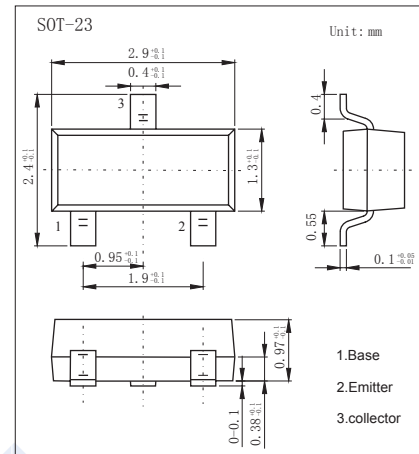


NPN Transistors

2SC4412

■ Features

- Collector Current Capability $I_C=50\text{mA}$
- Collector Emitter Voltage $V_{CE0}=300\text{V}$



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

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V_{CBO}	300	V
Collector - Emitter Voltage	V_{CEO}	300	
Emitter - Base Voltage	V_{EBO}	5	
Collector Current - Continuous	I_C	50	mA
Collector Power Dissipation	P_C	250	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}	$I_C = 100 \mu\text{A}, I_E = 0$	300			V
Collector- emitter breakdown voltage	V_{CEO}	$I_C = 1 \text{mA}, I_B = 0$	300			
Emitter - base breakdown voltage	V_{EBO}	$I_E = 100 \mu\text{A}, I_C = 0$	5			
Collector-base cut-off current	I_{CBO}	$V_{CB} = 200 \text{V}, I_E = 0$			0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = 4 \text{V}, I_C = 0$			0.1	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 10 \text{mA}, I_B = 1 \text{mA}$			1	V
Base - emitter saturation voltage	$V_{BE(sat)}$	$I_C = 10 \text{mA}, I_B = 1 \text{mA}$			1	
DC current gain	h_{FE}	$V_{CE} = 6 \text{V}, I_C = 0.1 \text{mA}$	100		320	
		$V_{CE} = 6 \text{V}, I_C = 1 \text{mA}$	100			
DC current gain ratio	$h_{FE \text{ ratio}}$	$h_{FE(1)}/h_{FE(2)}$		0.95		
Reverse transfer capacitance	C_{re}	$V_{CB} = 30 \text{V}, f = 1 \text{MHz}$		1		pF
Collector output capacitance	C_{ob}	$V_{CB} = 30 \text{V}, f = 1 \text{MHz}$		1.5		pF
Transition frequency	f_T	$V_{CE} = 30 \text{V}, I_C = 10 \text{mA}$		70		MHz

