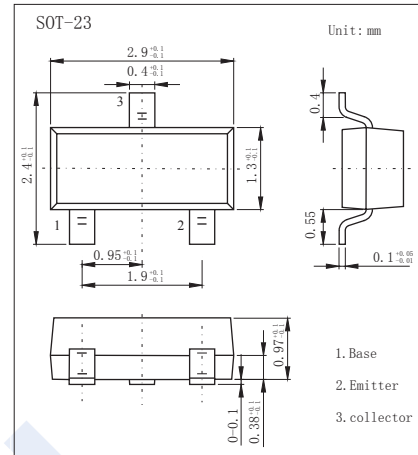


## NPN Transistors

### 2SC2404

#### ■ Features

- Collector Current Capability  $I_c=15\text{mA}$
- Collector Emitter Voltage  $V_{CE0}=20\text{V}$



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

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	$V_{CBO}$	30	V
Collector - Emitter Voltage	$V_{CEO}$	20	
Emitter - Base Voltage	$V_{EBO}$	3	
Collector Current - Continuous	$I_c$	15	mA
Collector Power Dissipation	$P_c$	150	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	$V_{CBO}$	$I_c = 100 \mu\text{A}, I_E = 0$	30			V
Collector- emitter breakdown voltage	$V_{CEO}$	$I_c = 1 \text{mA}, I_B = 0$	20			
Emitter - base breakdown voltage	$V_{EBO}$	$I_E = 100 \mu\text{A}, I_C = 0$	3			
Collector-base cut-off current	$I_{CBO}$	$V_{CB} = 30 \text{V}, I_E = 0$			0.1	$\mu\text{A}$
Emitter cut-off current	$I_{EBO}$	$V_{EB} = 3 \text{V}, I_C = 0$			0.1	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_c = 15 \text{mA}, I_B = 1.5 \text{mA}$			0.5	V
Base - emitter saturation voltage	$V_{BE(sat)}$	$I_c = 15 \text{mA}, I_B = 1.5 \text{mA}$			1.2	
Base - emitter voltage	$V_{BE}$	$V_{CE} = 6 \text{V}, I_E = -1 \text{mA}$		0.72		
DC current gain	$h_{FE}$	$V_{CE} = 6 \text{V}, I_E = -1 \text{mA}$	40		260	
Power gain	PG	$V_{CB} = 6 \text{V}, I_E = -1 \text{mA}, f = 100 \text{MHz}$		24		dB
Noise figure	NF	$V_{CB} = 6 \text{V}, I_E = -1 \text{mA}, f = 100 \text{MHz}$		3.3		
Common emitter reverse transfer capacitance	$C_{re}$	$V_{CE} = 6 \text{V}, I_c = 1 \text{mA}, f = 10.7 \text{MHz}$			1	pF
Transition frequency	$f_T$	$V_{CB} = 6 \text{V}, I_E = -1 \text{mA}, f = 100 \text{MHz}$	450			MHz

