



# STC403D

NPN Silicon Transistor

## Features

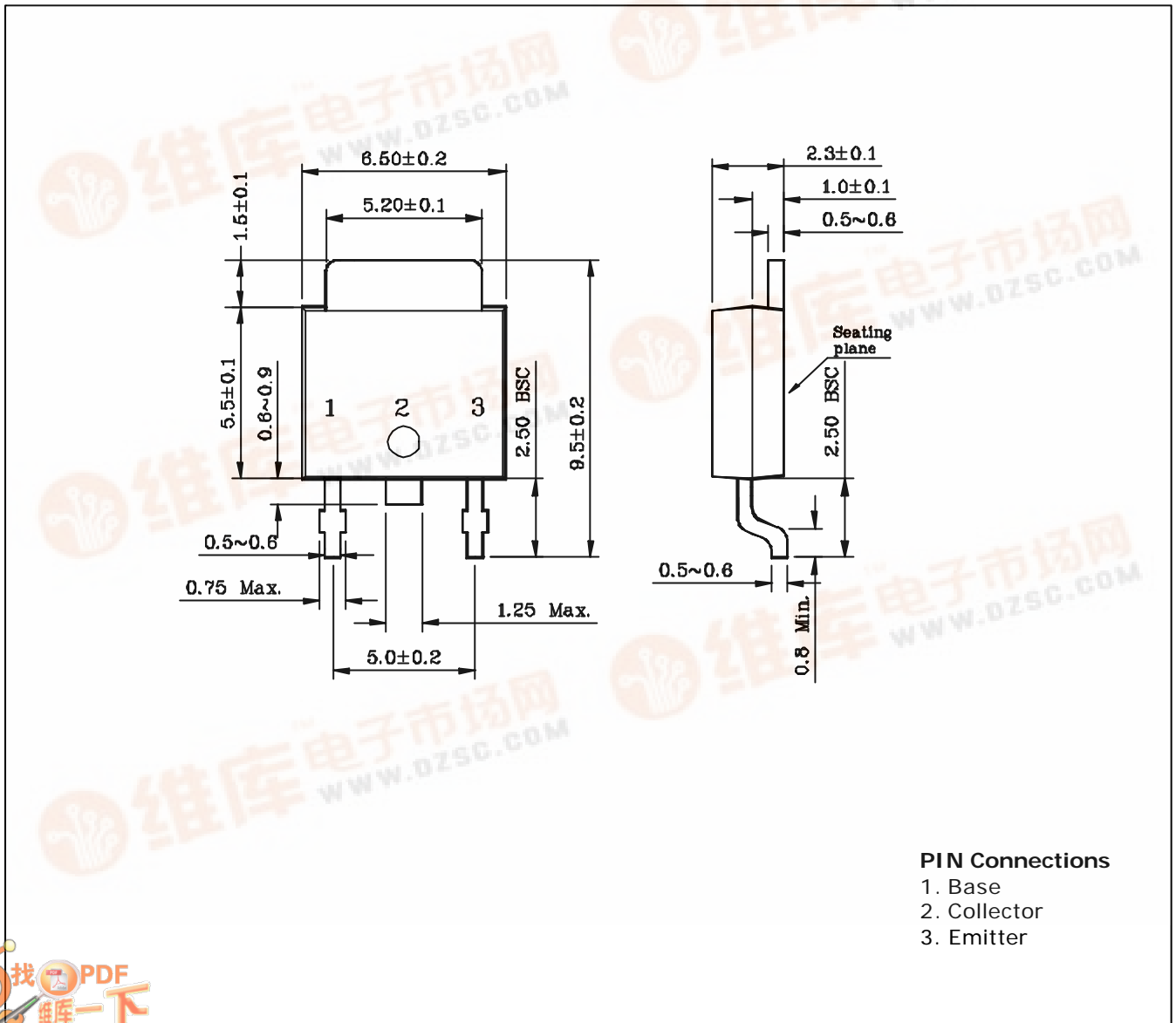
- Power Transistor General Purpose application
- Low saturation voltage  
:  $V_{CE(SAT)}=0.4V$  Max.
- High Voltage :  $V_{CEO}=60V$  Min.

## Ordering Information

Type NO.	Marking	Package Code
STC403D	STC403	D-PAK

## Outline Dimensions

unit : mm



## Absolute maximum ratings

Characteristic	Symbol	Ratings	Unit
Collector-Base voltage	$V_{CBO}$	80	V
Collector-Emitter voltage	$V_{CEO}$	60	V
Emitter-base voltage	$V_{EBO}$	5	V
Collector current	$I_C$	3	A
Collector dissipation ( $T_c=25^\circ$ )	$P_C$	15	W
Junction temperature	$T_j$	150	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-55~150	$^\circ\text{C}$

