

Description

- Suitable for low voltage large current drivers
- Excellent h_{FE} Linearity
- Complementary pair with STB772D
- Switching Application

Features

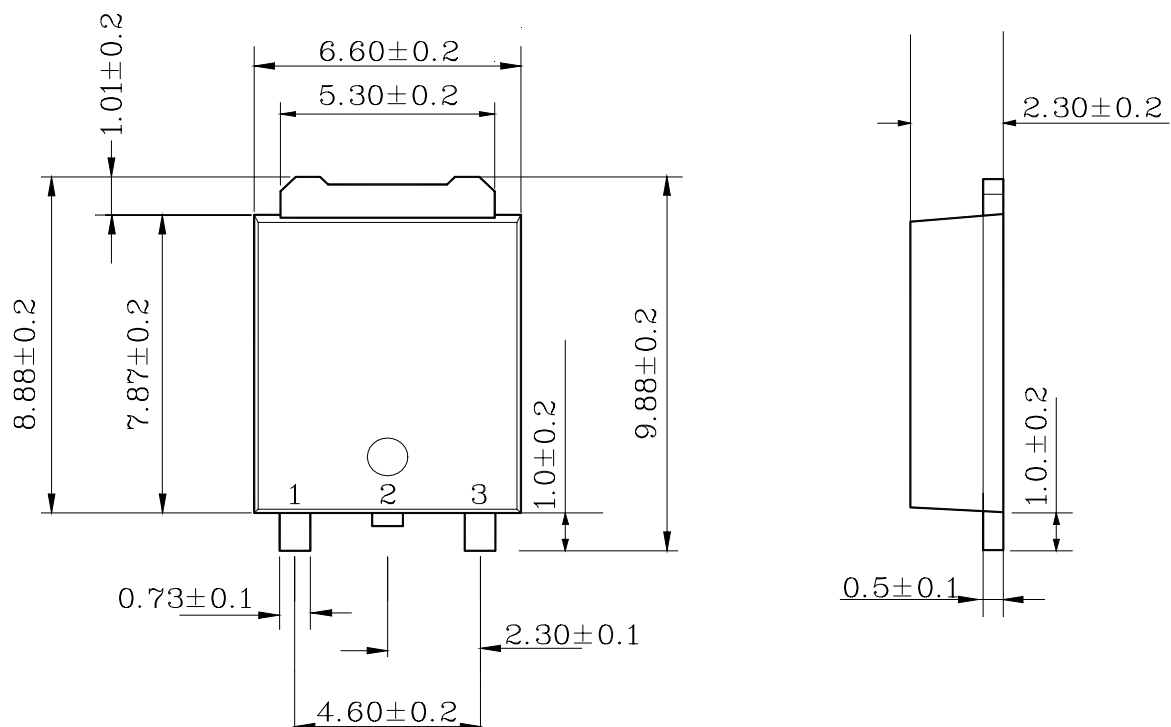
- Low collector saturation voltage $V_{CE(sat)} = 0.4V(\text{Max.})$

Ordering Information

Type NO.	Marking	Package Code
STD882D	STD882	D-PAK

Outline Dimensions

unit : mm



PIN Connections

1. Base
2. Collector
3. Emitter

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	15	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 $P_c - T_a$