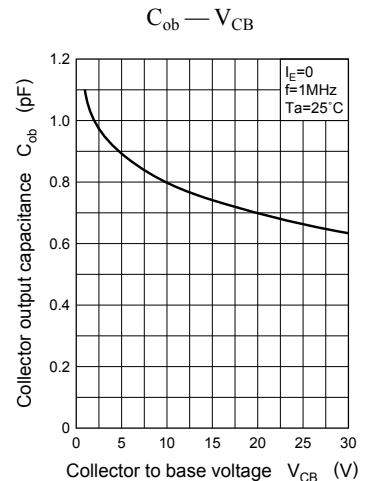
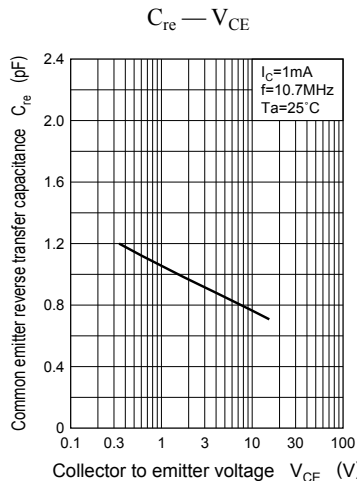
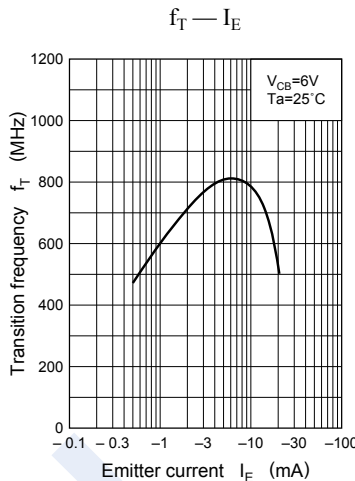
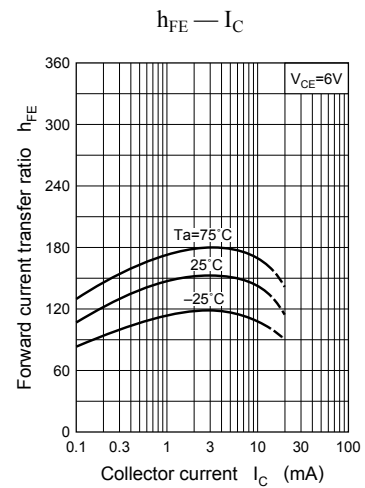
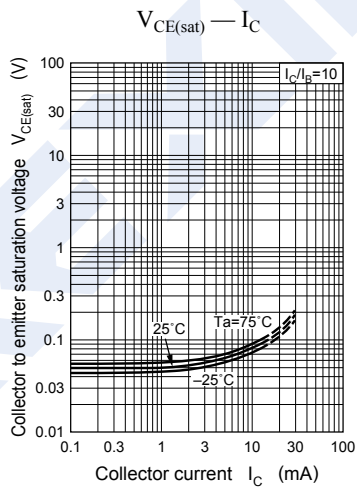
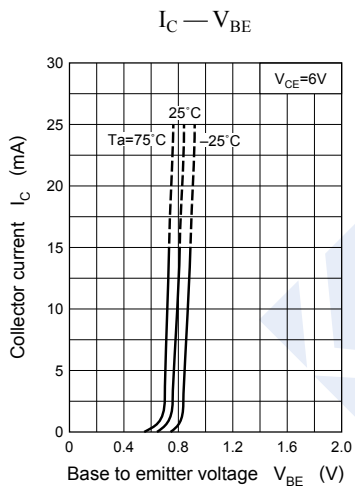
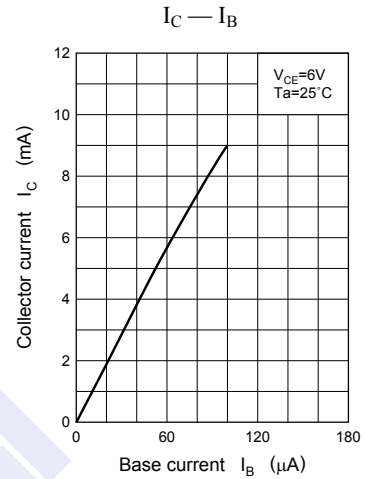
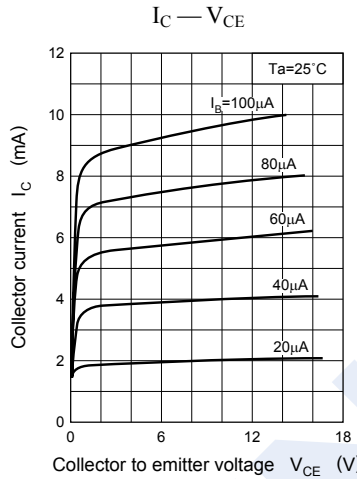
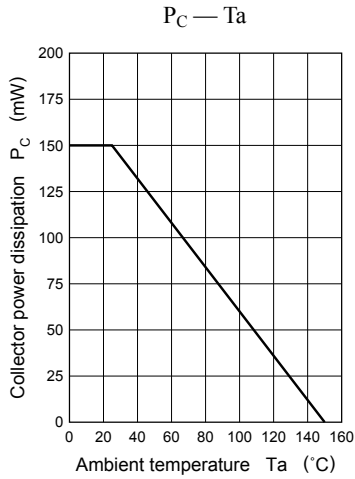
#### ■ Classification of $h_{FE}$

Type	2SC2404-B	2SC2404-C	2SC2404-D
Range	40-110	65-160	100-260
Marking	UB	UC	UD

### NPN Transistors

### 2SC2404

■ Typical Characteristics



## NPN Transistors 2SC2404

■ Typical Characteristics

