

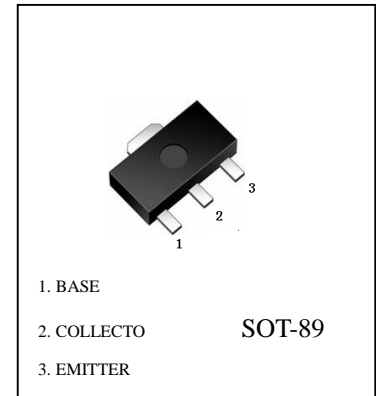
**FEATURES**

- Small flat package.
- Low saturation voltage  $V_{CE(sat)}=-0.5V$
- High speed switching time
- $PC=1.0$  to  $2.0W$

z High saturation current capability

Maximum Ratings ( $T_a=25\text{ }^\circ\text{C}$  unless otherwise noted)

Parameter	Symbol	Value	Unit
Collector-Base Voltage	$V_{CBO}$	50	V
Collector-Emitter Voltage	$V_{CEO}$	50	V
Emitter-Base Voltage	$V_{EBO}$	5	V
Collector Current -Continuous	$I_C$	2	A
Peak Base Current	$I_{BM}$	0.4	A
Collector Power dissipation	$PC$	1	W
Storage Temperature	$T_{stg}$	-55to +150	$^\circ\text{C}$

**2SC1766 (NPN)**

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

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector cut-off current	$I_{CBO}$	$V_{CB}=50V, I_E=0$			0.1	$\mu\text{A}$
Emitter cut-off current	$I_{EBO}$	$V_{EB}=5V, I_C=0$			0.1	$\mu\text{A}$
DC current gain	$h_{FE}$	$V_{CE}=2V, I_C=500\text{mA}$	70		240	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=1A, I_B=50\text{mA}$			0.5	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=1A, I_B=50\text{mA}$			1.2	mV
Transition frequency	$f_T$	$V_{CE}=2V, I_C=0.5A$ $f=100\text{MHz}$		120		MHz
Collector output capacitance	$C_{ob}$	$V_{CB}=10V, I_E=0, f=1\text{MHz}$		40		pF

**CLASSIFICATION OF  $h_{FE}$** 

Rank	P	Q	Y
Range	82-180	120-270	180-390
Marking	P1766	Q1766	Y1766

2SC1766 Typical Characteristics

Figure 1.  $V_{CE} - I_C$

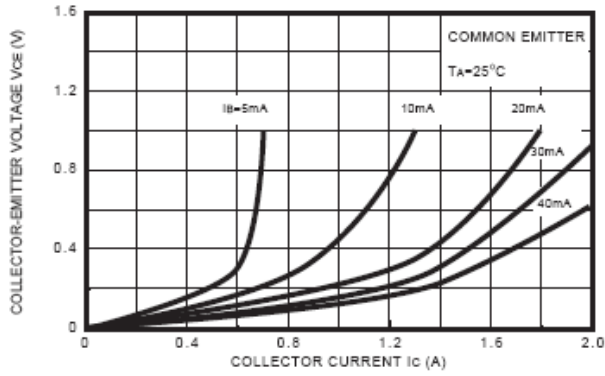


Figure 2.  $V_{CE} - I_C$

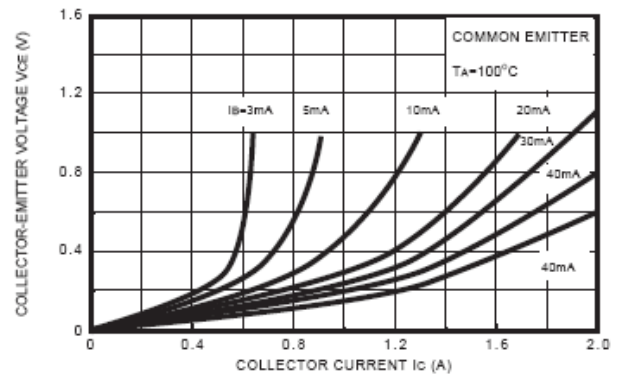


Figure 3.  $V_{CE} - I_C$

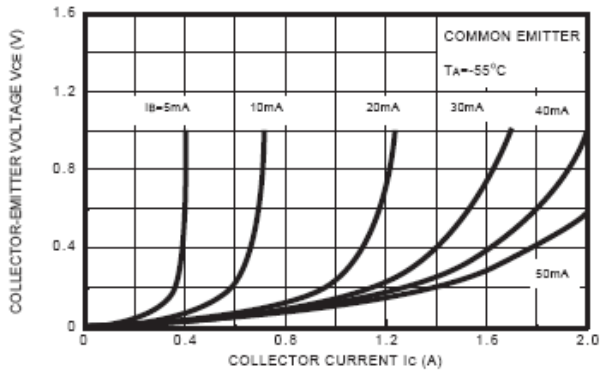


Figure 4.  $h_{FE} - I_C$

