

Features

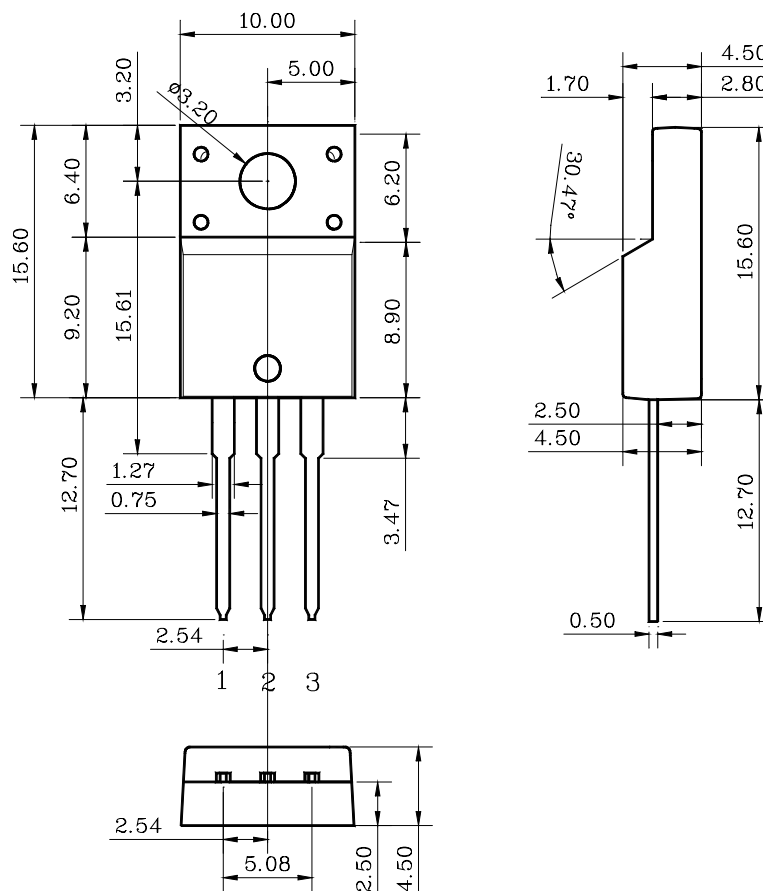
- Power Transistor General Purpose application
- Low saturation voltage
: $V_{CE(SAT)}=0.4V$ Typ.
- High Voltage : $V_{CEO}=60V$ Min.

Ordering Information

Type NO.	Marking	Package Code
STC403	STC403	TO-220F

Outline Dimensions

unit : mm



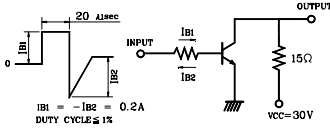
PIN Connections

1. Base
2. Collector
3. Emitter

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 ($T_c=25^\circ\text{C}$)	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	μA
Emitter cut-off current		I_{EBO}	$V_{EB}=5\text{V}$, $I_C=0$	-	-	50	μA
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	-	MHz
Collector output capacitance		C_{ob}	$V_{CB}=10\text{V}$, $I_E=0$, $f=1\text{MHz}$	-	20	-	pF
Switching Time	Turn-on Time	T_{on}		-	0.65	-	μs
	Storage Time	T_{stg}		-	1.3	-	
	Fall Time	T_f		-	0.65	-	

* h_{FE} rank : 200~400 Only

Electrical Characteristic Curves

Fig. 1 $P_C - T_a$

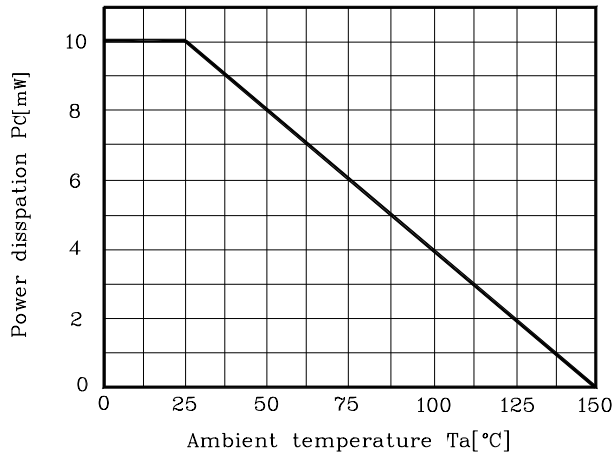


Fig. 2 $V_{CE(sat)} - I_C$

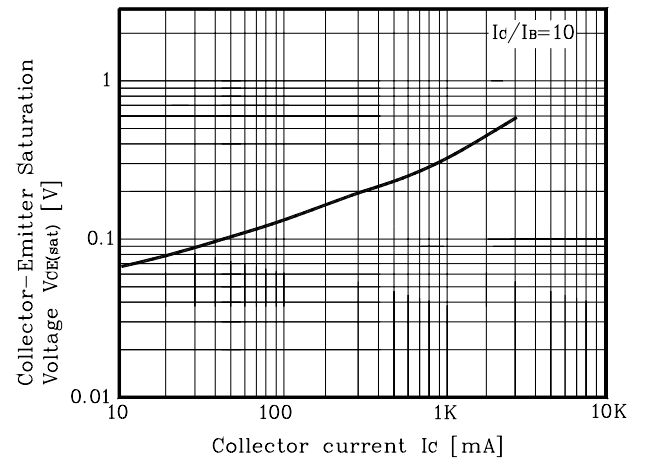


Fig. 3 $h_{FE} - I_C$

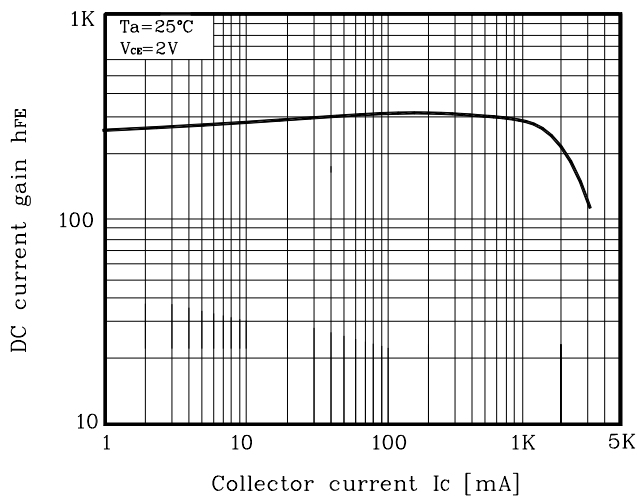


Fig. 4 $I_C - V_{CE}$

