



STD1862

NPN Silicon Transistor

Descriptions

- Audio power amplifier
- High current application

Features

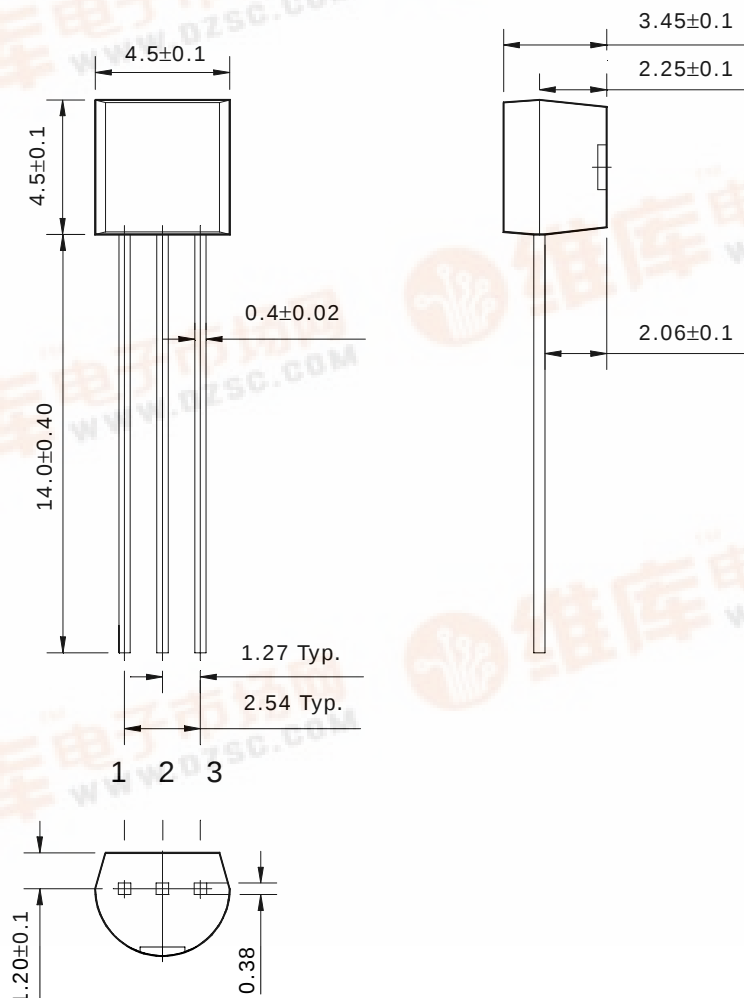
- High current : $I_C = 2A$
- Complementary pair with STB1277

Ordering Information

Type NO.	Marking	Package Code
STD1862	STD1862	TO-92

Outline Dimensions

unit : mm



PIN Connections

1. Emitter
2. Collector
3. Base

Absolute maximum ratings

(Ta=25°C)

Characteristic	Symbol	Ratings	Unit
Collector-Base voltage	V_{CBO}	30	V
Collector-Emitter voltage	V_{CEO}	30	V
Emitter-Base voltage	V_{EBO}	5	V
Collector current	I_C	2	A
Collector dissipation	P_C	625	mW
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	-55 ~ 150	°C

Electrical Characteristics

(Ta=25°C)

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Collector-Base breakdown voltage	BV_{CBO}	$I_C = 100\mu A, I_E = 0$	30	-	-	V
Collector-Emitter breakdown voltage	BV_{CEO}	$I_C = 10mA, I_B = 0$	30	-	-	V
Emitter-Base breakdown voltage	BV_{EBO}	$I_E = 1mA, I_C = 0$	5	-	-	V
Collector cut-off current	I_{CBO}	$V_{CB} = 30V, I_E = 0$	-	-	100	nA
Emitter cut-off current	I_{EBO}	$V_{EB} = 5V, I_C = 0$	-	-	100	nA
DC current gain	h_{FE}^*	$V_{CE} = 2V, I_C = 500mA$	100	-	320	-
Base-Emitter on voltage	$V_{BE(on)}$	$V_{CE} = 2V, I_C = 500mA$	-	-	1	V
Collector-Emitter saturation voltage	$V_{CE(sat)}$	$I_C = 2A, I_B = 0.2A$	-	-	0.8	V
Transition frequency	f_T	$V_{CB} = 5V, I_C = 50mA$	-	170	-	MHz
Collector output capacitance	C_{ob}	$V_{CB} = 10V, I_E = 0, f = 1MHz$	-	48	-	pF

