

Description

- Suitable for low voltage large current drivers
- Excellent h_{FE} Linearity
- Complementary pair with STB772
- Switching Application

Features

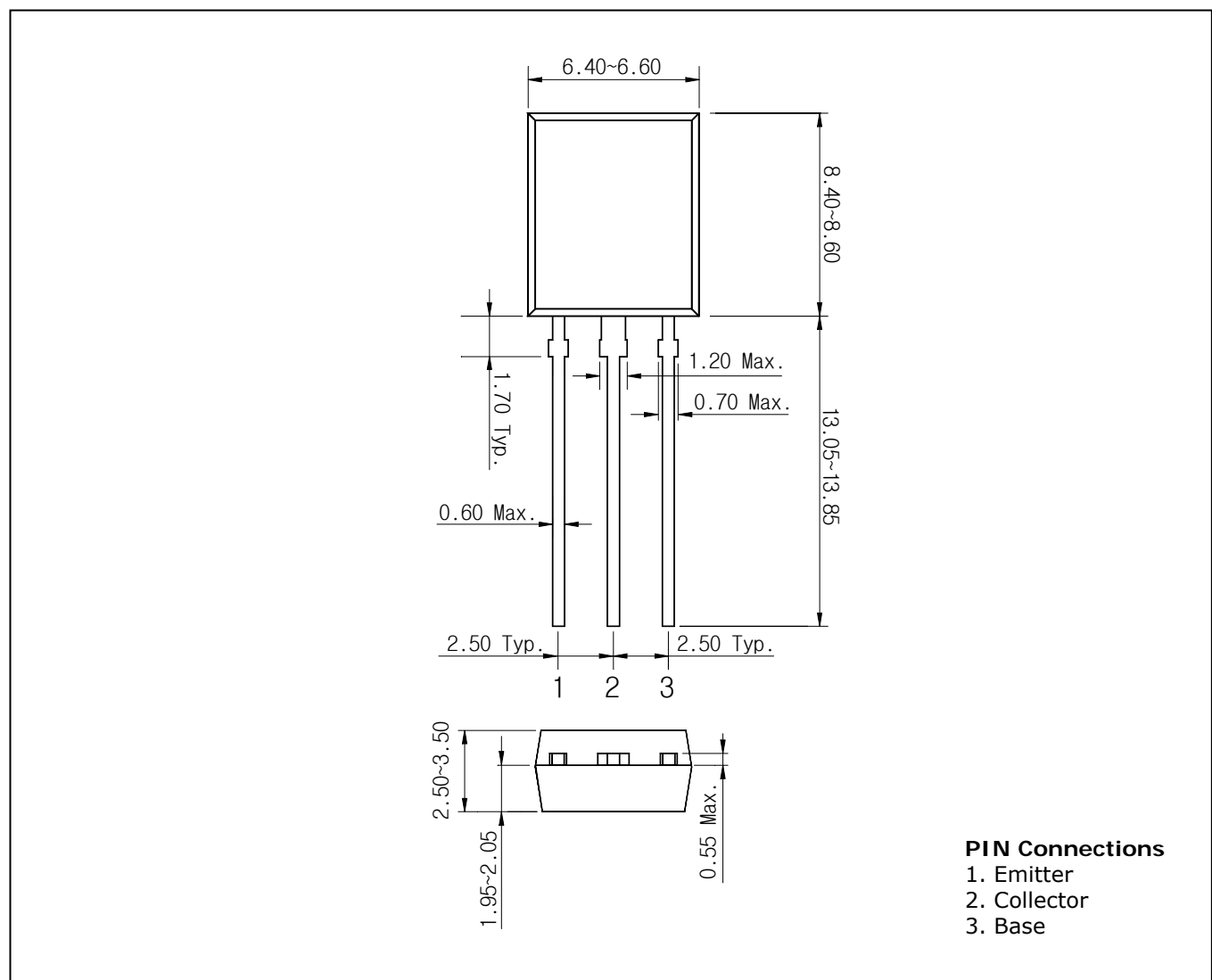
- Low collector saturation voltage $V_{CE(sat)}=0.4V(\text{Max.})$

Ordering Information

Type NO.	Marking	Package Code
STD882	STD882	MPT

Outline Dimensions

unit : mm



Absolute Maximum Ratings

(Ta=25°C)

