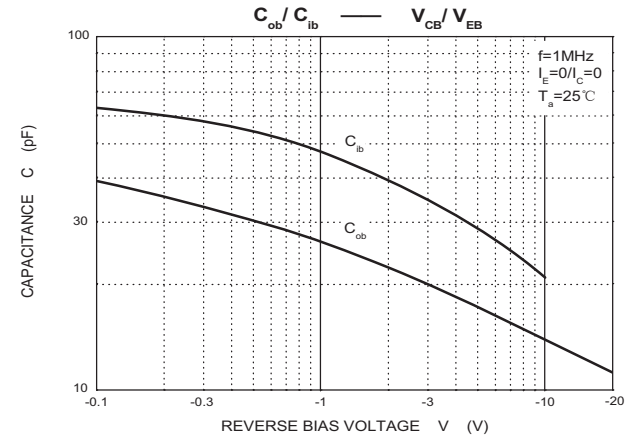
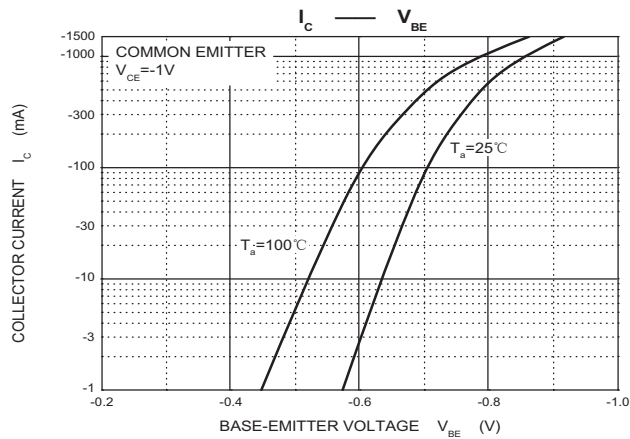
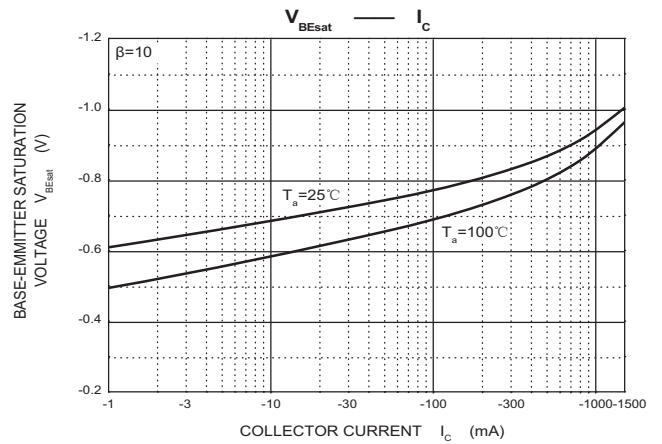
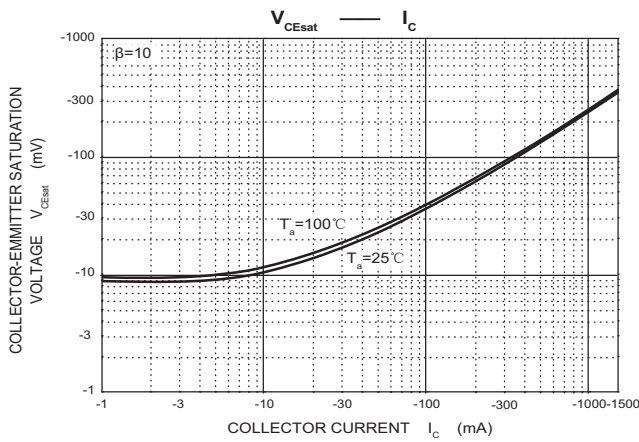
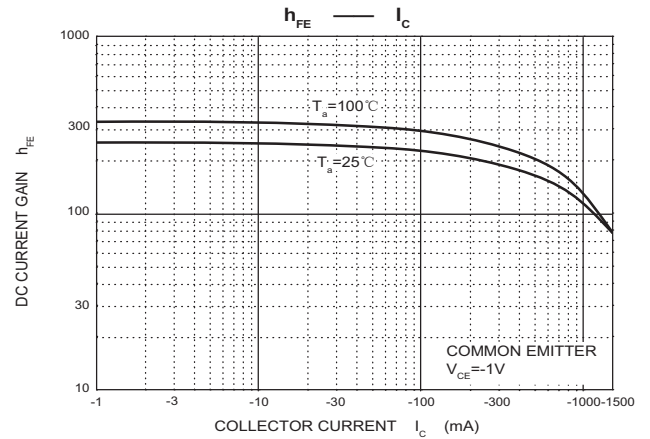
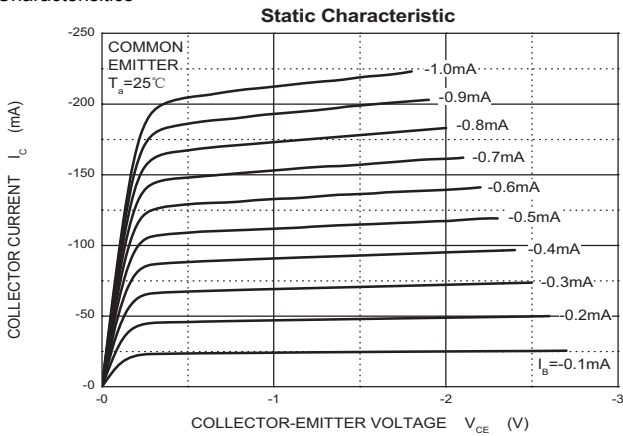
Symbol	Parameter	Value	Unit
$V_{CB0}$	Collector-Base Voltage	-40	V
$V_{CE0}$	Collector-Emitter Voltage	-25	V
$V_{EB0}$	Emitter-Base Voltage	-5	V
$I_C$	Collector Current -Continuous	-1.5	A
$P_D$	Collector Power Dissipation	1000	mW
$T_j$	Junction Temperature	150	°C
$T_{stg}$	Storage Temperature	-55~+150	°C

