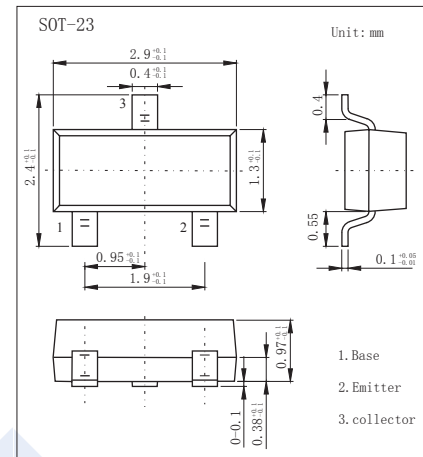


## NPN Transistors

### 2SC1621

#### ■ Features

- Collector Current Capability  $I_c=200\text{mA}$
- Collector Emitter Voltage  $V_{CE0}=20\text{V}$



#### ■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	$V_{CBO}$	40	V
Collector - Emitter Voltage	$V_{CEO}$	20	
Emitter - Base Voltage	$V_{EBO}$	5	
Collector Current - Continuous	$I_c$	200	mA
Collector Power Dissipation	$P_c$	200	mW
Junction Temperature	$T_J$	150	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	-55 to 150	

#### ■ Electrical Characteristics $T_a = 25^\circ\text{C}$

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{CBO}$	$I_c = 100 \mu\text{A}, I_E = 0$	40			V
Collector-emitter breakdown voltage	$V_{CEO}$	$I_c = 1 \text{ mA}, I_B = 0$	20			
Emitter - base breakdown voltage	$V_{EBO}$	$I_E = 100 \mu\text{A}, I_C = 0$	5			
Collector-base cut-off current	$I_{CBO}$	$V_{CB} = 30 \text{ V}, I_E = 0$			0.1	$\mu\text{A}$
Emitter cut-off current	$I_{EBO}$	$V_{EB} = 4 \text{ V}, I_C = 0$			0.1	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_c = 10 \text{ mA}, I_B = 1 \text{ mA}$			0.25	V
Base - emitter saturation voltage	$V_{BE(sat)}$	$I_c = 10 \text{ mA}, I_B = 1 \text{ mA}$			0.85	
DC current gain	$h_{FE}$	$V_{CE} = 0.5 \text{ V}, I_c = 1 \text{ mA}$	40		180	
Turn-on time	$t_{on}$	See Test Circuit			20	ns
Storage time	$t_{stg}$				20	
turn-off time	$t_{off}$				40	
Collector output capacitance	$C_{ob}$	$V_{CB} = 10 \text{ V}, I_E = 0, f = 1 \text{ MHz}$			6	pF
Transition frequency	$f_T$	$V_{CE} = 10 \text{ V}, I_E = -10 \text{ mA}$	200			MHz

