

Descriptions

- High current application
- Audio power amplifier

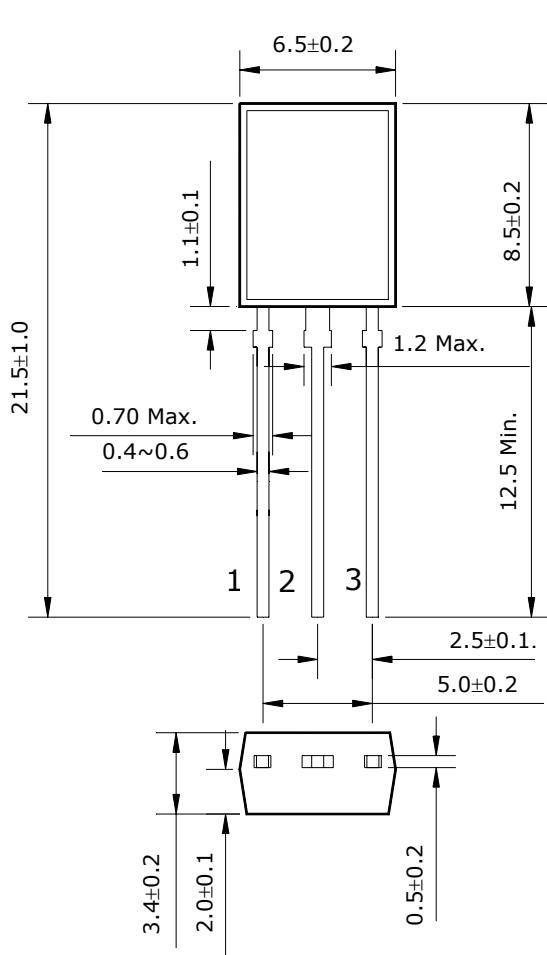
Features

- High current : $I_C = -2A$
- Complementary pair with STC352

Ordering Information

Type NO.	Marking	Package Code
STA353	STA353	MPT

Outline Dimensions

unit : mm


Absolute maximum ratings

(Ta=25°C)

Characteristic	Symbol	Rating	Unit
Collector-Base voltage	V _{CBO}	-40	V
Collector-Emitter voltage	V _{CEO}	-30	V
Emitter-Base voltage	V _{EBO}	-5	V
Collector current	I _C	-2	A
Emitter Current	I _E	2	A
Collector Power dissipation	P _C (T _c =25°C)	10	W
	P _C (Ta=25°C)	1.2	
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-Base breakdown voltage	BV _{CBO}	I _C =-100μA, I _E =0	-40	-	-	V
Collector-Emitter breakdown voltage	BV _{CEO}	I _C =-10mA, I _B =0	-30	-	-	V
Emitter-Base breakdown voltage	BV _{EBO}	I _E =-1mA, I _C =0	-5	-	-	V
Collector cut-off current	I _{CBO}	V _{CB} =-40V, I _E =0	-	-	-0.1	μA
Emitter cut-off current	I _{EBO}	V _{EB} =-5V, I _C =0	-	-	-0.1	μA
DC current gain	h _{FE} [*]	V _{CE} =-2V, I _C =-500mA	100	-	320	-
Base-Emitter on voltage	V _{BE(ON)}	V _{CE} =-2V, I _C =-500mA	-	-	-1	V
Collector-Emitter saturation voltage	V _{CE(sat)1}	I _C =-2A, I _B =-0.2A	-	-	-0.8	V
	V _{CE(sat)2}	I _C =-1.5A, I _B =-0.03A	-	-	-2	
Transition frequency	f _T	V _{CE} =-5V, I _C =-500mA	-	120	-	MHz
Collector output capacitance	C _{ob}	V _{CB} =-10V, I _E =0, f=1MHz	-	48	-	pF

