

TECHNICAL DATA

SSN3904**NPN Silicon Transistor**

1. Descriptions

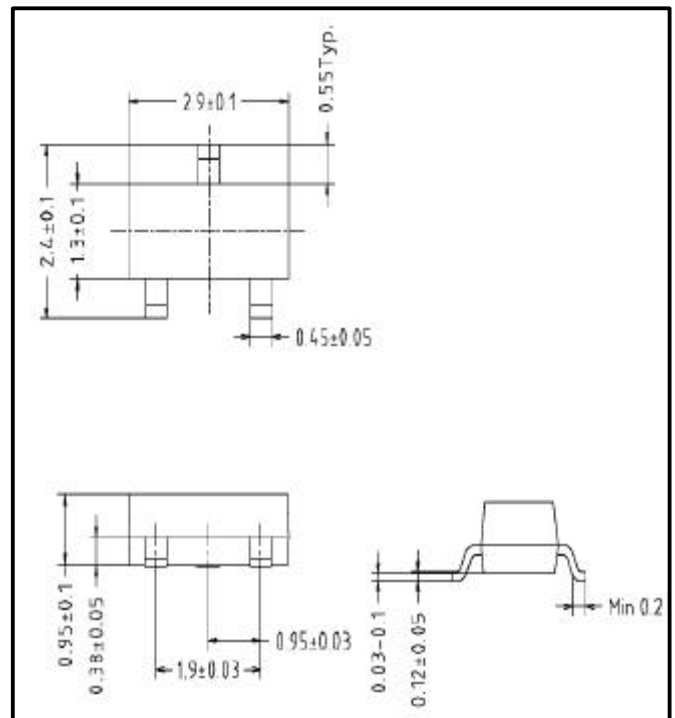
- General small signal amplifier
- Switching application

2. Features

- Low collector saturation voltage
 $V_{CE(sat)} = \text{Max. } 0.4\text{V}$
- Low output capacitance
 $C_{ob} = \text{Typ. } 4\text{pF}$
- Complementary to the SSN3906

3. Ordering Information

Device	Marking	Package
SSN3904	KA	SOT-23



SOT-23 Package Outline Dimension

4. Maximum ratings ($T_a=25^\circ\text{C}$)

Characteristic	Symbol	Ratings	Unit
Collector-Base voltage	V_{CBO}	60	V
Collector-Emitter voltage	V_{CEO}	40	V
Emitter-Base voltage	V_{EB0}	6	V
Collector current	I_C	100	mA
Collector dissipation	P_C^*	350	mW
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature	T_{stg}	$-55 \sim 150$	$^\circ\text{C}$

5. Electrical Characteristics ($T_a=25^\circ\text{C}$)

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Collector-Base breakdown voltage	BV_{CBO}	$I_C=10\mu\text{A}, I_E=0$	60	-	-	V
Collector-Emitter breakdown voltage	BV_{CEO}	$I_C=1\text{mA}, I_B=0$	40	-	-	V
Emitter-Base breakdown voltage	BV_{EB0}	$I_E=10\mu\text{A}, I_C=0$	6	-	-	V
Collector cut-off current	I_{CBO}	$V_{CB}=60\text{V}, I_E=0$	-	-	0.1	μA
DC current gain	h_{FE}	$V_{CE}=1\text{V}, I_C=10\text{mA}$	100	-	300	-
Collector-Emitter saturation voltage	$V_{CE(sat)}$	$I_C=50\text{mA}, I_B=5\text{mA}$	-	-	0.4	V
Transition frequency	f_T	$V_{CE}=20\text{V}, I_C=10\text{mA}$	300	-	-	MHz
Collector output capacitance	C_{ob}	$V_{CE}=5\text{V}, I_E=0, f=1\text{MHz}$	-	-	4	pF

