

RoHS Compliant Product

A suffix of "-C" specifies halogen & lead-free

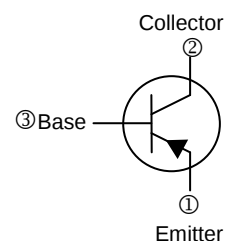
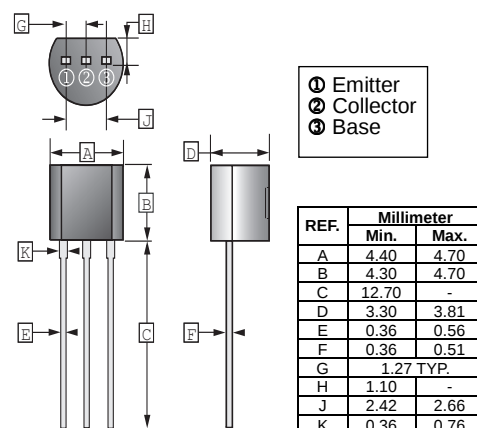
FEATURES

- Low collector saturation voltage: $V_{CE(sat)} = -0.3V(\text{Max.})$
- Low output capacitance : $C_{ob}=4pF$ (Typ.)
- Complements of the 2SC5343

CLASSIFICATION OF h_{FE}

Product-Rank	2SA1980-O	2SA1980-Y	2SA1980-G	2SA1980-L
Range	70~140	120~240	200~400	300~700

TO-92



ABSOLUTE MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	-50	V
Collector to Emitter Voltage	V_{CEO}	-50	V
Emitter to Base Voltage	V_{EBO}	-5	V
Collector Current - Continuous	I_C	-150	mA
Collector Power Dissipation	P_C	625	mW
Junction, Storage Temperature	T_J, T_{STG}	150, -55~150	$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Conditions
Collector to Base Breakdown Voltage	$V_{(BR)CBO}$	-50	-	-	V	$I_C = -100\mu\text{A}, I_E = 0$
Collector to Emitter Breakdown Voltage	$V_{(BR)CEO}$	-50	-	-	V	$I_C = -10\text{mA}, I_B = 0$
Emitter to Base Breakdown Voltage	$V_{(BR)EBO}$	-5	-	-	V	$I_E = -10\mu\text{A}, I_C = 0$
Collector Cut-Off Current	I_{CBO}	-	-	-0.1	μA	$V_{CB} = -50\text{V}, I_E = 0$
Collector Cut-Off Current	I_{CEO}	-	-	-0.1	μA	$V_{EB} = -5\text{V}, I_C = 0$
DC Current Gain	h_{FE}	70	-	700		$V_{CE} = -6\text{V}, I_C = -2\text{mA}$
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	-	-	-0.30	V	$I_C = -100\text{mA}, I_B = -10\text{mA}$
Transition Frequency	f_T	80	-	-	MHz	$V_{CE} = -10\text{V}, I_C = -1\text{mA}$
Collector Output Capacitance	C_{ob}	-	4	7	pF	$V_{CB} = -10\text{V}, I_E = 0, f = 1\text{MHz}$
Noise Figure	NF	-	-	10	dB	$V_{CE} = -6\text{V}, I_C = -0.1\text{mA}, f = 1\text{KHz}, R_S = 10\text{K}\Omega$

CHARACTERISTIC CURVES

Fig. 1 P_C - T_a

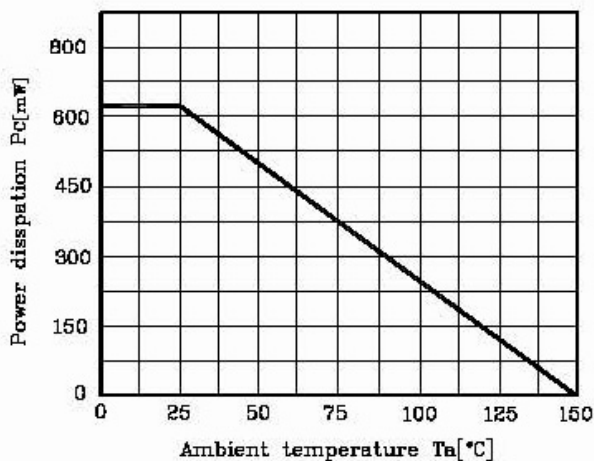


Fig. 2 I_C - V_{BE}

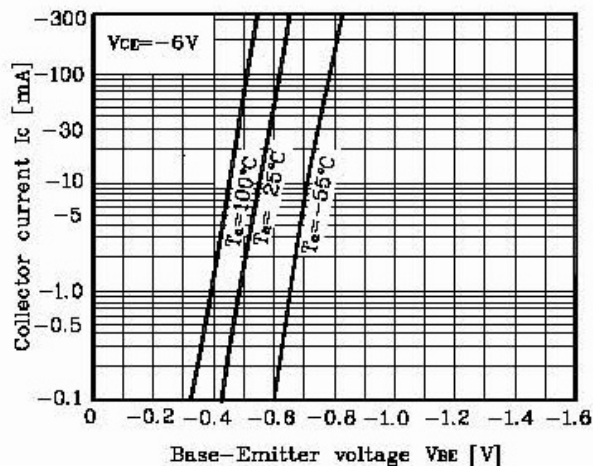


Fig. 3 I_C - V_{CE}

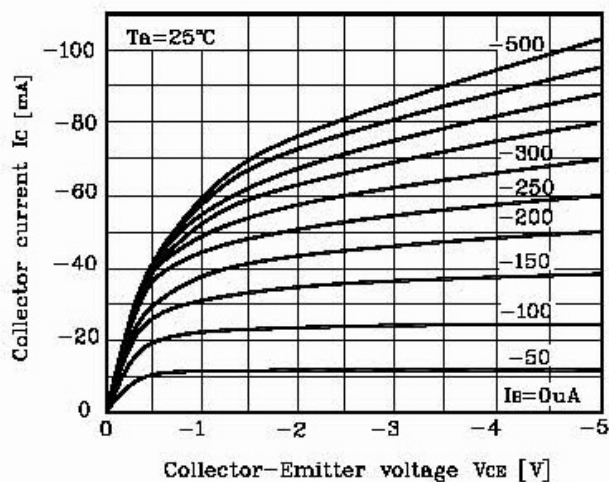


Fig. 4 h_{FE} - I_C

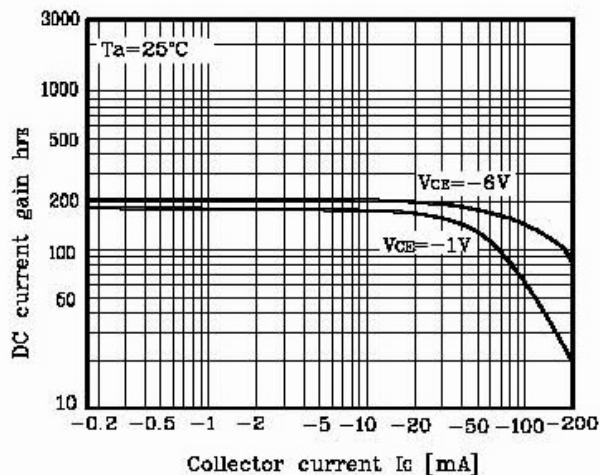


Fig. 5 $V_{CE(sat)}$ - I_C

