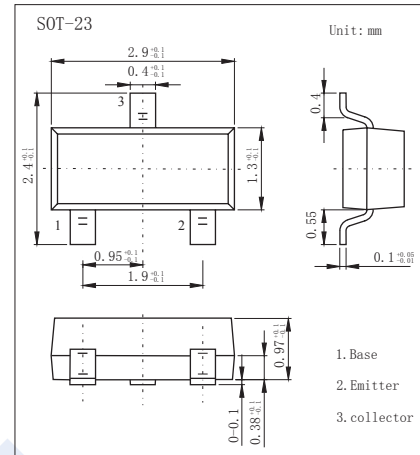


## NPN Transistors

## 2SC2778

## ■ Features

- Collector Current Capability  $I_c=30\text{mA}$
- 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	$V_{EBO}$	5	
Collector Current - Continuous	$I_c$	30	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	$V_{CBO}$	$I_c = 100 \mu\text{A}, I_E = 0$	30			V
Collector- emitter breakdown voltage	$V_{CEO}$	$I_c = 2\text{mA}, I_B = 0$	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	$I_{EBO}$	$V_{EB} = 5\text{V}, I_c = 0$			0.1	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_c = 30\text{mA}, I_B = 3\text{mA}$			0.5	V
Base - emitter saturation voltage	$V_{BE(sat)}$	$I_c = 30\text{mA}, I_B = 3\text{mA}$			1.2	
DC current gain	$h_{FE}$	$V_{CE} = 10\text{V}, I_c = 1\text{mA}$	70		250	
Common emitter reverse transfer capacitance	$C_{re}$	$V_{CE} = 10\text{V}, I_c = 1\text{mA}, f = 10.7\text{MHz}$		1.3		pF
Transition frequency	$f_T$	$V_{CB} = 10\text{V}, I_E = -1\text{mA}, f = 200\text{MHz}$	150			MHz

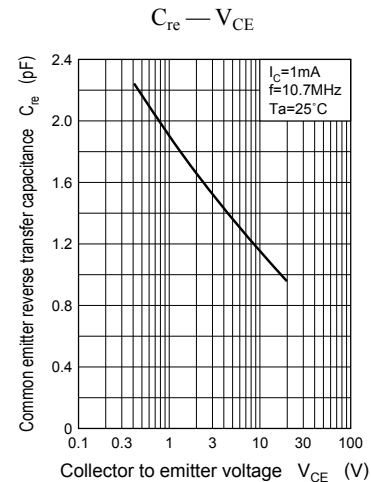
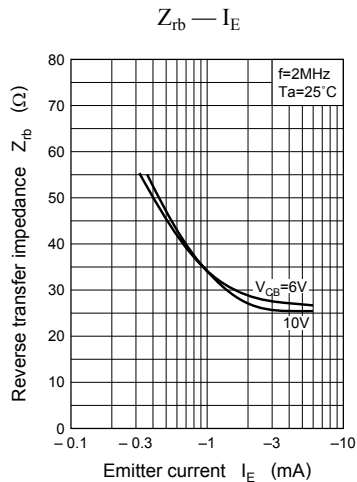
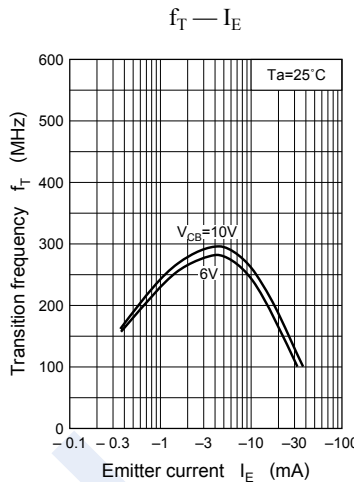
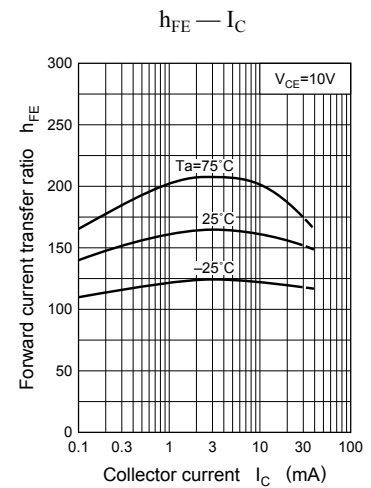
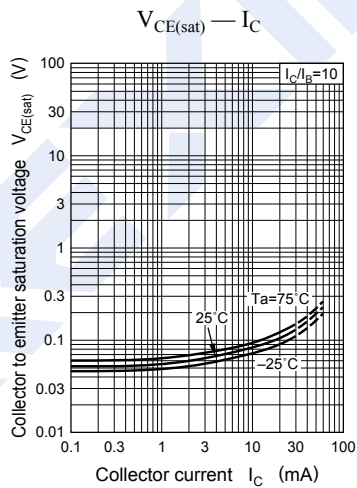
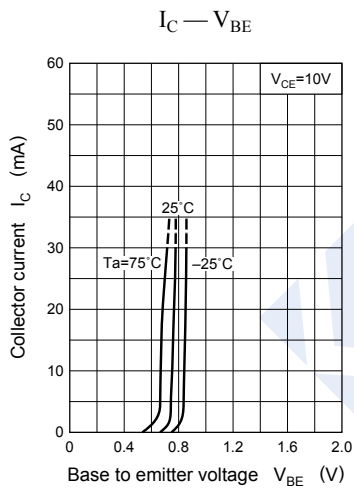
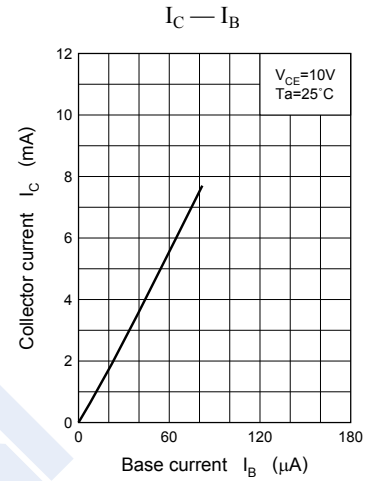
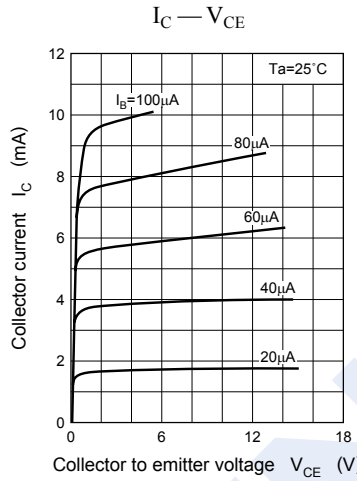
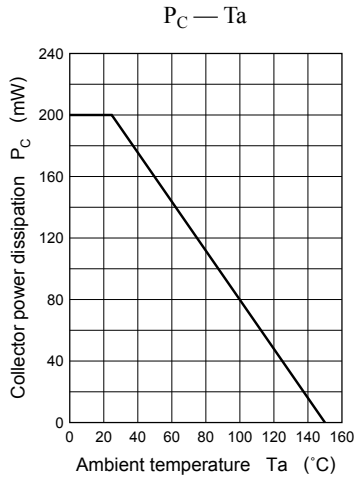
■ Classification of  $h_{FE}$ 

Type	2SC2778-B	2SC2778-C
Range	70-160	110-250
Marking	KB	KC

# NPN Transistors

## 2SC2778

■ Typical Characteristics



## NPN Transistors 2SC2778

■ Typical Characteristics