6. Electrical Characteristics Curves

Fig 1. $P_c - T_a$

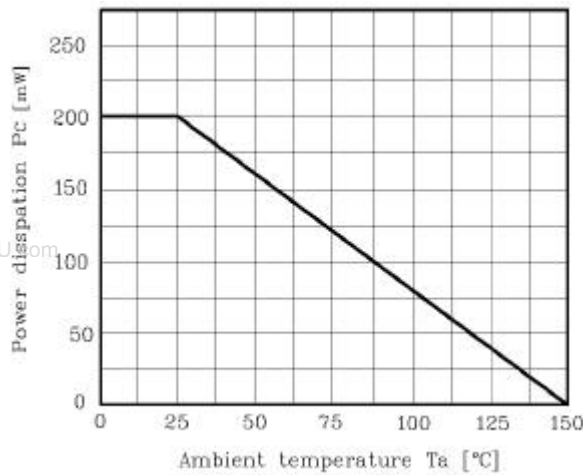


Fig 2. $I_c - V_{BE}$

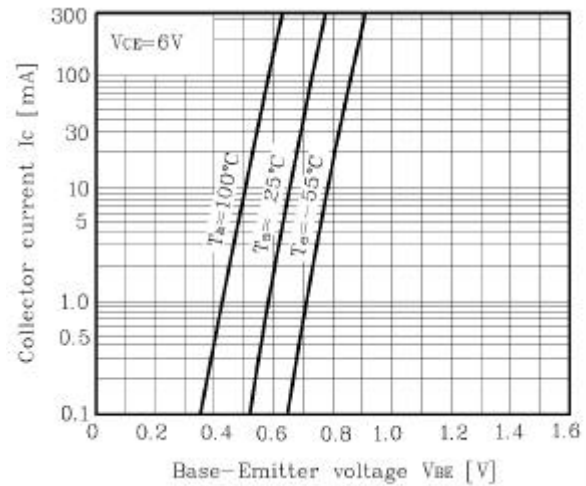


Fig 3. $I_c - V_{CE}$

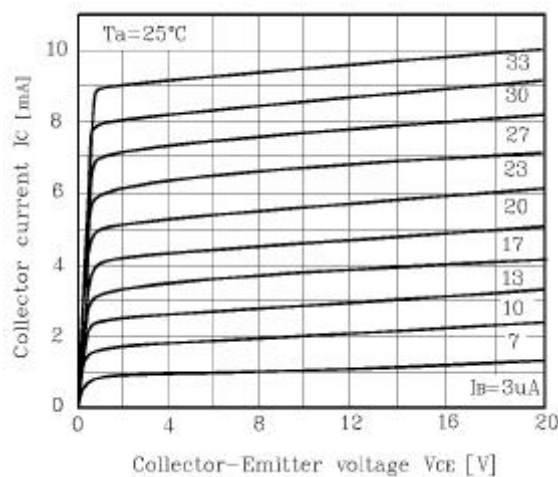


Fig 4. $V_{CE(sat)} - I_c$

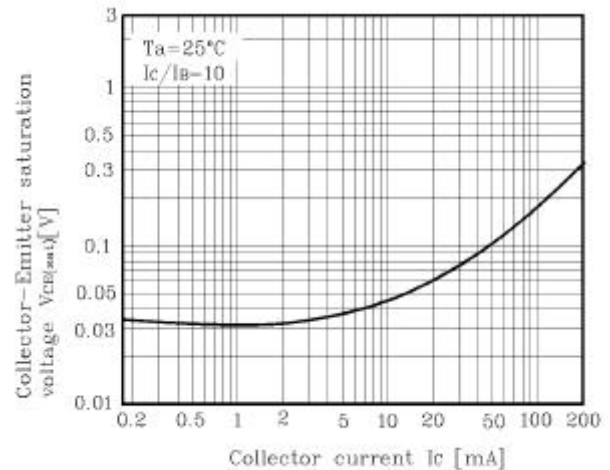


Fig 5. $h_{FE} - I_c$

