



STD1766

NPN Silicon Transistor

Descriptions

- Medium power amplifier

Features

- P_c (Collector dissipation) = 2W (Ceramic substate of 40×40×0.8mm used)
- Low collector saturation voltage : $V_{CE(sat)} = 0.5V$ (Typ.)
- Complementary pair with STB1188

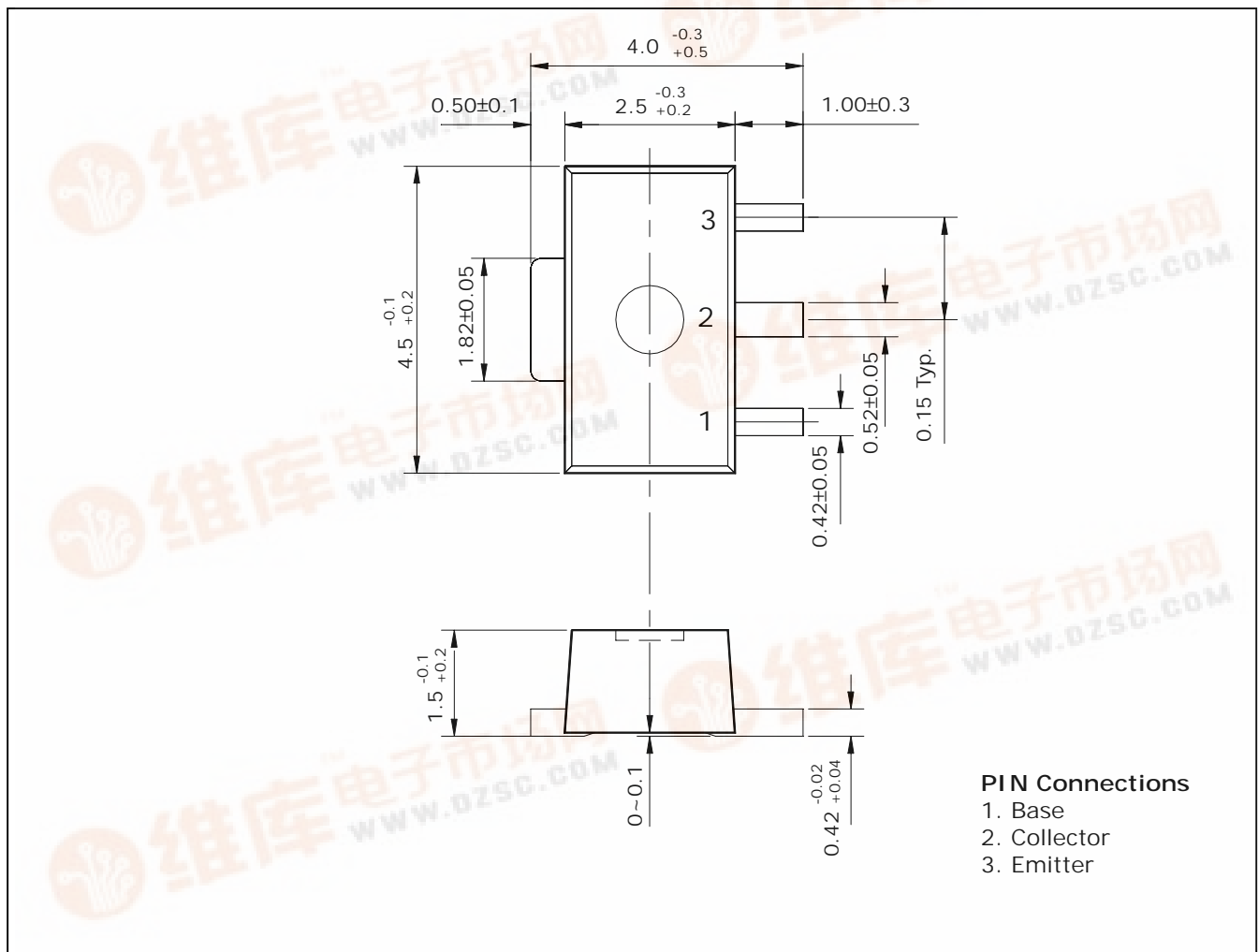
Ordering Information

Type NO.	Marking	Package Code
STD1766	B2□□	SOT-89

□□ : h_{FE} rank, monthly code

Outline Dimensions

unit : mm



Absolute maximum ratings

(Ta=25°C)

Characteristic	Symbol	Ratings	Unit
Collector-Base voltage	V_{CBO}	40	V
Collector-Emitter voltage	V_{CEO}	32	V
Emitter-Base voltage	V_{EBO}	5	V
Collector current	I_C	2	A
Collector dissipation	P_C	0.5	W
	P_C^*	2	
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	-55 ~ 150	°C

