

Descriptions

- High current application
- Audio power amplifier

Features

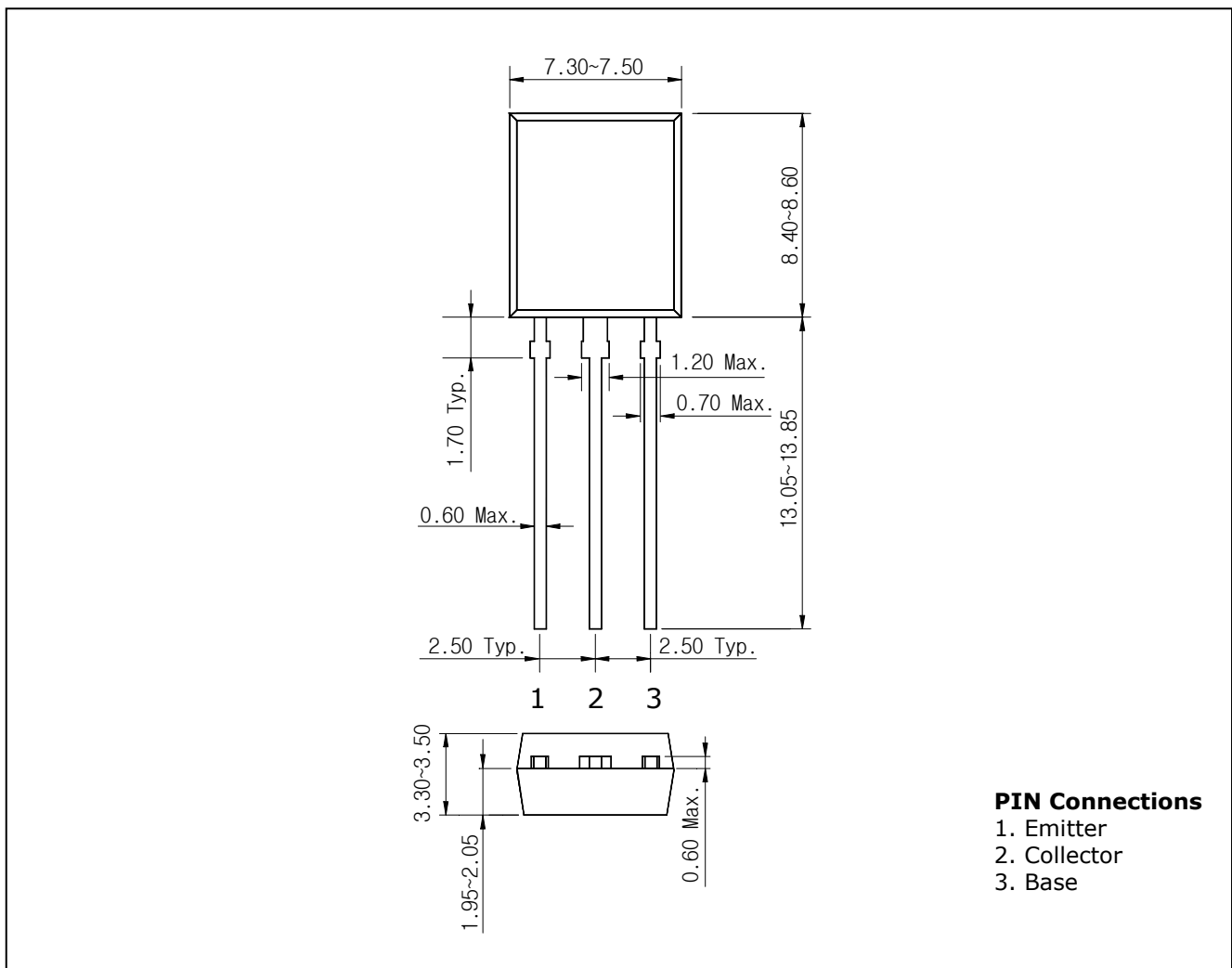
- High current : $I_C = -2A$
- Complementary pair with STC352

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
Collector power dissipation	P_C	1.2	W
Junction temperature	T_J	150	°C
Storage temperature range	T_{stg}	-55~150	°C

Electrical Characteristics

(Ta=25°C)

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Collector-emitter breakdown voltage	BV_{CEO}	$I_C = -10mA, I_B = 0$	-30	-	-	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 voltage	V_{BE}	$V_{CE} = -2V, I_C = -500mA$	-	-	-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 $P_c - T_a$