## Electrical Characteristics

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Collector-Emitter breakdown voltage	$BV_{CEO}$	$I_C=50\text{mA}, I_B=0$	60	-	-	V
Collector cut-off current	$I_{CBO}$	$V_{CB}=60\text{V}, I_E=0$	-	-	50	$\mu\text{A}$
Emitter cut-off current	$I_{EBO}$	$V_{EB}=5\text{V}, I_C=0$	-	-	50	$\mu\text{A}$
DC current gain	$h_{FE}^*$	$V_{CE}=5\text{V}, I_C=0.5\text{A}$	200	-	400	-
Base-Emitter on voltage	$V_{BE(ON)}$	$V_{CE}=5\text{V}, I_C=0.5\text{A}$	-	0.7	1	V
Collector-Emitter saturation voltage	$V_{CE(sat)}$	$I_C=2\text{A}, I_B=0.2\text{A}$	-	0.4	1	V
Transition frequency	$f_T$	$V_{CB}=5\text{V}, I_C=0.5\text{A}$	-	30	-	MH
Collector output capacitance	$C_{ob}$	$V_{CB}=10\text{V}, I_E=0, f=1\text{MHz}$	-	35	-	pF
Switching Time	Turn-on Time	$T_{on}$		0.65	-	$\mu\text{s}$
	Storage Time	$T_{stg}$		-	1.3	
	Fall Time	$T_f$		-	0.65	

\* HFE rank : 200~400 Only

## Electrical Characteristic Curves

Fig. 1  $P_C - T_a$

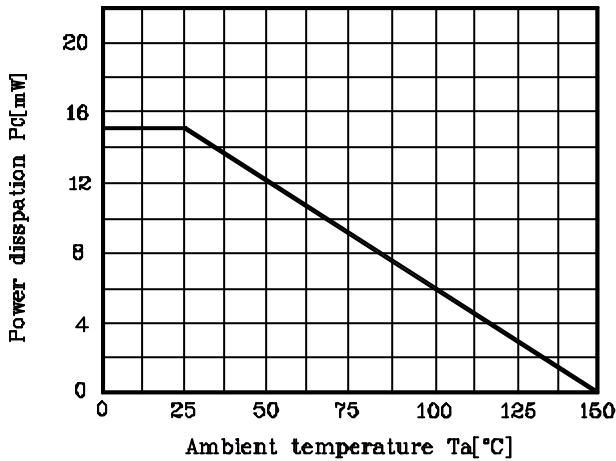


Fig. 2  $V_{CE} - I_C$

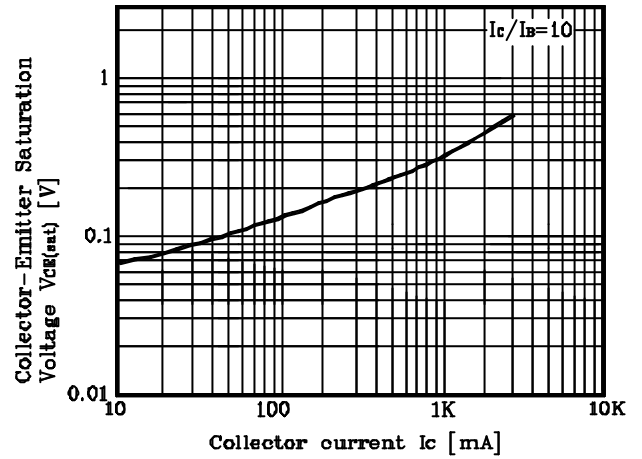


Fig. 3  $h_{FE} - I_C$

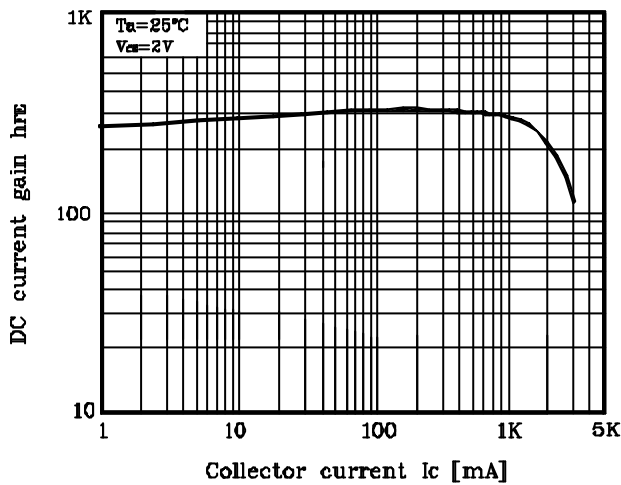


Fig. 5  $I_C - V_{CE}$

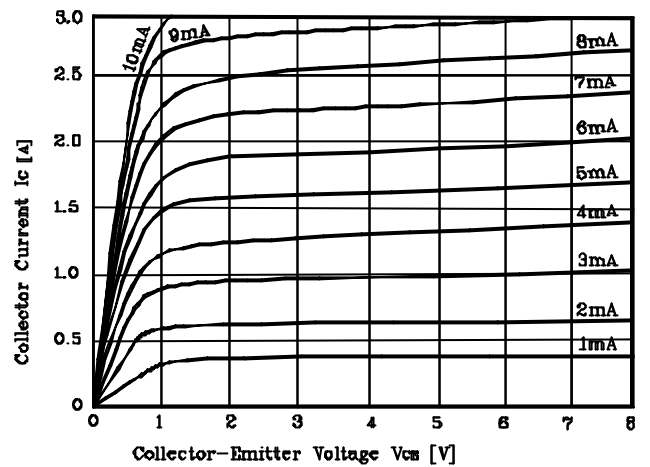


Fig. 5 Safe operating Area