Characteristic	Symbol	Rating	Unit
Collector-base voltage	V_{CBO}	40	V
Collector-emitter voltage	V_{CEO}	15	V
Emitter-base voltage	V_{EBO}	7	V
Collector current(DC)	$I_{C(DC)}$	5	A
Collector current(Pulse)	$I_{C(Pulse)}$	8	A
Collector power dissipation	P_C	1.2	W
Junction temperature	T_j	150	°C
Storage temperature range	T_{stg}	-55~150	°C

Electrical Characteristics

(Ta=25°C)

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Collector-emitter breakdown voltage	BV_{CEO}	$I_C=1mA, I_B=0$	15	-	-	V
Collector cut-off current	I_{CBO}	$V_{CB}=40V, I_E=0$	-	-	0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=7V, I_C=0$	-	-	0.1	μA
DC current gain	$*h_{FE}^1$	$V_{CE}=2V, I_C=0.5A$	160	-	320	-
	$*h_{FE}^2$	$V_{CE}=2V, I_C=2A$	100	-	-	-
Collector-emitter saturation voltage	$*V_{CE(sat)}$	$I_C=3A, I_B=100mA$	-	-	0.4	V
Base-emitter voltage	$*V_{BE}$	$V_{CE}=2V, I_C=0.5A$	-	-	1.0	V
Transition frequency	f_T	$V_{CE}=6V, I_E=-50mA$	-	200	-	MHz
Collector output capacitance	C_{ob}	$V_{CB}=20V, I_E=0, f=1MHz$	-	18	-	pF

