

Description

- General small signal amplifier

Features

- Low collector saturation voltage : $V_{CE(sat)} = -0.3V$ [$I_C = -20mA$, $I_B = -2mA$]
- Low output capacitance : $C_{ob} = 2.8pF$ (Typ.)
- Complementary pair with STS5343

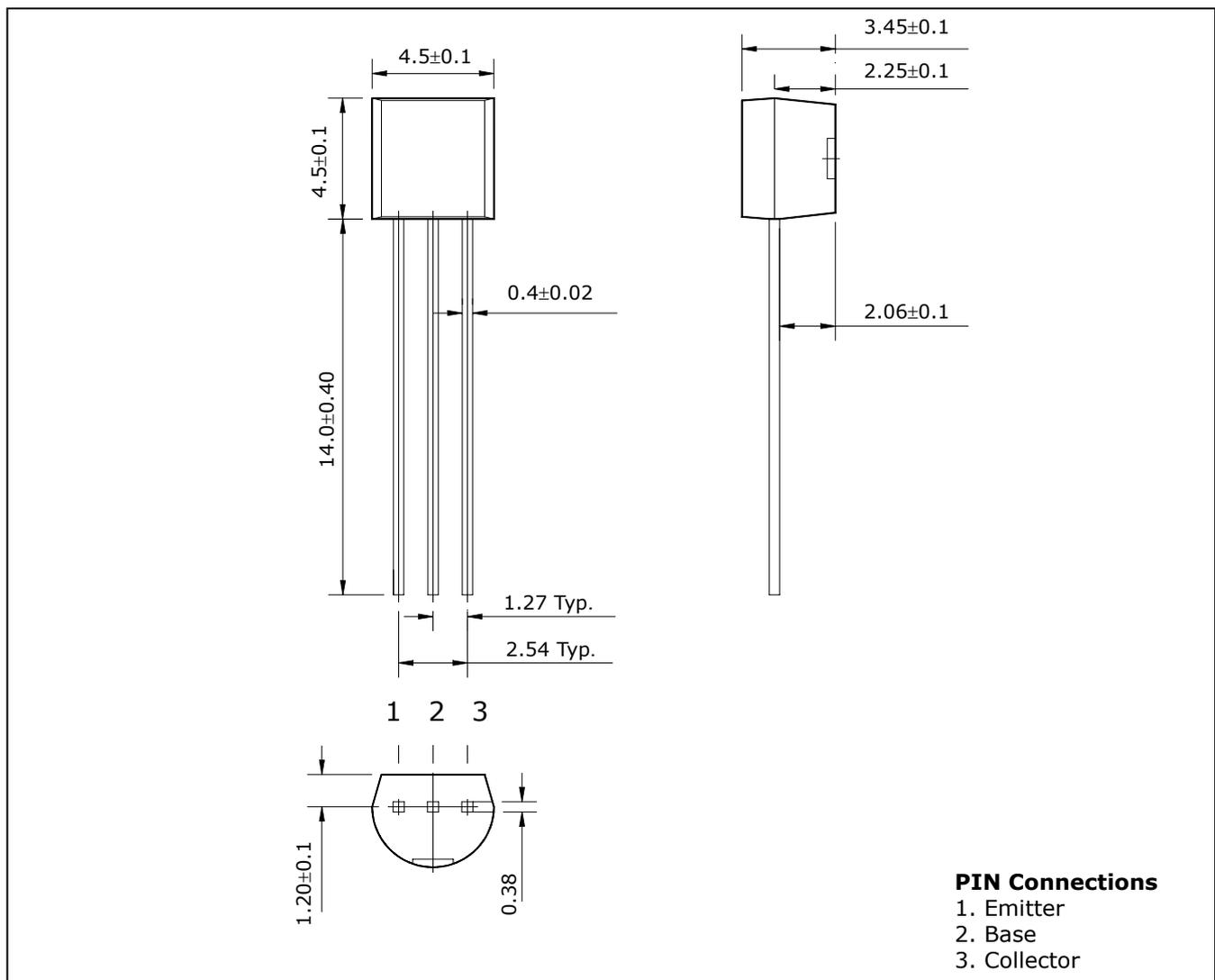
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Ordering Information