* : When mounted on 40×40×0.8mm ceramic substate

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}	$I_C=1mA, I_B=0$	32	-	-	V
Emitter-Base breakdown voltage	BV_{EBO}	$I_E=50\mu A, I_C=0$	5	-	-	V
Collector cut-off current	I_{CBO}	$V_{CB}=20V, I_E=0$	-	-	1	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=4V, I_C=0$	-	-	1	μA
DC current gain	h_{FE}^*	$V_{CE}=3V, I_C=0.5A$	100	-	320	-
Collector-Emitter saturation voltage	$V_{CE(sat)}$	$I_C=2A, I_B=200mA$	-	0.5	0.8	V
Transition frequency	f_T	$V_{CB}=5V, I_C=500mA$	-	100	-	MHz
Collector output capacitance	C_{ob}	$V_{CB}=10V, I_E=0, f=1MHz$	-	30	-	pF

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

Electrical Characteristic Curves

Fig. 1 $P_C - T_a$

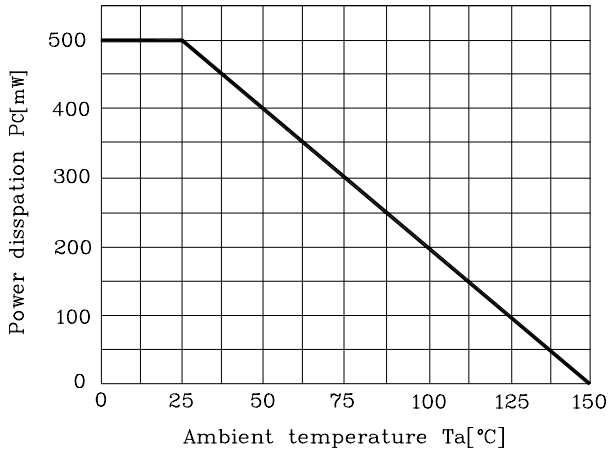


Fig. 2 $I_C - V_{BE}$

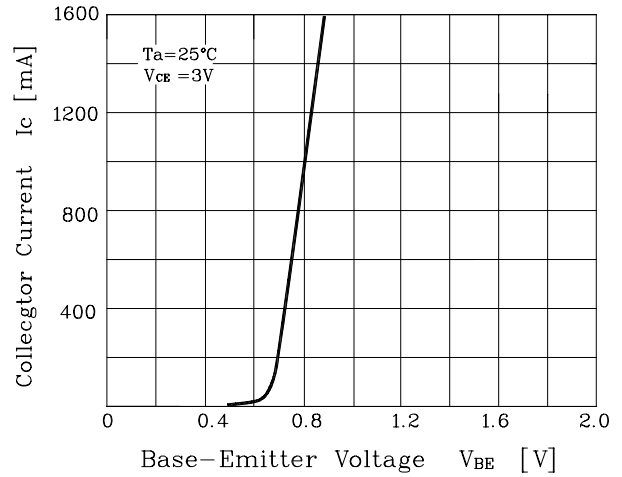


Fig. 3 $I_C - V_{CE}$

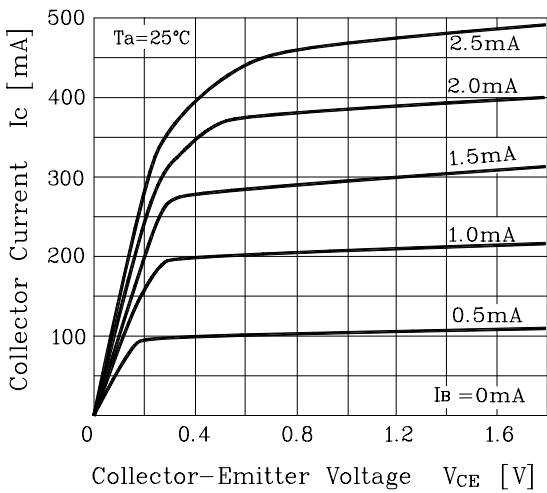


Fig. 4 $V_{CE(sat)} - I_C$

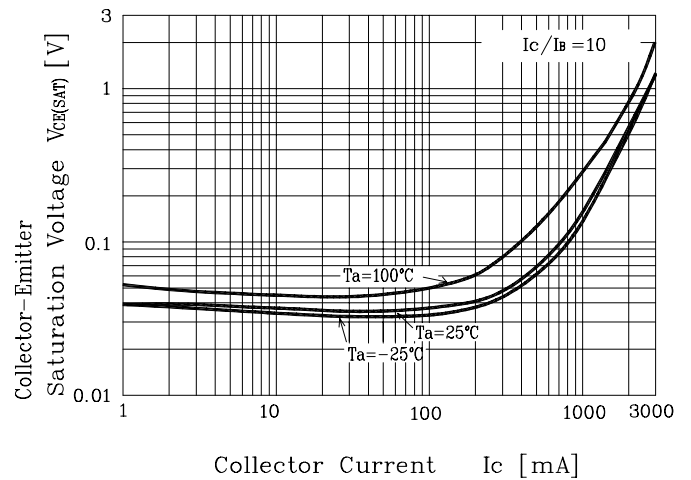


Fig. 5 $h_{FE} - I_C$