※ : Pulse Test : $t_p=100 \mu s$, Duty cycle ≤ 2%

Electrical Characteristic Curves

Fig. 1 $P_c - T_a$

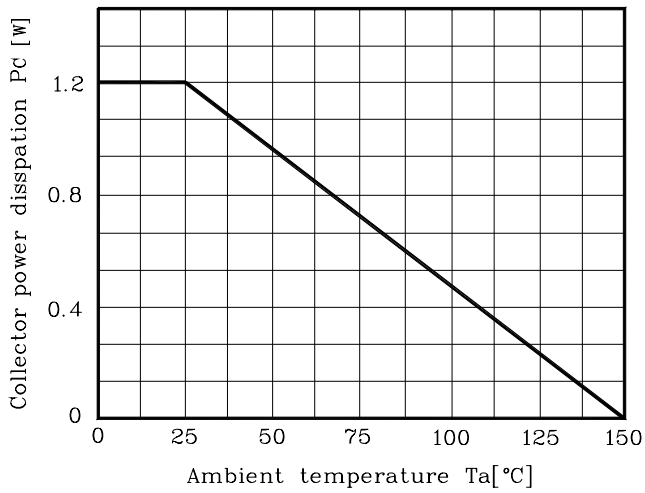


Fig. 2 $I_c - V_{BE}$

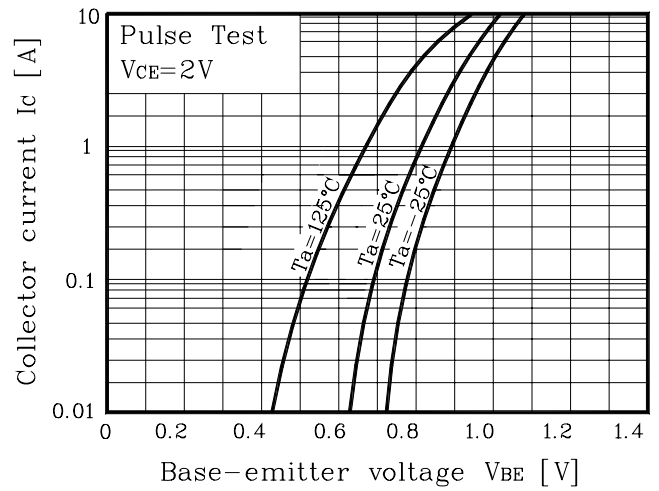


Fig. 3 $h_{FE} - I_c$

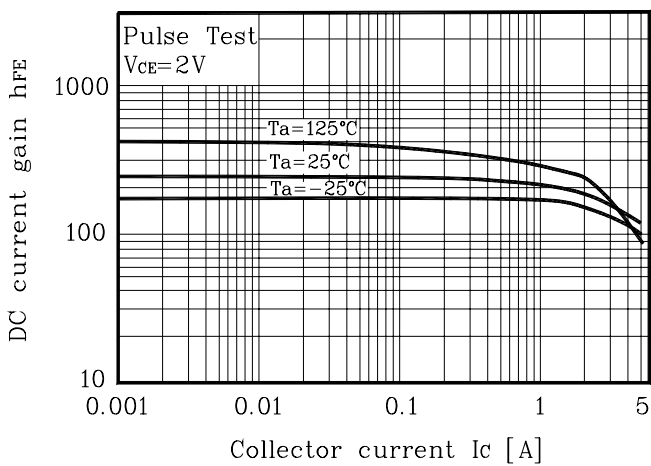


Fig. 4 $V_{CE(sat)} - I_c$

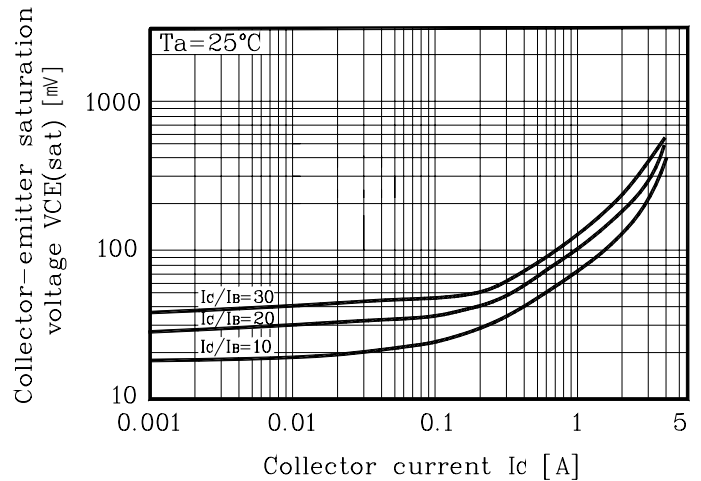


Fig. 5 $C_{ob} - V_{CB}$

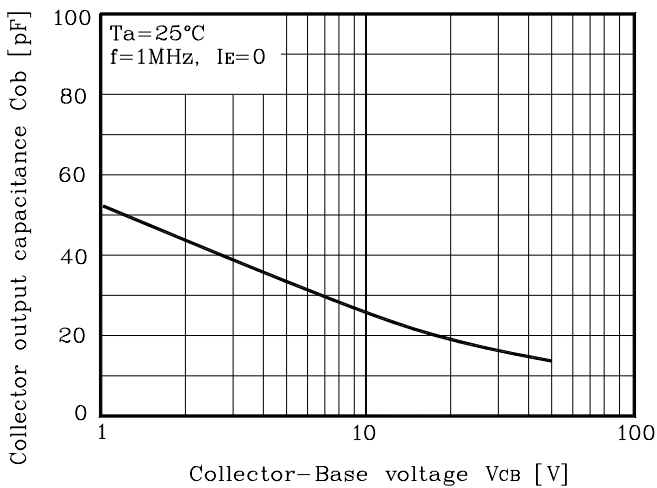
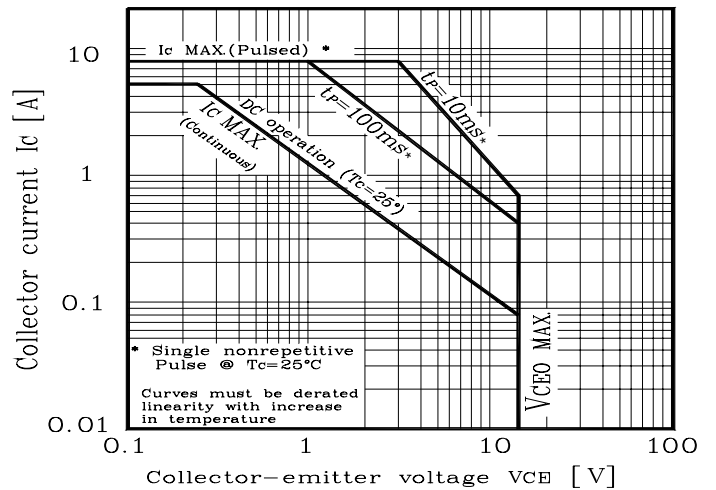


Fig. 6 Safe operating Area



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