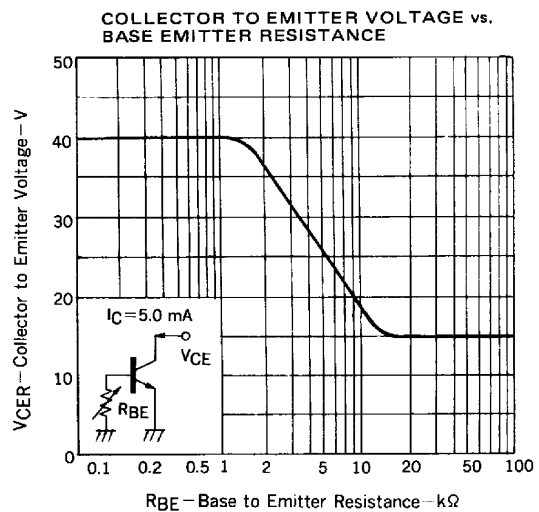
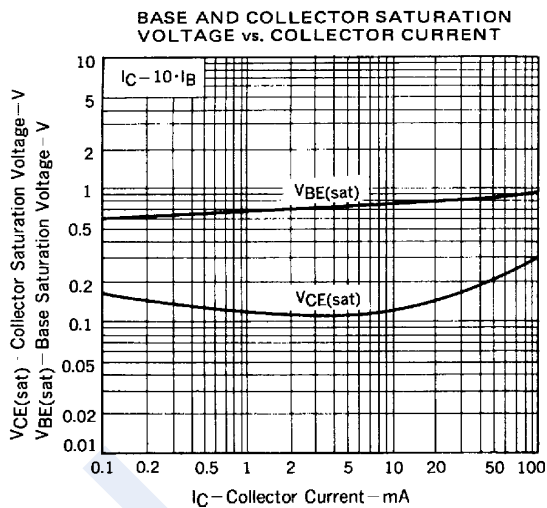
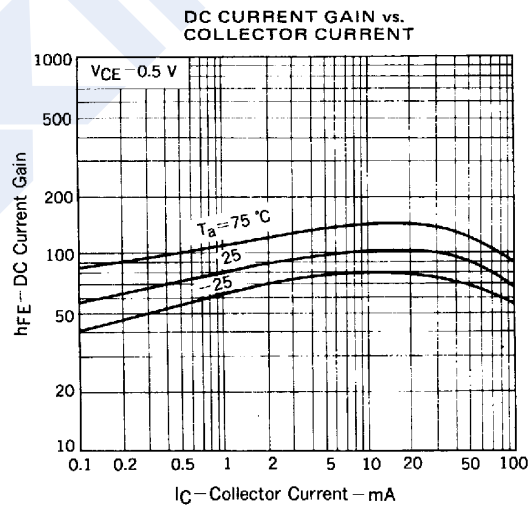
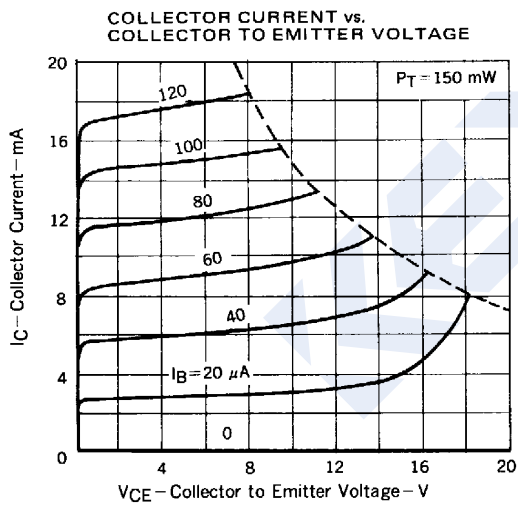
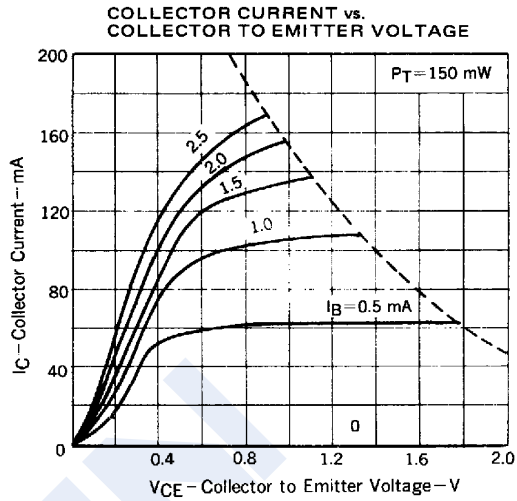
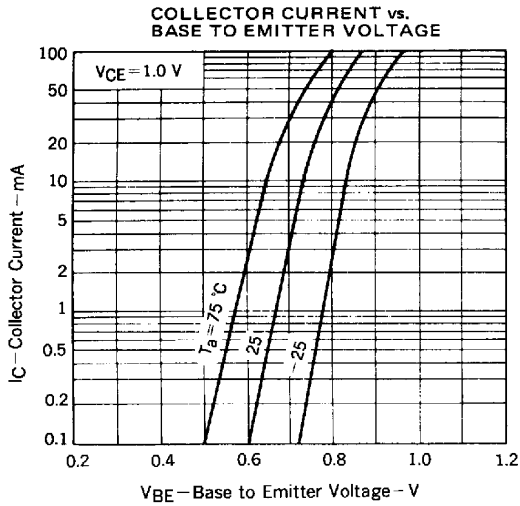
#### ■ Classification of $h_{FE}$

