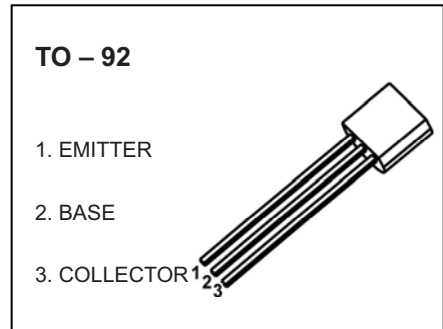
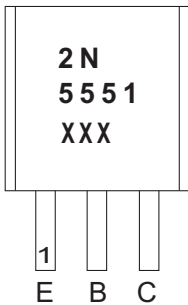


## FEATURES

- General Purpose Switching Application

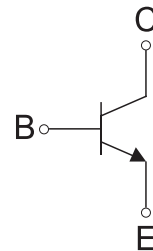


## MARKING



2N5551=Device code  
XXX=Code

## Equivalent Circuit



## ORDERING INFORMATION

Part Number	Package	Packing Method	Pack Quantity
2N5551	TO-92	Bulk	1000pcs/Bag
2N5551-TA	TO-92	Tape	2000pcs/Box

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

Symbol	Parameter	Value	Unit
V <sub>CBO</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	0.6	A
P <sub>C</sub>	Collector Power Dissipation	625	mW
R <sub>θJA</sub>	Thermal Resistance From Junction To Ambient	200	°C/W
T <sub>j</sub>	Junction Temperature	150	°C
T <sub>stg</sub>	Storage Temperature	-55~+150	°C

**ELECTRICAL CHARACTERISTICS  $T_a=25^\circ\text{C}$  unless otherwise specified**

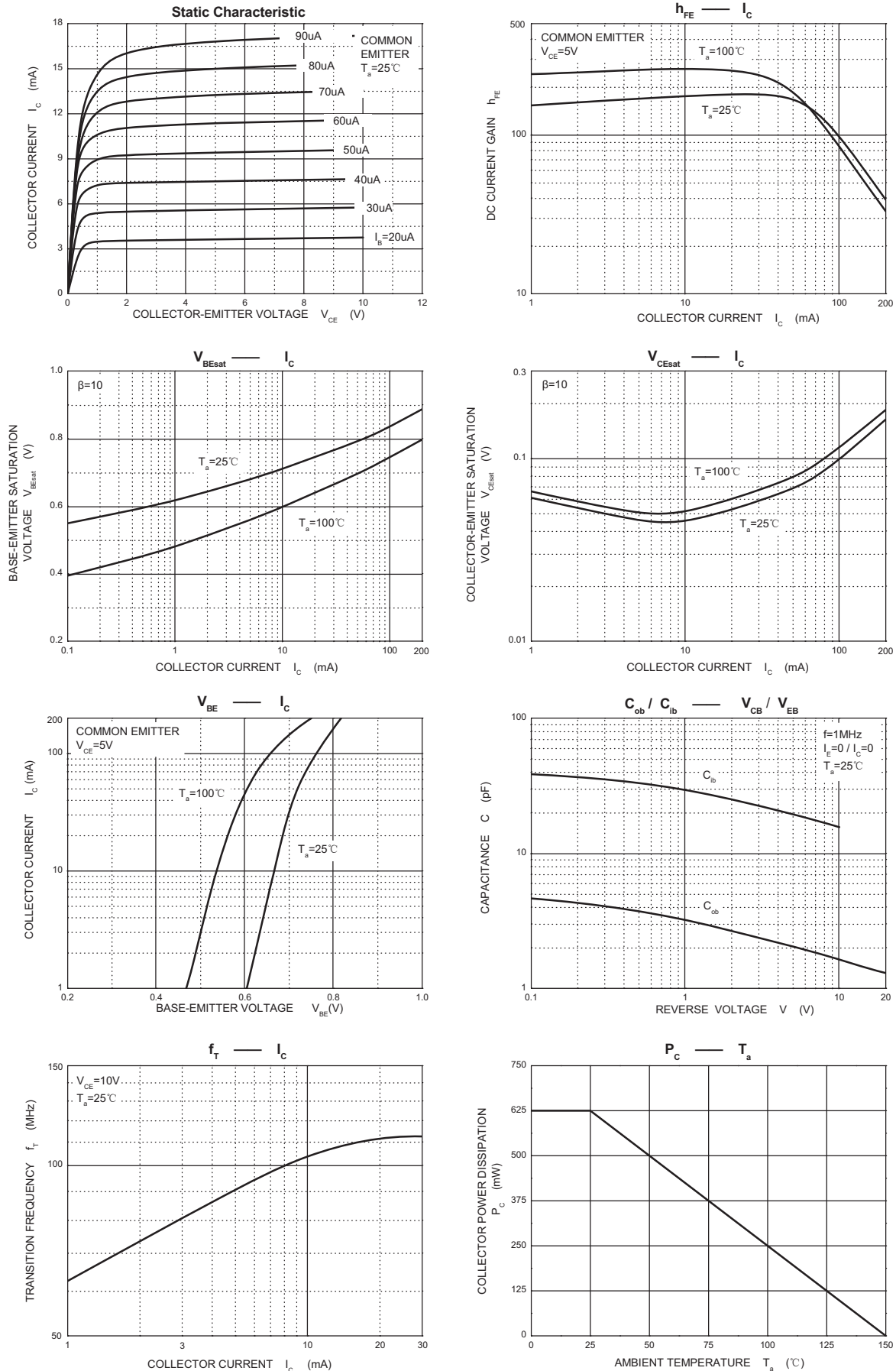
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=100\mu\text{A}, I_E=0$	180			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}^*$	$I_C=1\text{mA}, I_B=0$	160			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=10\mu\text{A}, I_C=0$	6			V
Collector cut-off current	$I_{CBO}$	$V_{CB}=120\text{V}, I_E=0$			50	nA
Emitter cut-off current	$I_{EBO}$	$V_{EB}=4\text{V}, I_C=0$			50	nA
DC current gain	$h_{FE(1)}$	$V_{CE}=5\text{V}, I_C=1\text{mA}$	80			
	$h_{FE(2)}$	$V_{CE}=5\text{V}, I_C=10\text{mA}$	100		300	
	$h_{FE(3)}$	$V_{CE}=5\text{V}, I_C=50\text{mA}$	50			
Collector-emitter saturation voltage	$V_{CE(sat) (1)}$	$I_C=10\text{mA}, I_B=1\text{mA}$			0.15	V
	$V_{CE(sat) (2)}$	$I_C=50\text{mA}, I_B=5\text{mA}$			0.2	V
Base-emitter saturation voltage	$V_{BE(sat) (1)}$	$I_C=10\text{mA}, I_B=1\text{mA}$			1	V
	$V_{BE(sat) (2)}$	$I_C=50\text{mA}, I_B=5\text{mA}$			1	V
Collector output capacitance	$C_{ob}$	$V_{CB}=10\text{V}, I_E=0, f=1\text{MHz}$			6	pF
Emitter input capacitance	$C_{ib}$	$V_{BE}=0.5\text{V}, I_C=0, f=1\text{MHz}$			20	pF
Transition frequency	$f_T$	$V_{CE}=10\text{V}, I_C=10\text{mA}, f=100\text{MHz}$	100		300	MHz

