

Descriptions

- High voltage application
- Color TV horizontal driver application
- Color TV chroma output application

Features

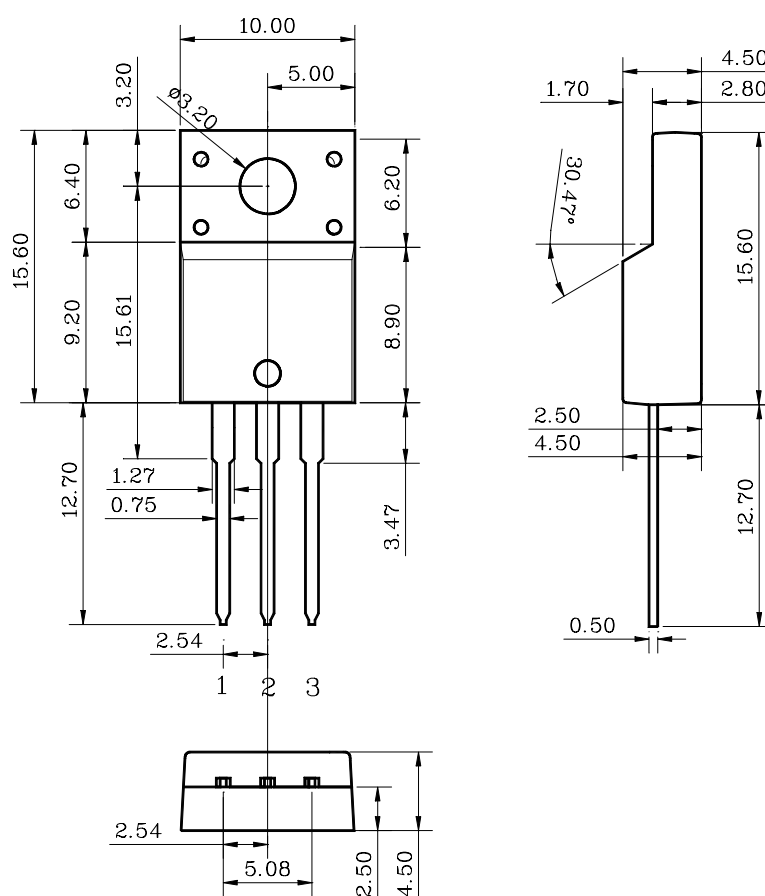
- Collector-Emitter voltage $V_{CE0}=300V$

Ordering Information

Type NO.	Marking	Package Code
STC345	STC345	TO-220F

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}	300	V
Collector-Emitter voltage	V_{CEO}	300	V
Emitter-Base voltage	V_{EBO}	5	V
Collector current	I_C	100	mA
Base Current	I_B	20	mA
Collector dissipation	$P_C(T_a=25^\circ\text{C})$	2	W
	$P_C(T_c=25^\circ\text{C})$	10	W
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	-55~150	°C

Electrical Characteristics

(Ta=25°C)

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Collector cut-off current	I_{CBO}	$V_{CB}=240\text{V}, I_E=0$	-	-	1	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=5\text{V}, I_C=0$	-	-	1	μA
DC current gain	$h_{FE}(1)$	$V_{CE}=10\text{V}, I_C=0.5\text{mA}$	20	-	-	
	$h_{FE}(2)$	$V_{CE}=10\text{V}, I_C=20\text{mA}$	30	-	200	
Collector-Emitter saturation voltage	$V_{CE(sat)}$	$I_C=10\text{mA}, I_B=1\text{mA}$	-	-	1.0	V
Transition frequency	f_T	$V_{CE}=20\text{V}, I_C=20\text{mA}$	75	95	-	MHz
Collector output capacitance	C_{ob}	$V_{CB}=20\text{V}, I_E=0, f=1\text{MHz}$	-	3	-	pF