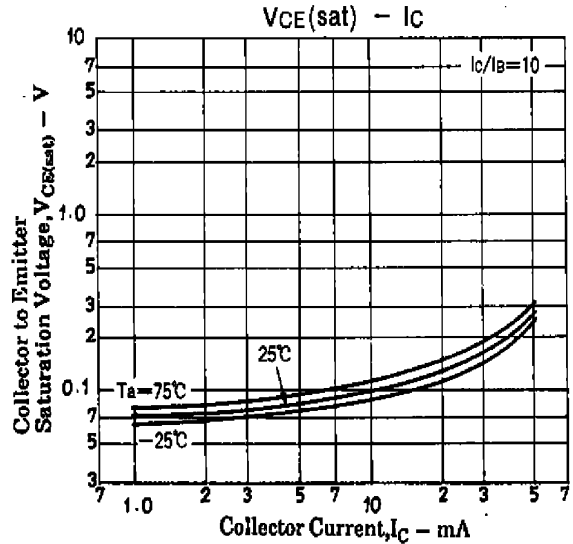
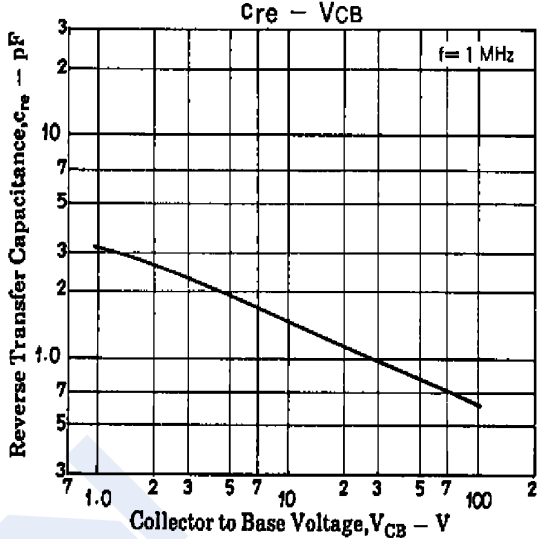
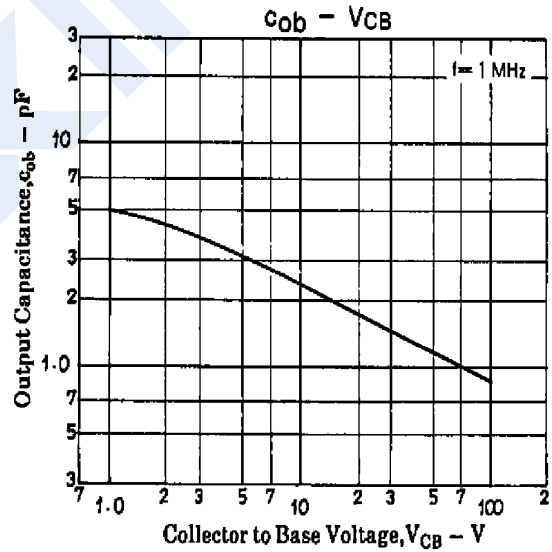
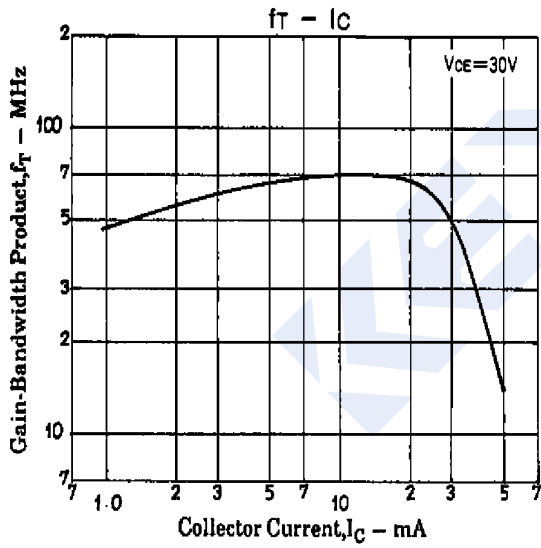
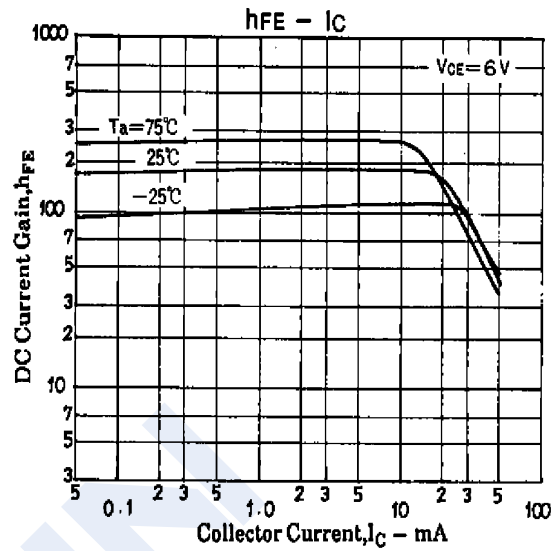
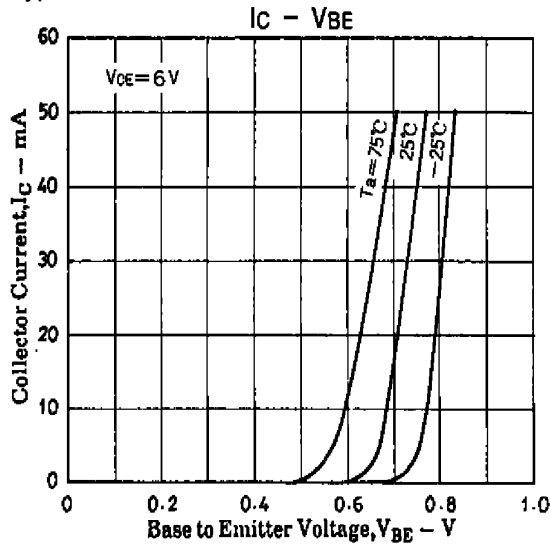
■ Classification of $h_{FE(1)}$

Type	2SC4412-QT4	2SC4412-QT5
Range	100-200	160-320
Marking	QT4	QT5

NPN Transistors

2SC4412

■ Typical Characteristics



NPN Transistors

2SC4412

■ Typical Characteristics