* : h_{FE} rank / O : 100~200, Y : 160~320

Electrical Characteristic Curves

Fig. 1 P_C - T_a

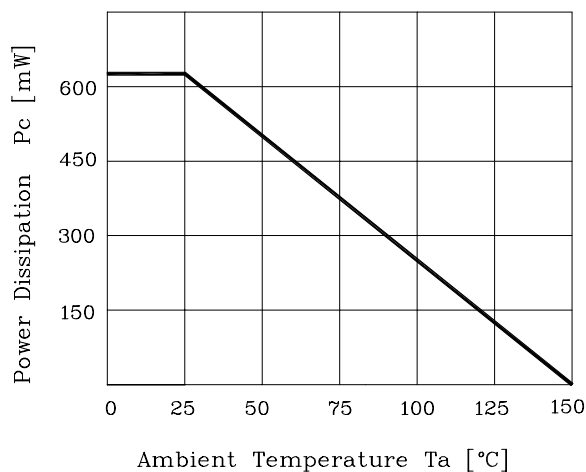


Fig. 2 I_C - V_{BE}

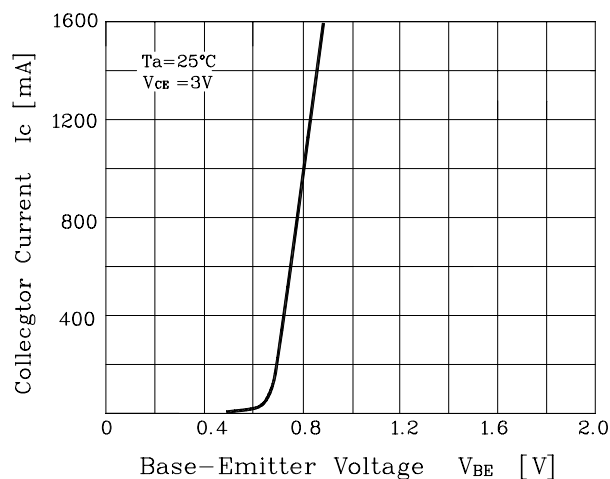


Fig. 3 I_C - V_{CE}

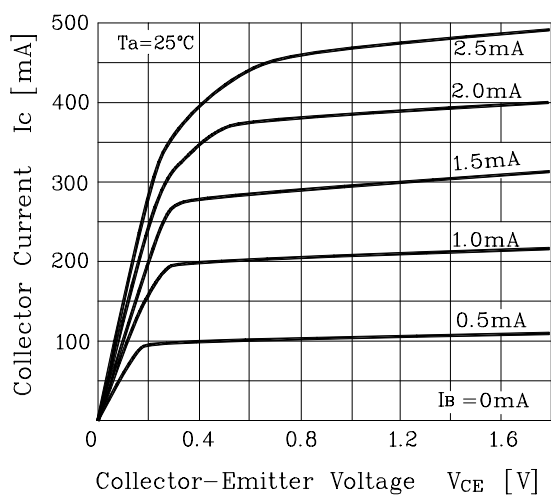


Fig. 4 $V_{CE(sat)}$ - I_C

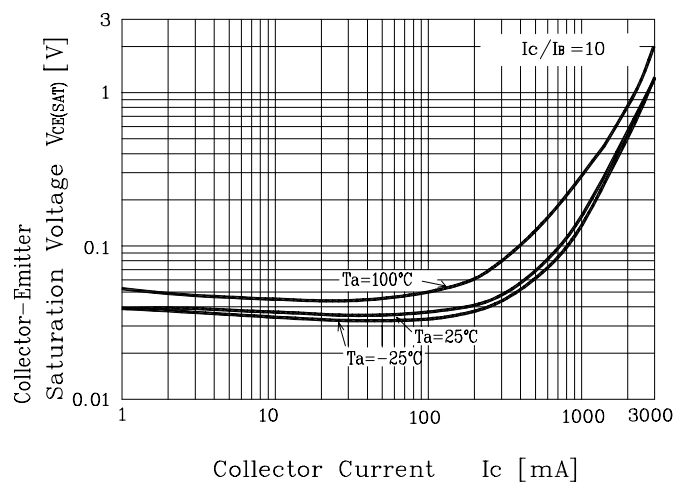


Fig. 5 h_{FE} - I_C

