

# **STA124SF**

**PNP Silicon Transistor** 

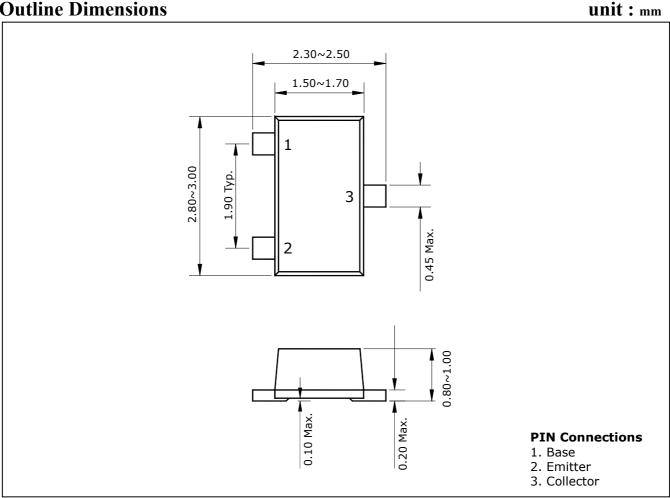
#### **Features**

- Suitable for low voltage large current drivers
- High DC current gain and large current capability
- Complementary pair with STD123SF

### **Ordering Information**

Type NO.	Marking	Package Code		
STA124SF	124	SOT-23F		

#### **Outline Dimensions**



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Absolute maximum ratings

(Ta=25°C)

Characteristic	Symbol	Ratings	Unit
Collector-Base voltage	$V_{CBO}$	-15	V
Collector-Emitter voltage	$V_{\sf CEO}$	-12	V
Emitter-Base voltage	$V_{EBO}$	-6.5	V
Collector current	$I_{C}$	-1	Α
Collector dissipation	P <sub>C</sub> *	350	mW
Junction temperature	T <sub>j</sub>	150	°C
Storage temperature	$T_{stg}$	-55~150	°C

<sup>\* :</sup> Package mounted on 99.5% alumina  $10 \times 8 \times 0.1$ mm

### **Electrical Characteristics**

(Ta=25°C)

Characteristic	Symbol	<b>Test Condition</b>	Min.	Typ.	Max.	Unit
Collector-Base breakdown voltage	BV <sub>CBO</sub>	$I_C = -50 \mu A, I_E = 0$	-15	-	-	V
Collector-Emitter breakdown voltage	BV <sub>CEO</sub>	$I_C=-1$ mA, $I_B=0$	-12	-	-	V
Emitter-Base breakdown voltage	BV <sub>EBO</sub>	$I_E = -50 \mu A, I_C = 0$	-6.5	-	-	V
Collector cut-off current	$I_{CBO}$	$V_{CB}$ =-15V, $I_E$ =0	-	-	-0.1	μΑ
Emitter cut-off current	$I_{EBO}$	$V_{EB}$ =-6V, $I_C$ =0	-	1	-0.1	μΑ
DC current gain	h <sub>FE</sub>	V <sub>CE</sub> =-1V, I <sub>C</sub> =-100mA	200	1	450	-
Collector-Emitter saturation voltage	$V_{\text{CE(sat)}}$	I <sub>C</sub> =-500mA, I <sub>B</sub> =-50mA	-	-0.2	-0.4	V
Transistor frequency	$f_T$	$V_{CE}$ =-5V, $I_{C}$ =-50mA	-	260	-	MHz
Collector output capacitance	C <sub>ob</sub>	$V_{CB}$ =-10V, $I_{E}$ =0, f=1MHz	-	5	-	pF

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Fig. 1  $P_C$  -  $T_a$ 

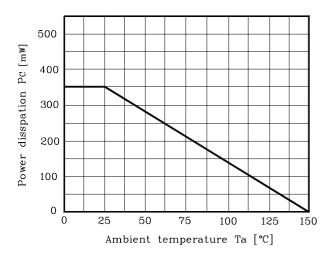


Fig. 3  $h_{FE}$ - $I_C$ 

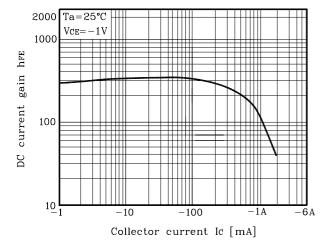


Fig. 2  $I_{\text{C}}$  -  $V_{\text{BE}}$ 

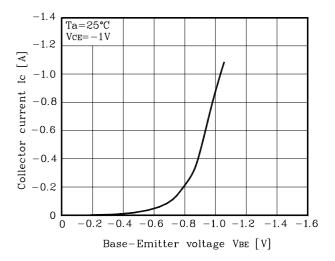
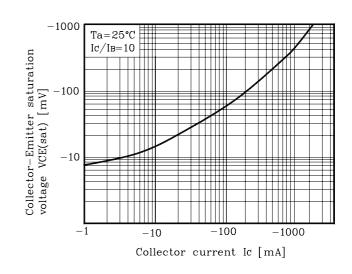


Fig. 4 V<sub>CE(sat)</sub>-I<sub>C</sub>



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