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = -100\mu A, I_E = 0$	-40			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = -0.1mA, I_B = 0$	-25			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = -100\mu A, I_C = 0$	-5			V
Collector cut-off current	$I_{CBO}$	$V_{CB} = -40V, I_E = 0$			-0.1	$\mu A$
Emitter cut-off current	$I_{CEO}$	$V_{CE} = -20V, I_E = 0$			-0.1	$\mu A$
Emitter cut-off current	$I_{EBO}$	$V_{EB} = -5V, I_C = 0$			-0.1	$\mu A$
DC current gain	$h_{FE(1)}$	$V_{CE} = -1V, I_C = -100mA$	85		400	
	$h_{FE(2)}$	$V_{CE} = -1V, I_C = -800mA$	40			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -800mA, I_B = -80mA$			-0.5	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = -800mA, I_B = -80mA$			-1.2	V
Base-emitter voltage	$V_{BE(on)}$	$V_{CE} = -1V, I_C = -10mA$			-1	V
Out capacitance	$C_{ob}$	$V_{CB} = -10V, I_E = 0mA, f = 1MHz$			20	pF
Transition frequency	$f_T$	$V_{CE} = -10V, I_C = -50mA, f = 30MHz$	100			MHz

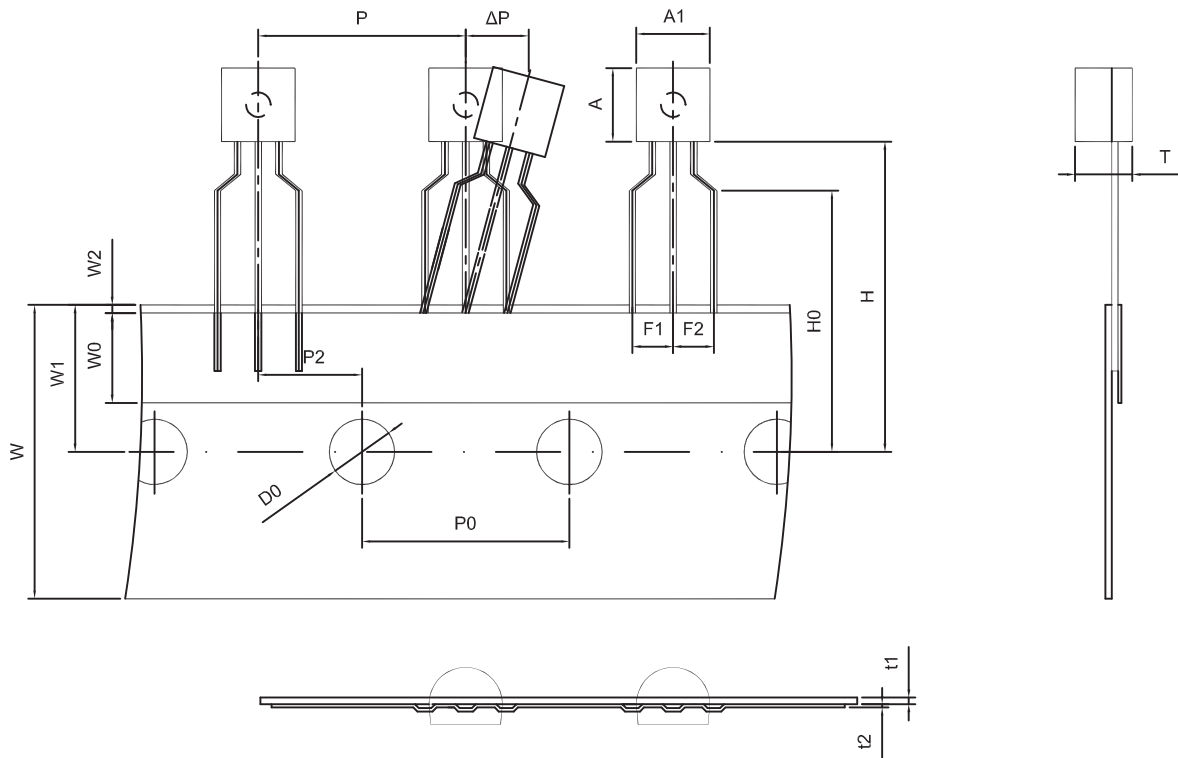
### CLASSIFICATION OF $h_{FE(2)}$

Rank	B	C	D	D3
Range	85-160	120-200	160-300	300-400

## Typical Characteristics

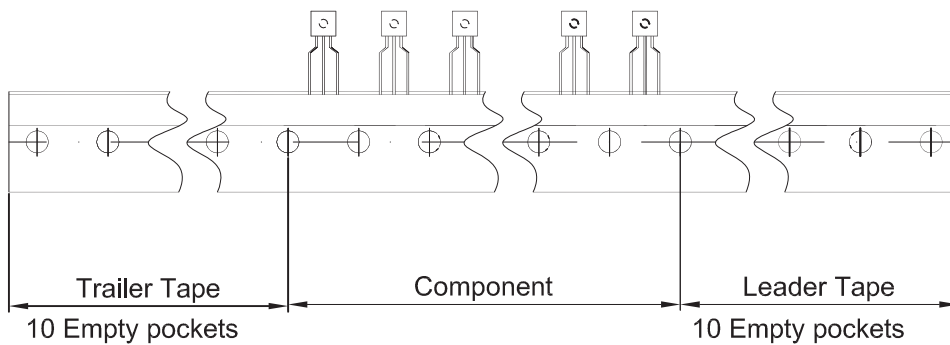


TO-92 PACKAGE TAPEING DIMENSION



Dimiensions are in millimeter

A1	A	T	P	P0	P2	F1	F2	W
4.5	4.5	3.5	12.7	12.7	6.35	2.5	2.5	18.0
W0	W1	W2	H	H0	D0	t1	t2	ΔP
6.0	9.0	1.0 MAX.	19.0	16.0	4.0	0.4	0.2	0



Package	Box	Box Size(mm)	Carton	Carton Size(mm)
TO-92	2000 pcs	333×162×43	20,000 pcs	350×340×250