Electrical Characteristic Curves

Fig. 1 $h_{FE} - I_C$

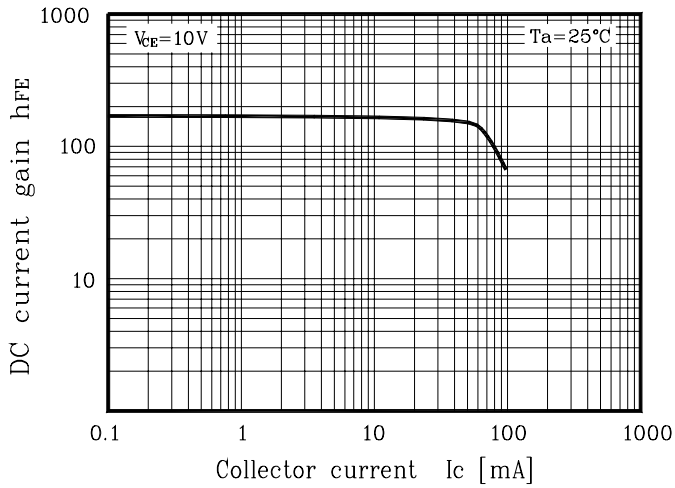


Fig. 2 $V_{CE(sat)} - I_C$

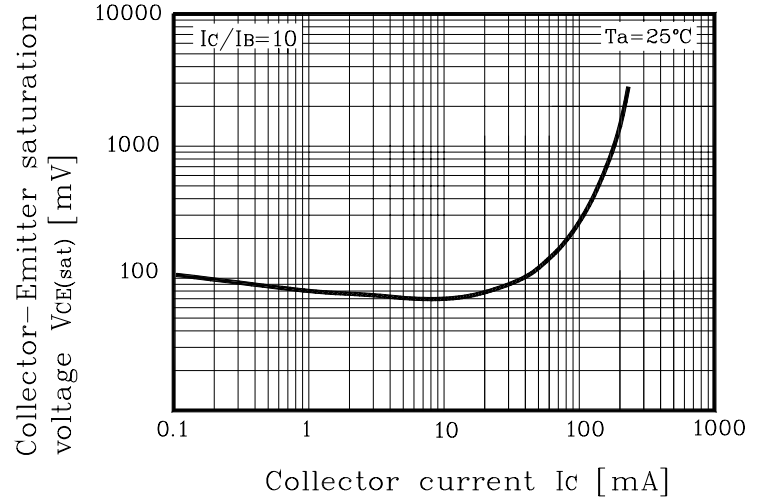


Fig. 3 $f_T - I_C$

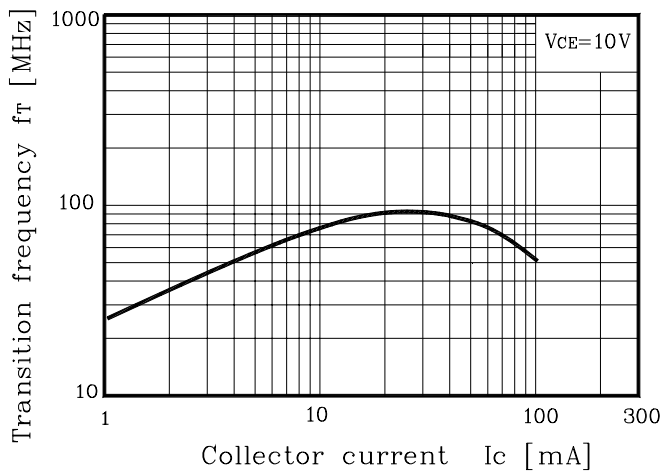


Fig. 4 $C_{ob} - V_R$

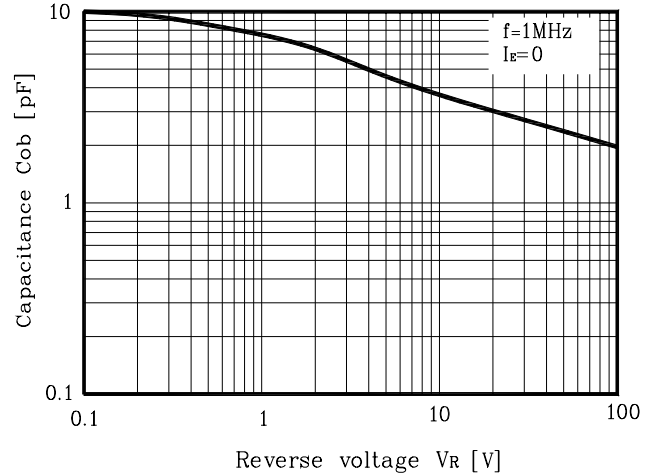


Fig. 5 Safe operating Area