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

Electrical Characteristic Curves

Fig. 1 $P_C - T_A$

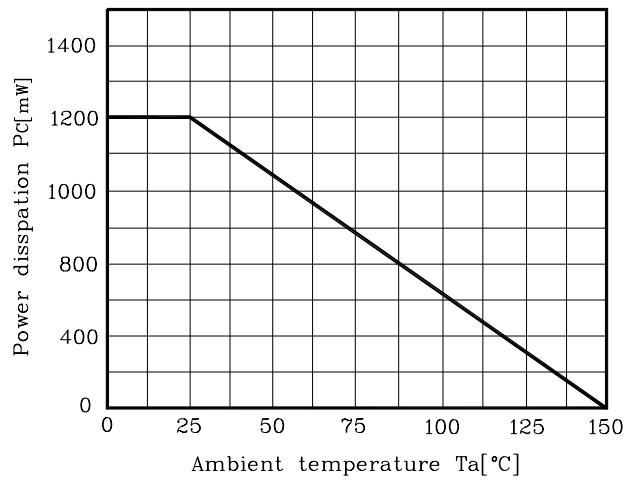


Fig. 2 $V_{CE(sat)} - I_C$

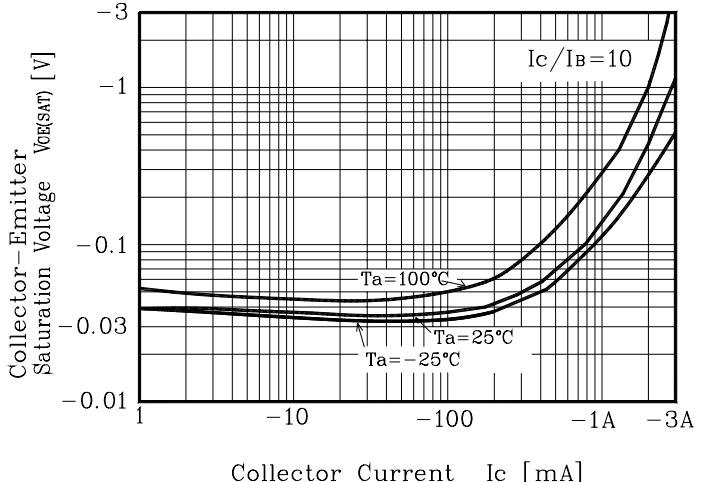


Fig. 3 $f_T - I_C$

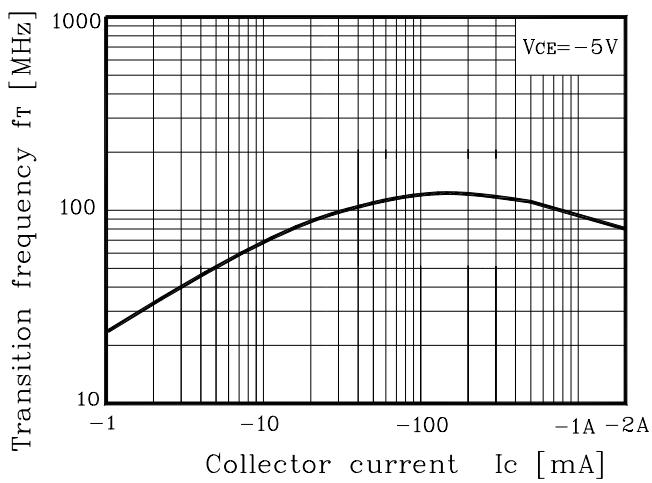


