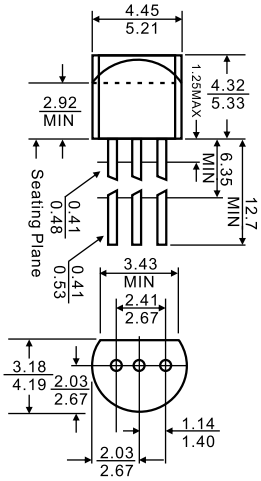
2SA1980

TO-92 Bipolar Transistors(PNP)

1. EMITTER
2. COLLECTOR
3. BASE

TO-92



Dimensions in inches and (millimeters)

Features

- ✧ **Low collector saturation voltage: $V_{CE(sat)}$ =-0.3V(Max.)**
- ✧ **Low output capacitance : C_{ob} =4pF (Typ.)**
- ✧ **Complementary pair with 2SC5343**

MAXIMUM RATINGS (T_A=25℃ unless otherwise noted)

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	-50	V
V_{CEO}	Collector-Emitter Voltage	-50	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current -Continuous	-150	mA
P_C	Collector Power Dissipation	625	mW
T_j	Junction Temperature	150	℃
T_{stg}	Storage Temperature	-55-150	℃

ELECTRICAL CHARACTERISTICS (Tamb=25℃ unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C=-100μA,I_E=0	-50			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C=-10mA,I_B=0	-50			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=-10μA,I_C=0	-5			V
Collector cut-off current	I_{CBO}	V_{CB}=-50V,I_E=0			-0.1	μA
Collector cut-off current	I_{CEO}	V_{EB}=-5V,I_C=0			-0.1	μA
DC current gain	h_{FE}	V_{CE}=-6V,I_C=-2mA	70		700	
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=-100mA,I_B=-10mA			-0.3	V
Transition frequency	f_T	V_{CE}=-10V,I_C=-1mA	80			MHz
Collector output capacitance	C_{ob}	V_{CB}=-10V,I_E=0,f=1MHz		4	7	pF
Noise figure	NF	V_{CE}=-6V,I_C=-0.1mA,f=1KH$_Z$,R_S=10KΩ			10	dB

CLASSIFICATION OF h_{FE}

Rank	O	Y	G	L
Range	70-140	120-240	200-400	300-700

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Typical Characteristics

Fig. 1 P_C-T_a

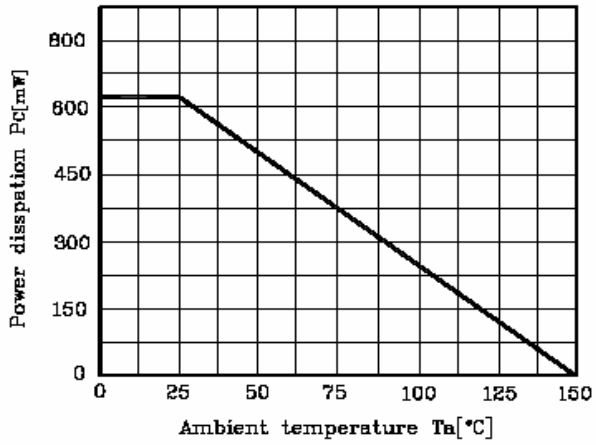


Fig. 2 I_C-V_{BE}

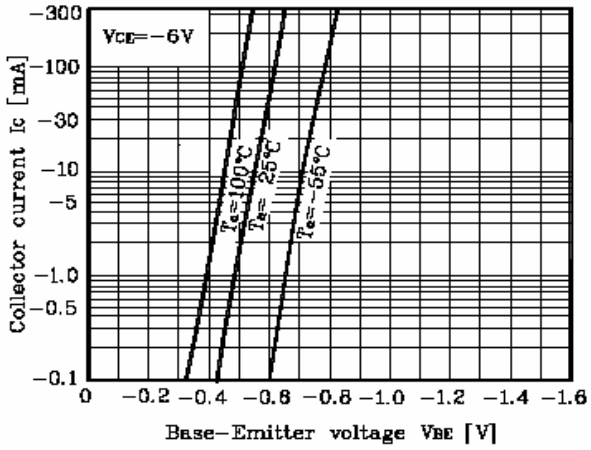


Fig. 3 I_C-V_{CE}

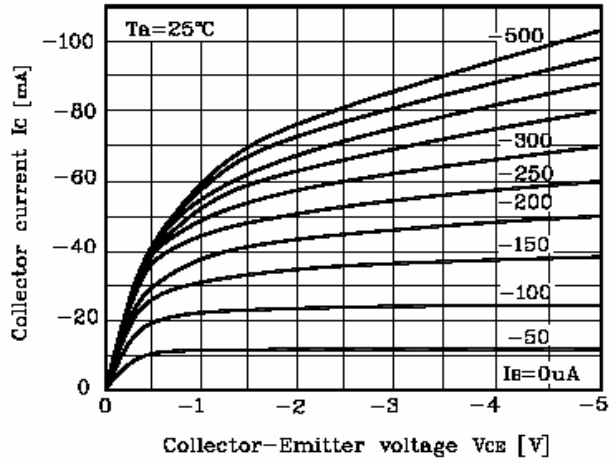


Fig. 4 h_{FE}-I_C

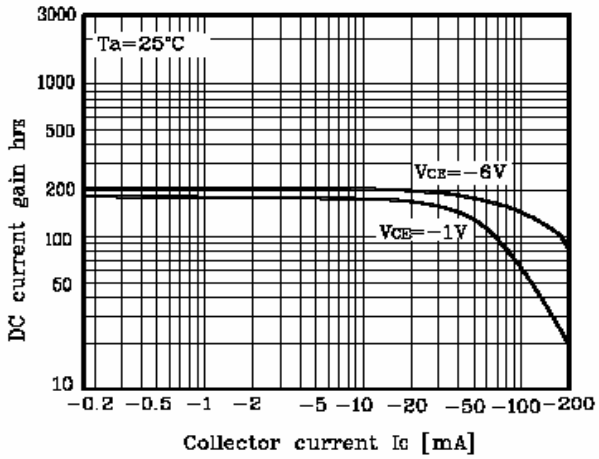
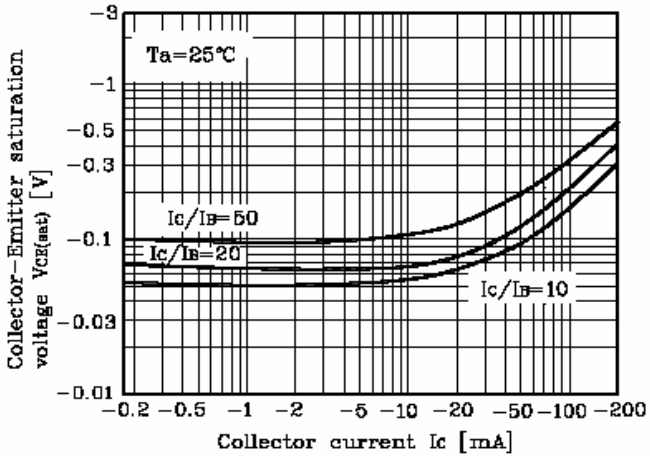


Fig. 5 $V_{CE(sat)}$-I_C



Package	Box	Box Size(mm)	Carton	Carton Size(mm)
TO-92	2000pcs	333×162×43	20,000pcs	350×340×250