\*Pulse test: pulse width  $\leq 300\mu\text{s}$ , duty cycle  $\leq 2.0\%$ .

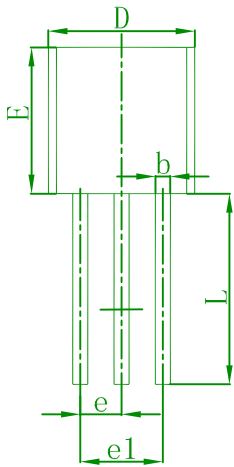
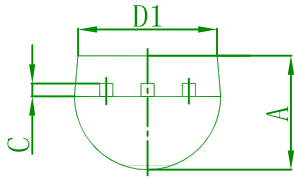
**CLASSIFICATION OF  $h_{FE(2)}$** 

RANK	A	B	C
RANGE	100-150	150-200	200-300

## Typical Characteristics

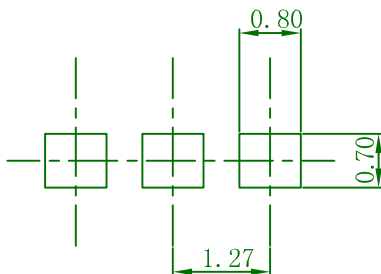


## TO-92 Package Outline Dimensions



Symbol	Dimensions In Millimeters	
	Min	Max
A	3.100	3.800
b	0.340	0.550
c	0.300	0.510
D	4.100	4.900
D1	3.700	4.800
E	4.300	4.800
e	1.270 TYP	
e1	2.440	2.640
L	13.100	14.500

## TO-92 Suggested Pad Layout



**Note:**

1. Controlling dimension: in millimeters.
2. General tolerance:  $\pm 0.05$ mm.
3. The pad layout is for reference purposes only.