

Features

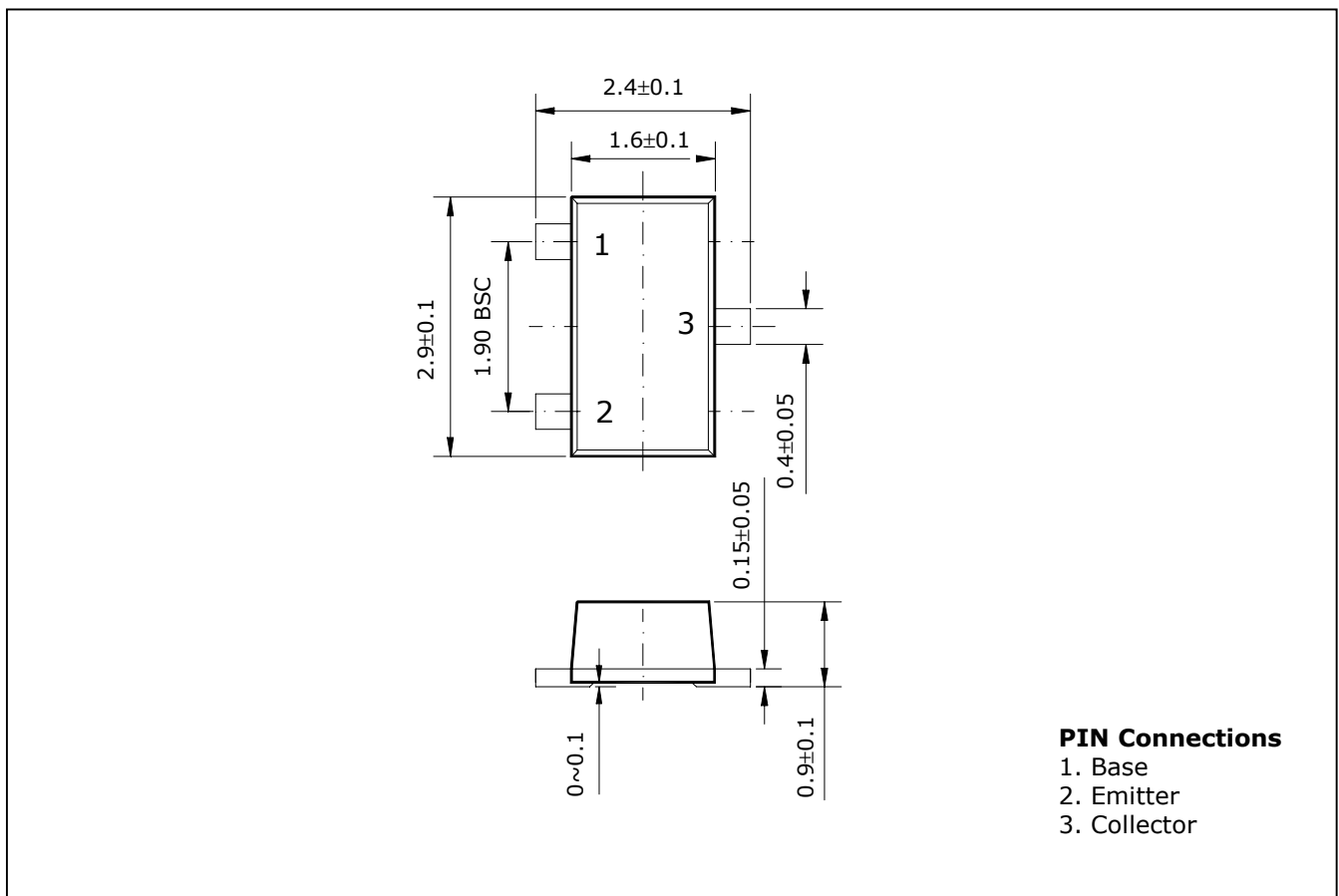
- Suitable for low voltage large current drivers
- High DC current gain and large current capability
- Complementary pair with STD123SF

Ordering Information

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

Outline Dimensions

unit : mm



Absolute maximum ratings

(Ta=25°C)

Characteristic	Symbol	Ratings	Unit
Collector-Base voltage	V_{CBO}	-15	V
Collector-Emitter voltage	V_{CEO}	-12	V
Emitter-Base voltage	V_{EBO}	-6.5	V
Collector current	I_C	-1	A
Collector dissipation	P_C^*	350	mW
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	-55~150	°C

* : Package mounted on 99.5% alumina 10×8×0.1mm

Electrical Characteristics

(Ta=25°C)

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

Fig. 1 $P_C - T_a$

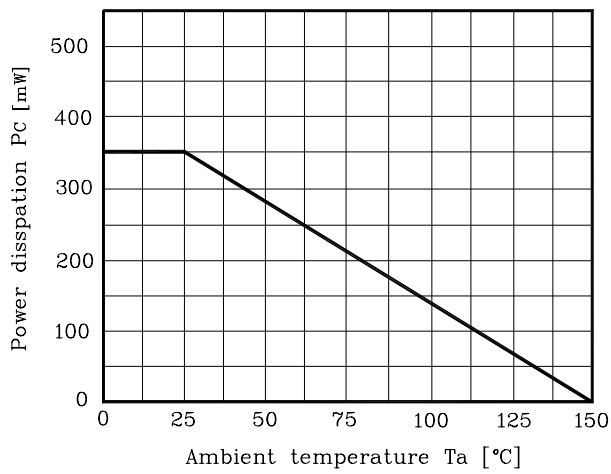


Fig. 2 $I_C - V_{BE}$

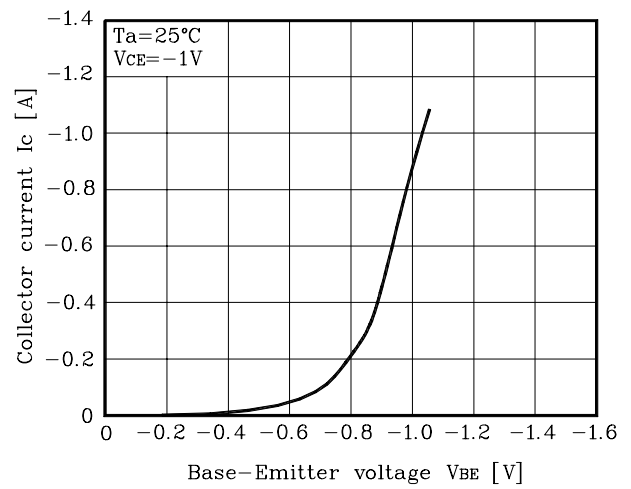


Fig. 3 $h_{FE} - I_C$

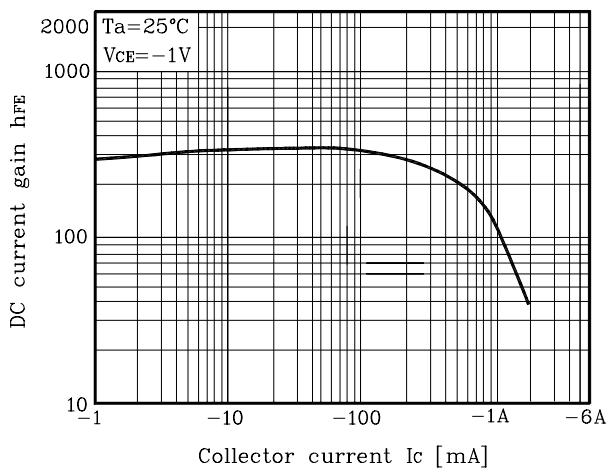


Fig. 4 $V_{CE(sat)} - I_C$

