AUK Semiconductor

STC405D

NPN Silicon Transistor

Features

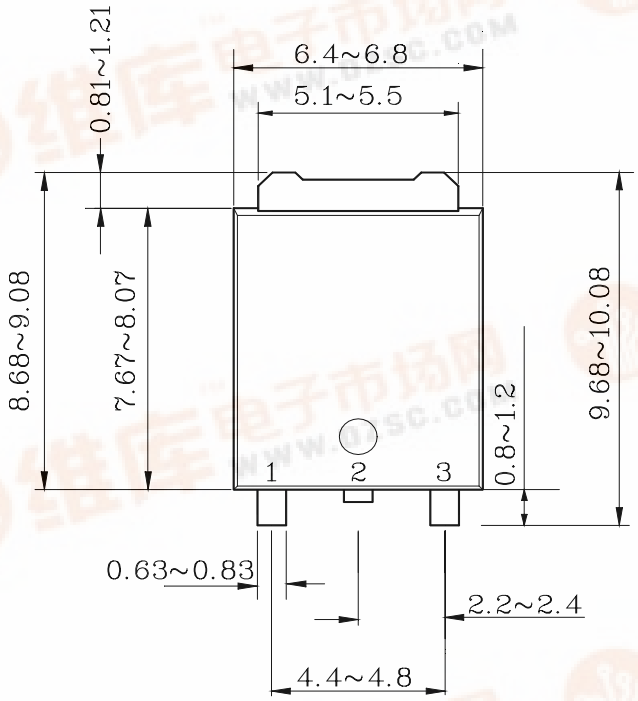
- Low saturation switching application
- Voltage regulator application
- High Voltage : V_{CEO}=60V Min.

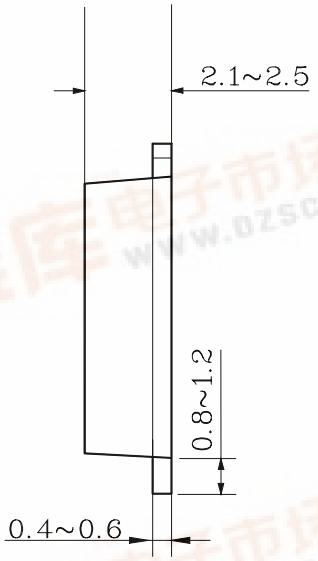
Ordering Information

Type NO.	Marking	Package Code
STC405D	STC405	D-PAK

Outline Dimensions

unit : mm





PIN Connections
1. Base
2. Collector
3. Emitter

Absolute maximum ratings

Characteristic	Symbol	Rating	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	5	A
Collector Power dissipation (Tc=25℃)	P_C	15	W
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	-55~150	°C

Electrical Characteristics

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Collector cut-off current	I_{CBO}	V_{CB}=80V, I_E=0	-	-	10	μA
Emitter cut-off current	I_{EBO}	V_{EB}=5V, I_C=0	-	-	10	μA
Collector-Emitter breakdown voltage	BV_{CEO}	I_C=1mA, I_B=0	60	-	-	V
DC current gain	h_{FE}	V_{CE}=5V, I_C=1A	200	-	400	-
		V_{CE}=5V, I_C=3A	80	-		-
Collector-Emitter saturation voltage	$V_{CE(sat)}$	I_C=3A, I_B=300mA	-	-	1	V
Base-Emitter saturation voltage	$V_{BE(SAT)}$	I_C=3A, I_B=300mA	-	-	1.5	V
Transition frequency	f_T	V_{CB}=5V, I_C=50mA	-	8	-	MHz
Collector output capacitance	C_{ob}	V_{CB}=10V, I_E=0, f=1MHz	-	25	-	pF

