

Description

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

Features

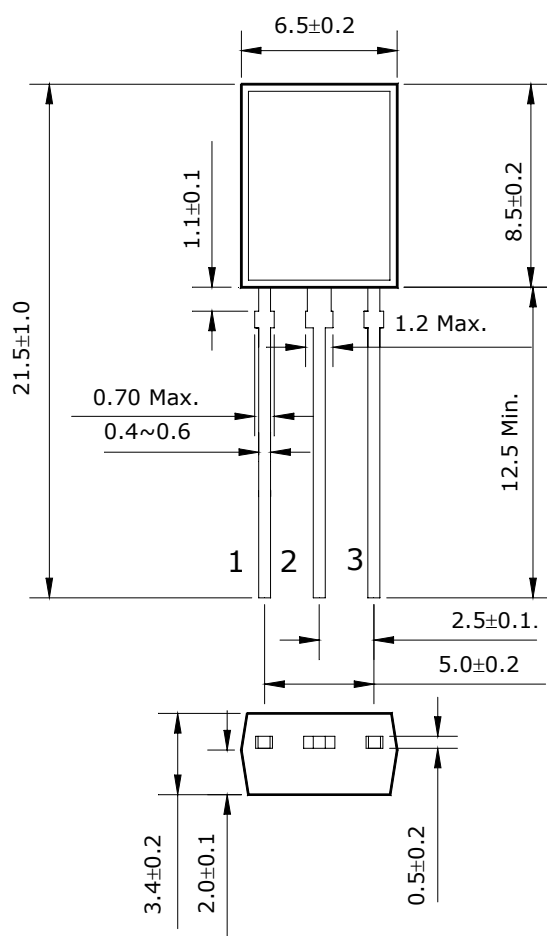
- Low collector saturation voltage $V_{CE(sat)}=0.4V(\text{Max.})$

Ordering Information

Type NO.	Marking	Package Code
STD882	STD882	MPT

Outline Dimensions

unit : mm



PIN Connections

1. Emitter
2. Collector
3. Base

Absolute maximum ratings
(Ta=25°C)

Characteristic	Symbol	Ratings	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 dissipation	P_C	1.2	W
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	-55~150	°C

* Pulse Test : Pulse Width=10ms (Max.), Duty Cycle=30%(Max.)

Electrical Characteristics
(Ta=25°C)

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Collector-Base breakdown voltage	BV_{CBO}	$I_C=50\mu A, I_E=0$	40	-	-	V
Collector-Emitter breakdown voltage	BV_{CEO}	$I_C=1mA, I_B=0$	15	-	-	V
Emitter-Base breakdown voltage	BV_{EBO}	$I_E=50\mu A, I_C=0$	7	-	-	V
Collector cut-off current	I_{CBO}	$V_{CB}=30V, I_E=0$	-	-	0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=5V, I_C=0$	-	-	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
Transition frequency	f_T	$V_{CE}=6V, I_E=-50mA$	-	150	-	MHz
Collector output capacitance	C_{ob}	$V_{CB}=20V, I_E=0, f=1MHz$	-	-	50	pF