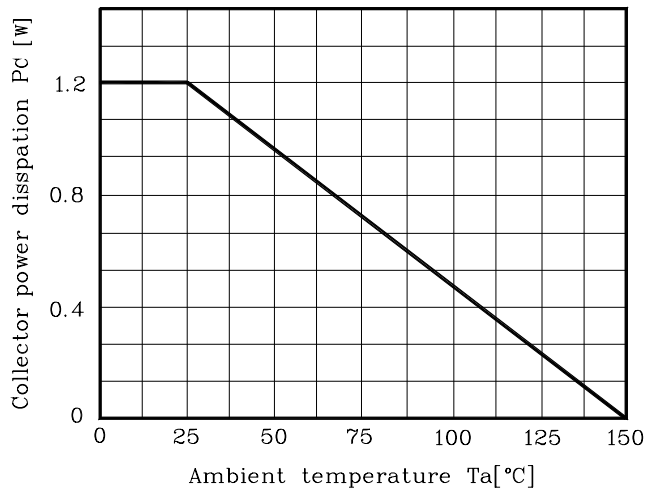


Fig. 2 $I_c - V_{BE}$

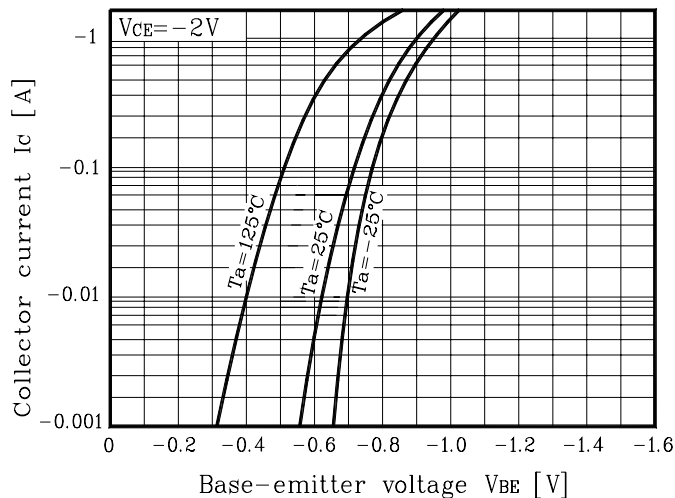


Fig. 3 $h_{FE} - I_c$

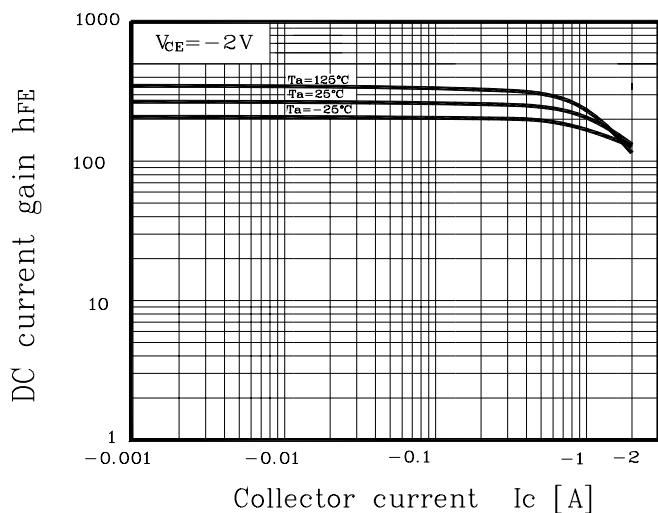


Fig. 4 $V_{CE(sat)} - I_c$

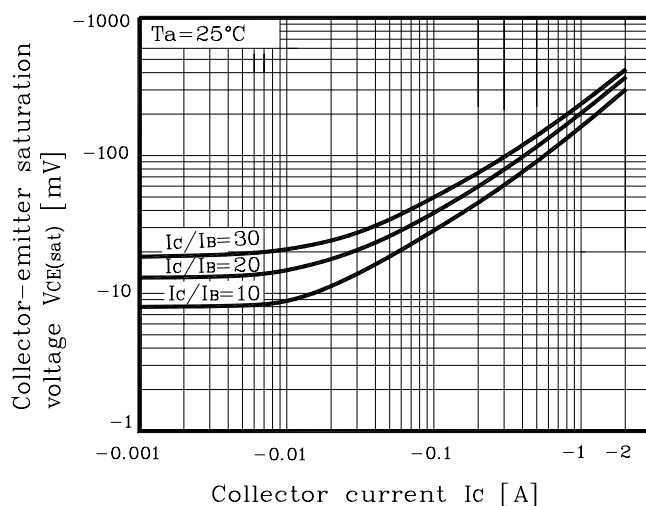


Fig. 5 $f_T - I_c$

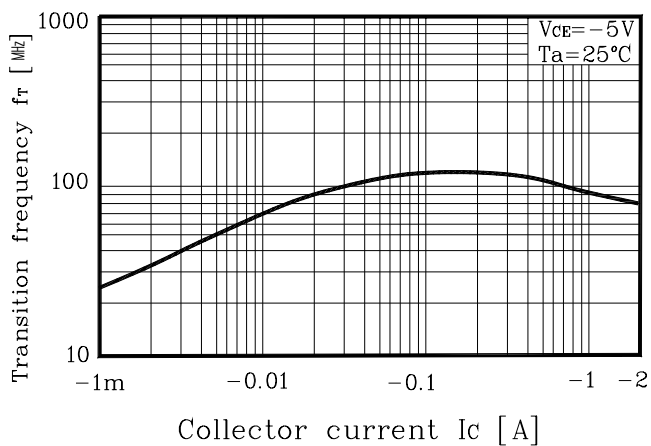
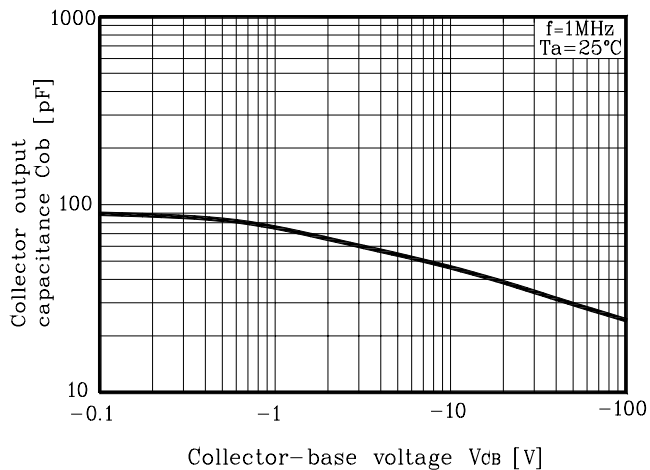


Fig. 6 $C_{ob} - V_R$



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