* HFE rank : 200~400 Only

Electrical Characteristic Curves

Fig. 1 P_C - Ta

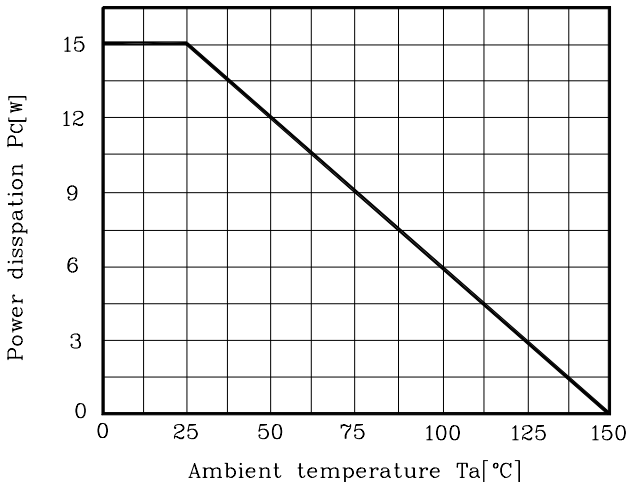


Fig. 2 $V_{CE(sat)}$ - I_C

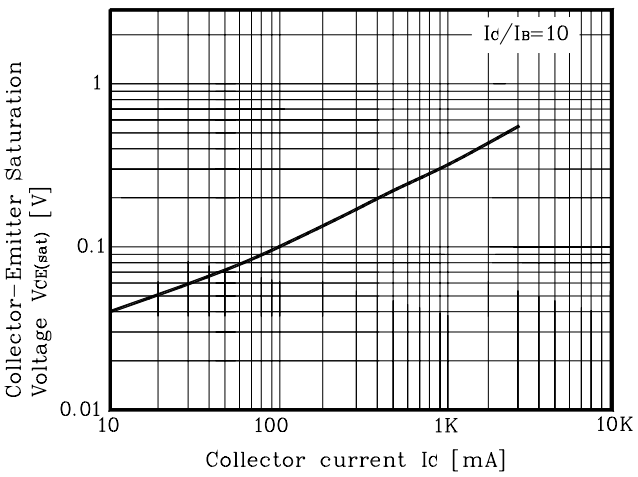


Fig. 3 h_{FE}-I_C

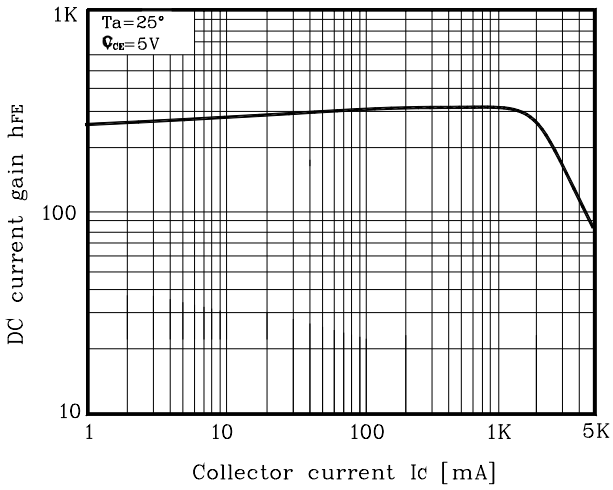


Fig. 4 I_C - V_{CE}

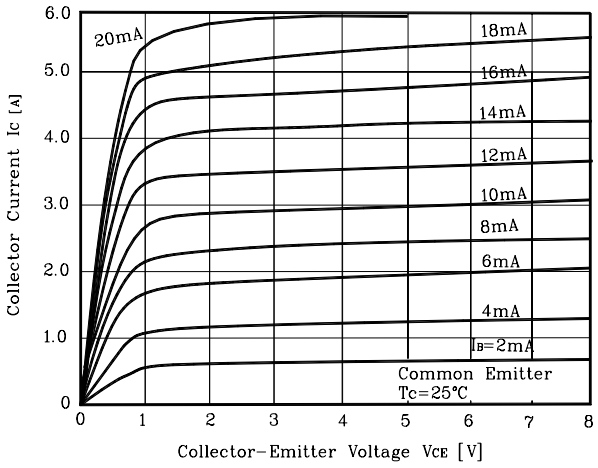
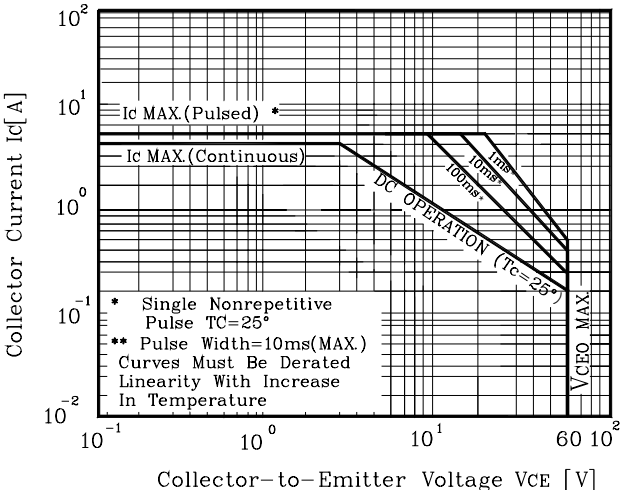


Fig. 5 Safe operating Area



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