Fig. 4 $C_{Ob} - V_R$

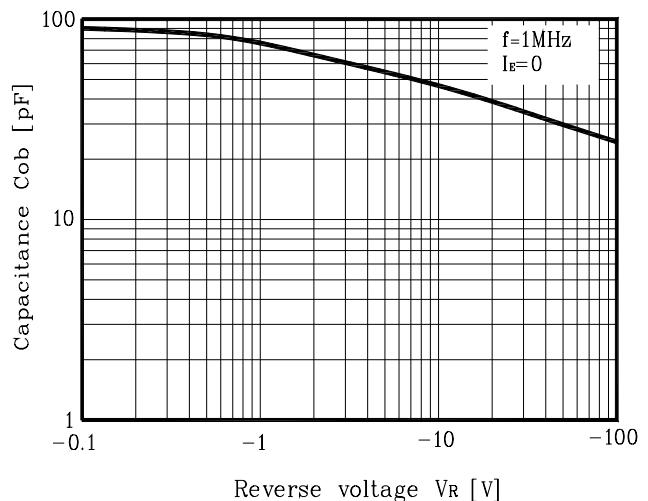


Fig. 5 $h_{FE} - I_C$

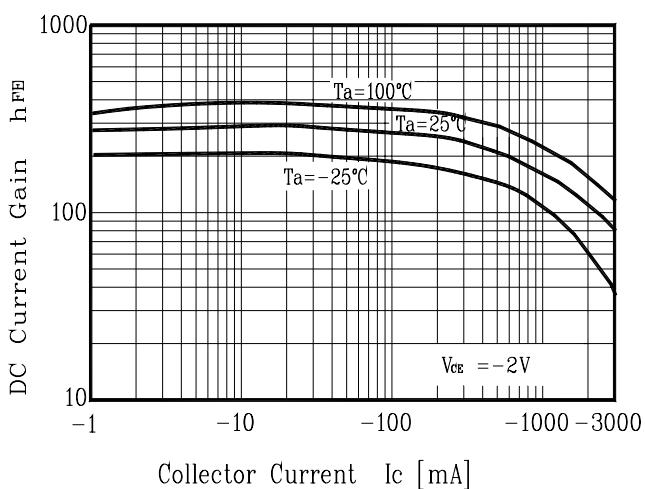
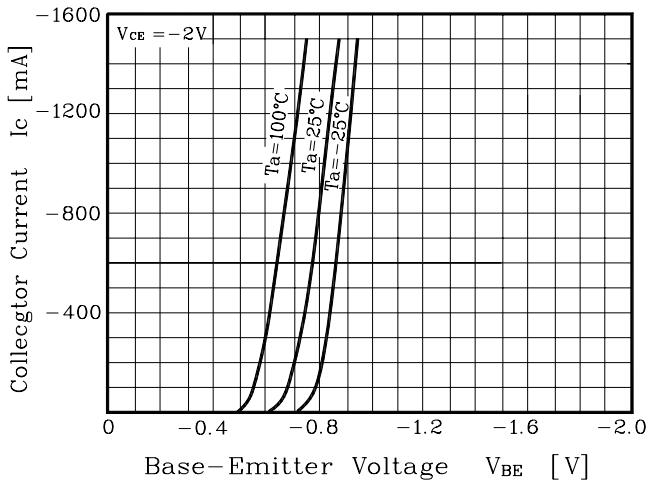


Fig. 6 $I_C - V_{BE}$



STA353

Fig. 7 Safe Operating Area

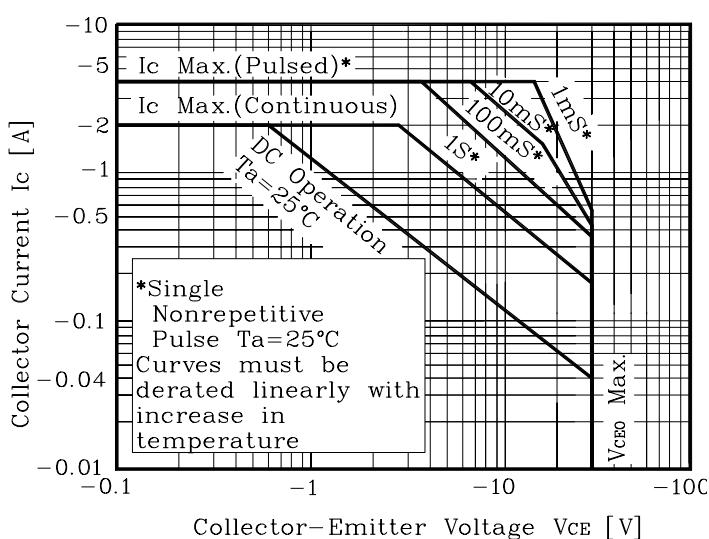


Fig. 8 $P_C - T_C$

