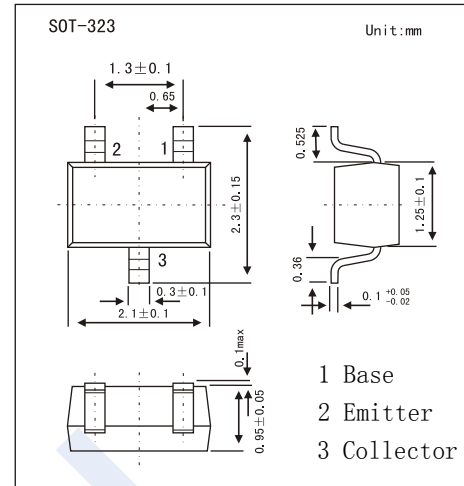


PNP Transistors

2SA1980UF

■ Features

- Low collector saturation voltage
- Low output capacitance : $C_{ob}=4\text{pF(Typ.)}$
- Complements to 2SC5343UF



■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V_{CB0}	-50	V
Collector - Emitter Voltage	V_{CE0}	-50	
Emitter - Base Voltage	V_{EB0}	-5	
Collector Current - Continuous	I_c	-150	mA
Collector Power Dissipation	P_c	200	mW
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature range	T_{stg}	-55 to 150	

■ Electrical Characteristics $T_a = 25^\circ\text{C}$

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V_{CB0}	$I_c = -100\ \mu\text{A}, I_E = 0$	-50			V
Collector- emitter breakdown voltage	V_{CE0}	$I_c = -1\ \text{mA}, I_B = 0$	-50			
Emitter - base breakdown voltage	V_{EB0}	$I_E = -100\ \mu\text{A}, I_C = 0$	-5			
Collector-base cut-off current	I_{CBO}	$V_{CB} = -50\text{V}, I_E = 0$			-0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = -5\text{V}, I_C = 0$			-0.1	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_c = -100\text{mA}, I_B = -10\text{mA}$			-0.3	V
Base - emitter saturation voltage	$V_{BE(sat)}$	$I_c = -100\text{mA}, I_B = -10\text{mA}$			-1.2	
DC current gain	h_{FE}	$V_{CE} = -6\text{V}, I_c = -2\text{mA}$	70		700	
Noise figure	NF	$V_{CE} = -6\text{V}, I_c = -0.1\text{mA}, f = 1\text{KHz}, R_g = 10\text{K}\Omega$		10		dB
Collector output capacitance	C_{ob}	$V_{CB} = -10\text{V}, I_E = 0, f = 1\text{MHz}$		7		pF
Transition frequency	f_T	$V_{CE} = -10\text{V}, I_c = -1\text{mA}$		80		MHz

■ Classification of h_{FE}

Type	2SA1980UF-O	2SA1980UF-Y	2SA1980UF-G	2SA1980UF-L
Range	70-140	120-240	200-400	300-700
Marking	CO	CY	CG	CL

PNP Transistors

2SA1980UF

■ Typical Characteristics

Fig. 1 $P_C - T_a$

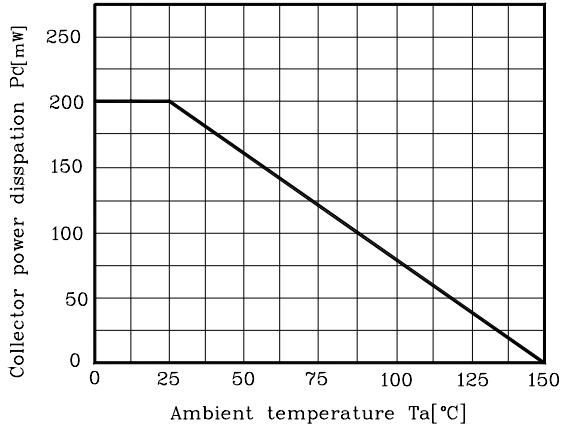


Fig. 2 $I_C - V_{BE}$

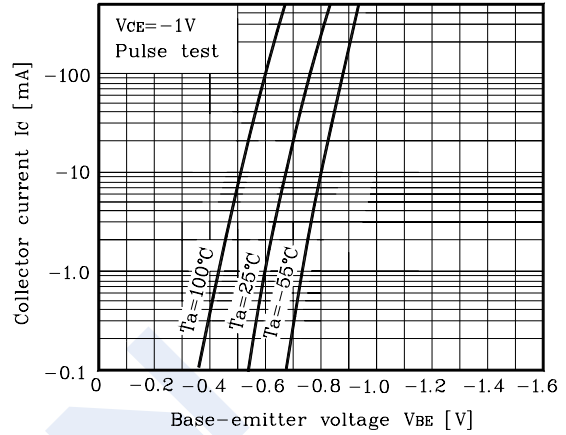


Fig. 3 $I_C - V_{CE}$

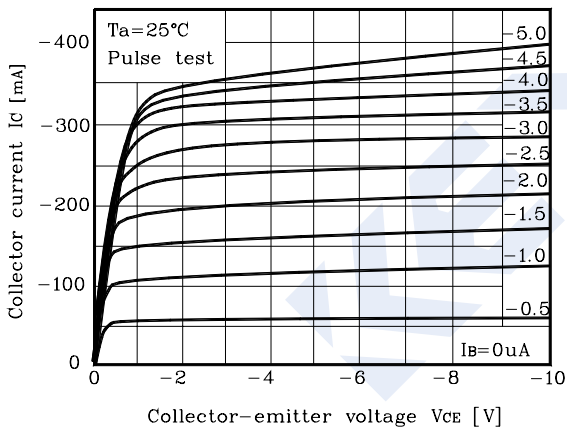


Fig. 4 $h_{FE} - I_C$

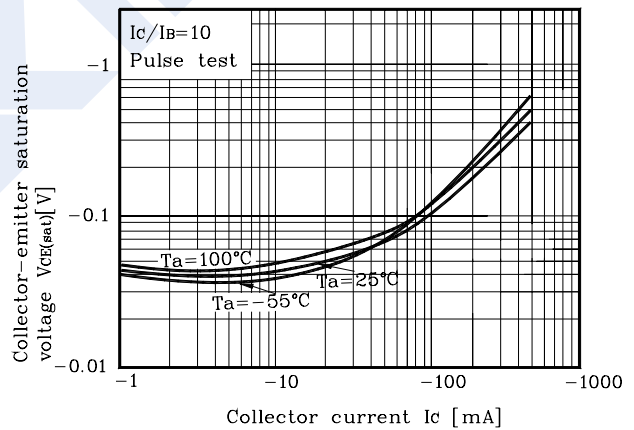


Fig. 5 $V_{CE(sat)} - I_C$