Electrical Characteristic Curves

Fig. 1 $P_c - T_a$

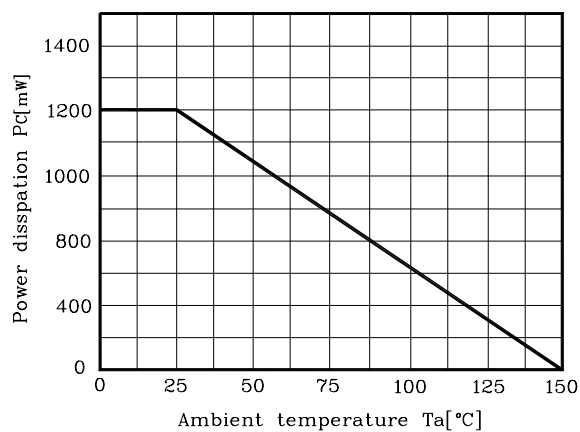


Fig. 2 $h_{FE} - I_C$

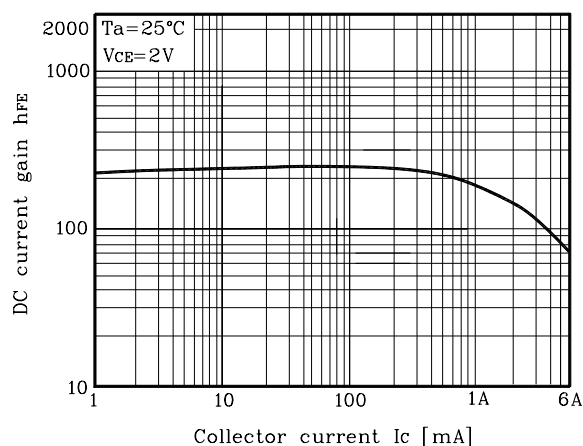


Fig. 3 $V_{CE(sat)} - I_C$

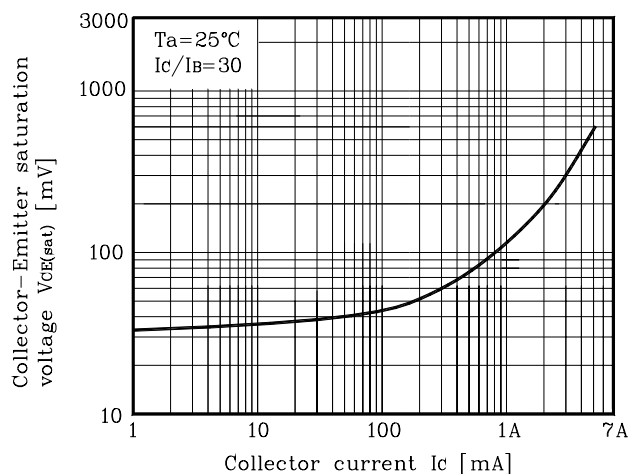


Fig. 4 $f_T - I_C$

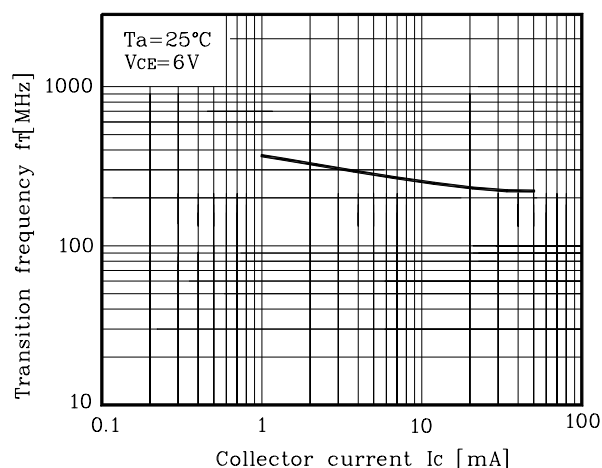


Fig. 5 $C_{ob} - V_{CB}$

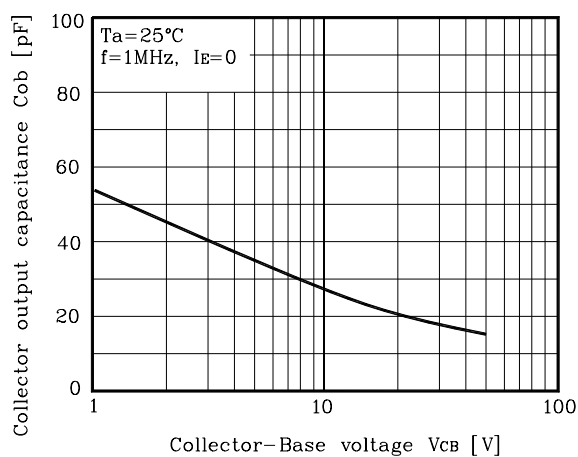


Fig. 6 Safe operating Area

