AUK Semiconductor

SBT3906F

PNP Silicon Transistor

Descriptions

- General small signal application
- Switching application

Features

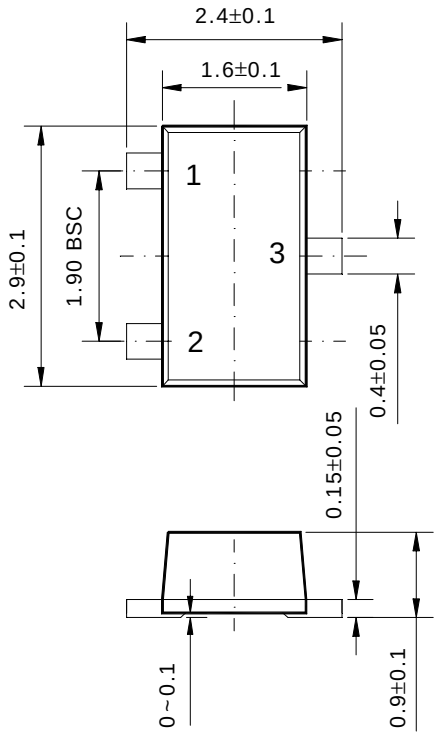
- Low collector saturation voltage
- Collector output capacitance
- Complementary pair with SBT3904F

Ordering Information

Type NO.	Marking	Package Code
SBT3906F	2A	SOT-23F

Outline Dimensions

unit : mm



PIN Connections
1. Base
2. Emitter
3. Collector

Absolute maximum ratings

Ta=25°C

Characteristic	Symbol	Ratings	Unit
Collector-Base voltage	V_{CBO}	-40	V
Collector-Emitter voltage	V_{CEO}	-40	V
Emitter-base voltage	V_{EBO}	-5	V
Collector current	I_C	-200	mA
Collector dissipation	P_C^*	350	mW
Junction temperature	T_j	150	°C
Storage temperature range	T_{stg}	-55~150	°C

* : Package mounted on 99.5% alumina 10×8×0.6mm

Electrical Characteristics

Ta=25°C

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Collector-Base breakdown voltage	BV_{CBO}	I_C=-10μA, I_E=0	-40	-	-	V
Collector-Emitter breakdown voltage	BV_{CEO}	I_C=-1mA, I_B=0	-40	-	-	V
Emitter-Base breakdown voltage	BV_{EBO}	I_E=-10μA, I_C=0	-5	-	-	V
Collector cut-off current	I_{CEX}	V_{CE}=-30V, V_{EB}=-3V	-	-	-50	nA
DC current gain	h_{FE}	V_{CE}=-1V, I_C=-10mA	100	-	300	-
Collector-Emitter saturation voltage	$V_{CE(sat)}$	I_C=-50mA, I_B=-5mA	-	-	-0.4	V
Transition frequency	f_T	V_{CE}=-20V, I_C=-10mA, f=100MHz	250	-	-	MHz
Collector output capacitance	C_{ob}	V_{CB}=-5V, I_E=0, f=1MHz	-	-	4.5	pF
Delay time	t_d	V_{CC}=-3V_{dc}, $V_{BE(off)}$=-0.5V_{dc}, I_C=-10mA_{dc}, I_{B1}=-1mA_{dc}	-	-	35	ns
Rise time	t_r		-	-	35	ns
Storage time	t_s	V_{CC}=-3V_{dc}, I_C=-10mA_{dc}, I_{B1}=I_{B2}=-1mA_{dc}	-	-	225	ns
Fall Time	t_f		-	-	75	ns

Electrical Characteristic Curves

Fig. 1 P_C-T_a

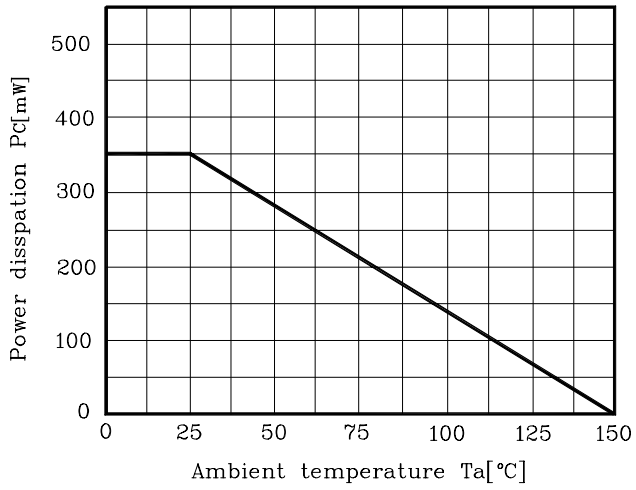


Fig. 2 h_{FE}-I_C

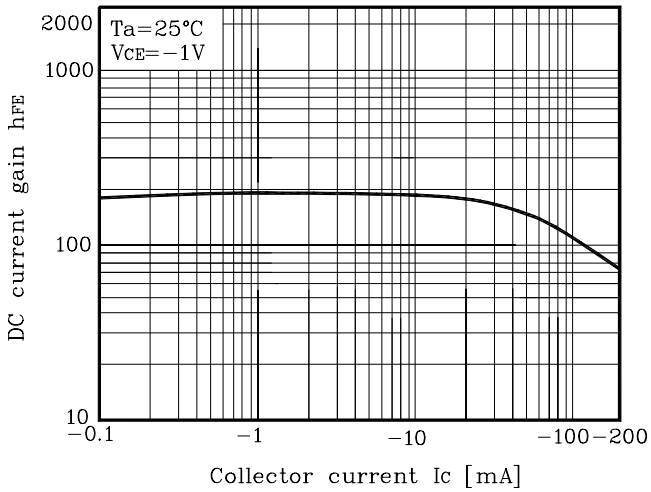


Fig. 3 $V_{CE(sat)}$-I_C