Type	2SC1621-B2	2SC1621-B3	2SC1621-B4
Range	40-80	60-120	90-180
Marking	B2	B3	B4

# NPN Transistors

## 2SC1621

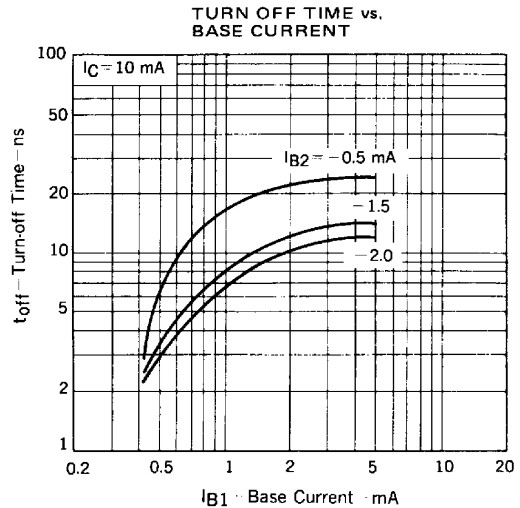
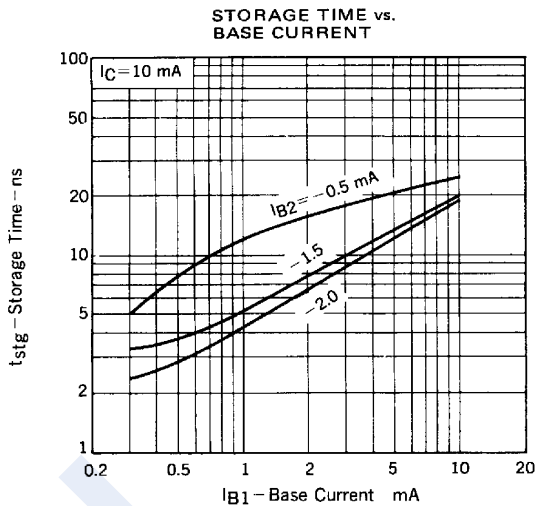
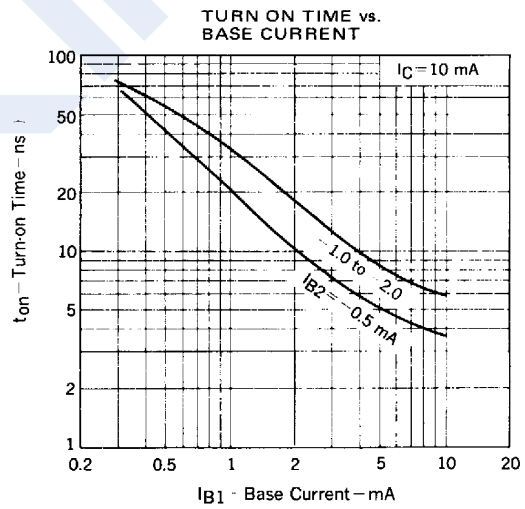
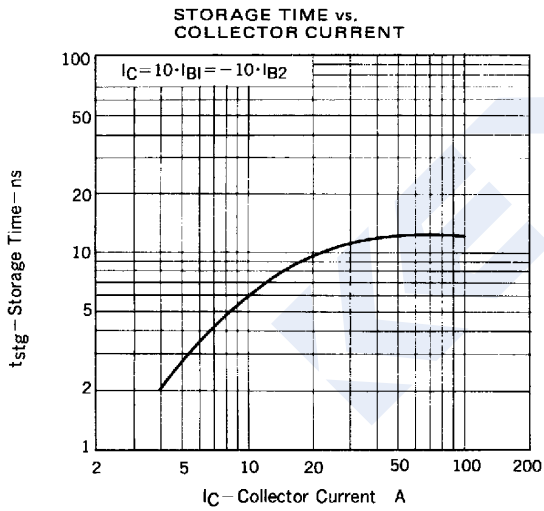
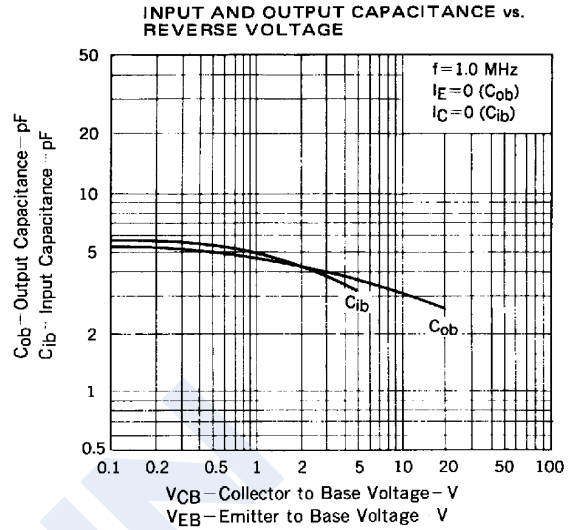
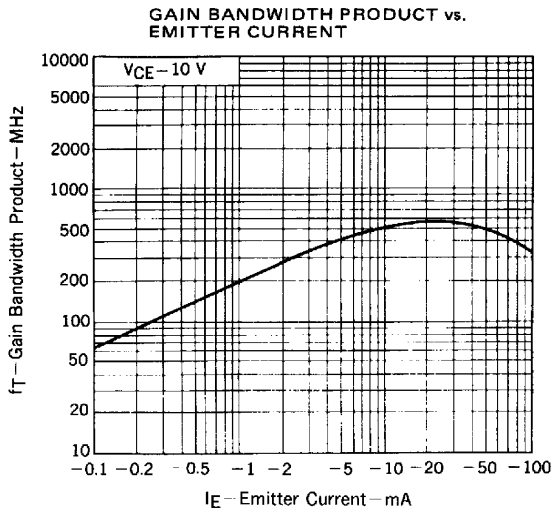
### Typical Characteristics



# NPN Transistors

## 2SC1621

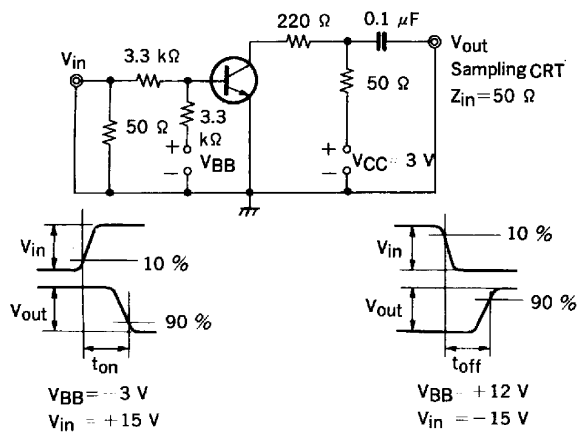
■ Typical Characteristics



## NPN Transistors

## 2SC1621

Switching Time Test Circuit

 $t_{on}, t_{off}$  TEST CIRCUIT $t_{stg}$  TEST CIRCUIT