Type NO.	Marking	Package Code
STS733	STS733	TO-92

Outline Dimensions

unit : mm



Absolute maximum ratings

(Ta = 25 °C)

Characteristic	Symbol	Ratings	Unit
Collector-Base voltage	V_{CBO}	-60	V
Collector-Emitter voltage	V_{CEO}	-50	V
Emitter-base	V_{EBO}	-5	V
Collector current	I_C	-150	mA
Collector dissipation	P_C	625	mW
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	-55~150	°C

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Electrical Characteristics

(Ta = 25 °C)

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Collector-Base breakdown voltage	BV_{CBO}	$I_C = -100\mu A, I_B = 0$	-60	-	-	V
Collector-Emitter breakdown voltage	BV_{CEO}	$I_C = -1mA, I_B = 0$	-50	-	-	V
Emitter-Base breakdown voltage	BV_{EBO}	$I_C = -10\mu A, I_B = 0$	-5	-	-	V
Collector cut-off current	I_{CBO}	$V_{CB} = -25V, I_E = 0$	-	-	-100	nA
Emitter cut-off current	I_{EBO}	$V_{EB} = -3V, I_C = 0$	-	-	-100	nA
DC current gain	h_{FE1}	$V_{CE} = -6V, I_C = -1mA$	120	-	240	-
DC current gain	h_{FE2}	$V_{CE} = -2.5V, I_C = -100mA$	60	-	-	-
Collector-Emitter saturation voltage	$V_{CE(sat)}$	$I_C = -20mA, I_B = -2mA$	-	-0.18	-0.3	V
Base-Emitter on Voltage	$V_{BE(on)}$	$V_{CE} = -6V, I_C = -1mA$	-0.5	-0.62	-0.8	V
Transition frequency	f_T	$V_{CE} = -6V, I_C = -10mA$	50	180	-	MHz
Collector output capacitance	C_{ob}	$V_{CB} = -10V, I_E = 0, f = 1MHz$	-	2.8	-	pF
Noise figure	NF	$V_{CE} = -6V, I_C = -0.3mA, f = 1KHz, R_S = 10K\Omega$	-	6	20	dB