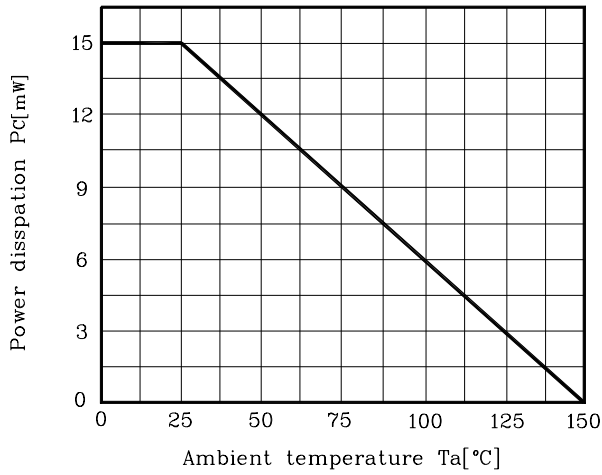


Fig. 2 $h_{FE} - I_C$

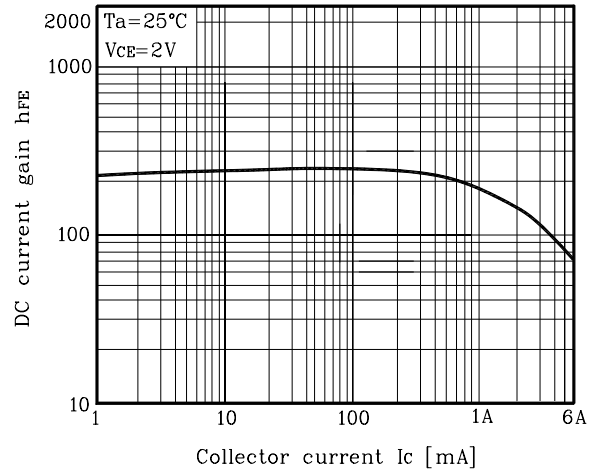


Fig. 3 $V_{CE(sat)} - I_C$

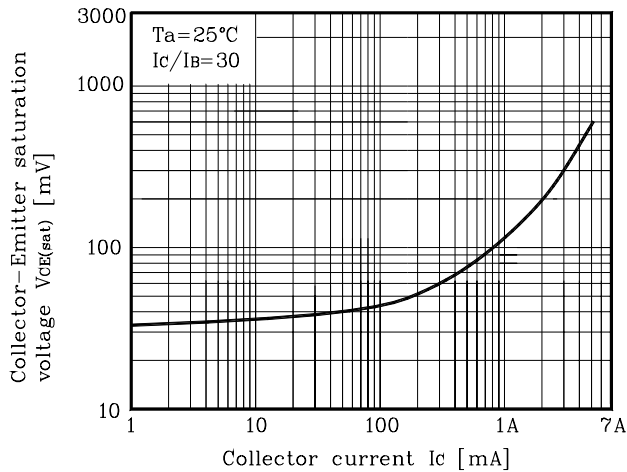


Fig. 4 $f_T - I_C$

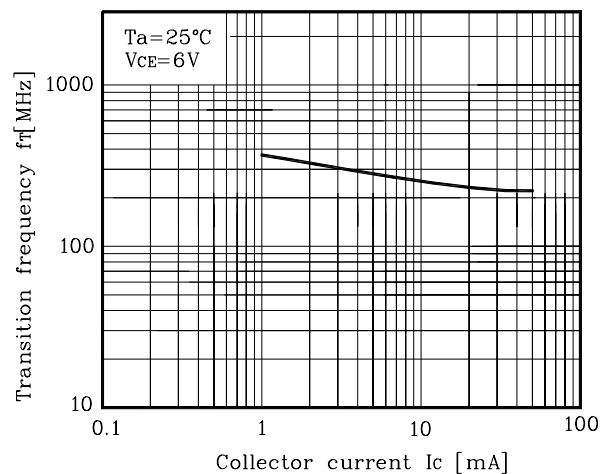


Fig. 5 $C_{ob} - V_{CB}$

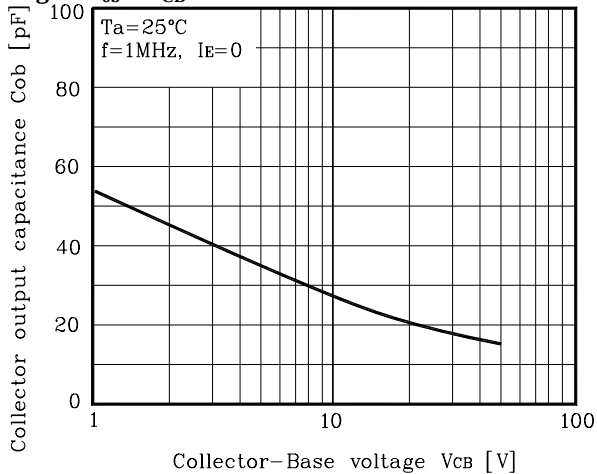


Fig. 6 Safe operating Area