Electrical Characteristic Curves

Fig. 1 P_C-T_a

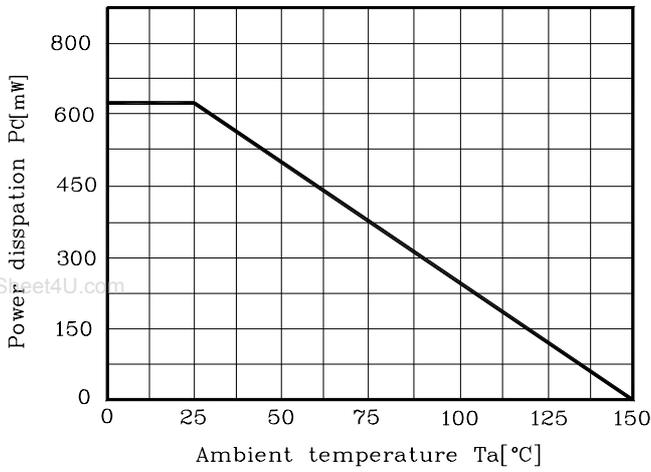


Fig. 2 I_C-V_{BE}

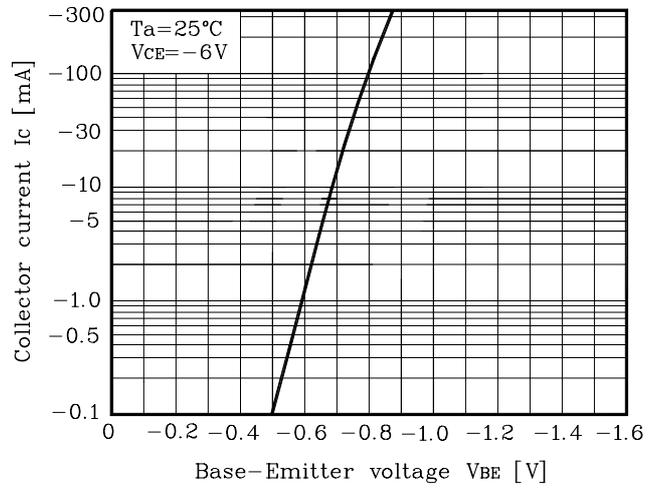


Fig. 3 I_C-V_{CE}

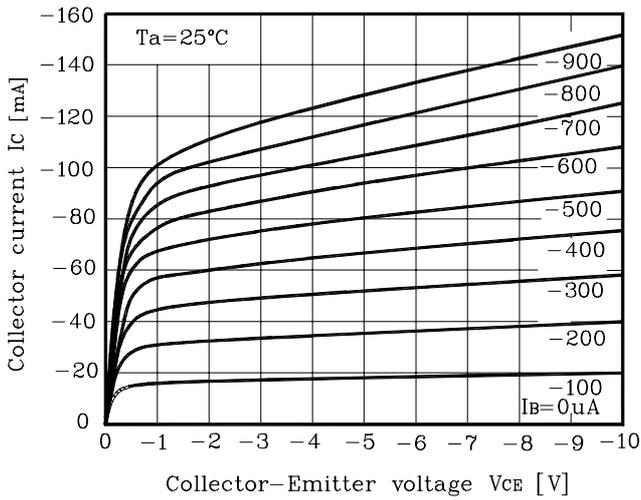


Fig. 4 $h_{FE}-I_C$

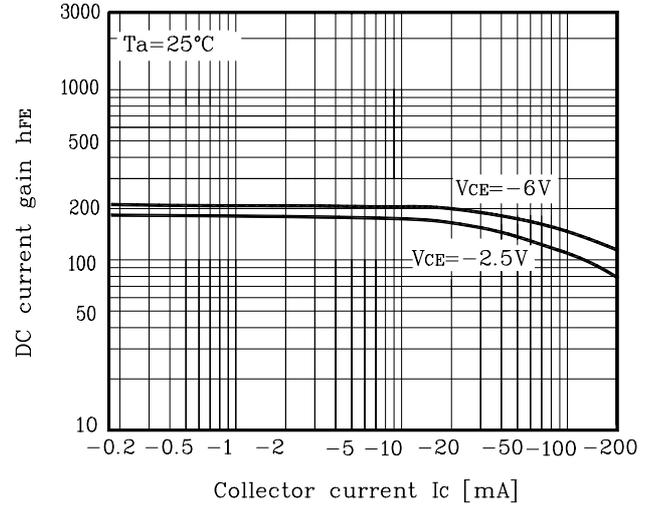
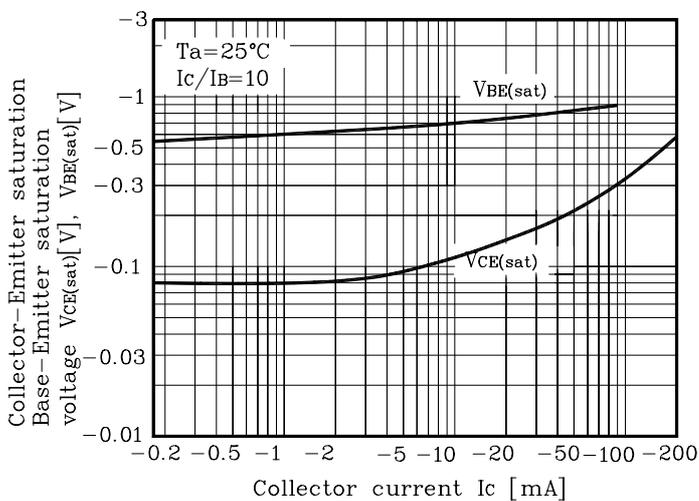


Fig. 5 $V_{CE(sat)}/V_{BE(sat)}-I_C$



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