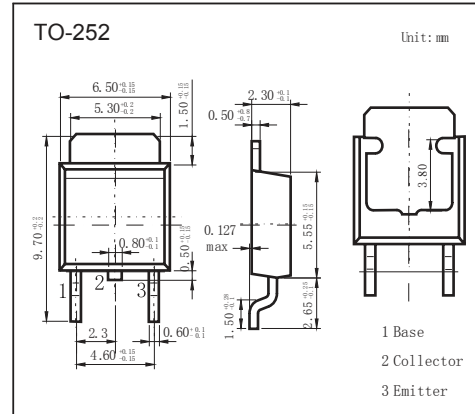


PNP Transistors

2SB906



■ Features

- Low collector saturation voltage
- High power dissipation: $P_c = 20 \text{ W}$ ($T_c = 25^\circ\text{C}$)
- Complementary to 2SD1221

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

Parameter	Symbol	Rating	Unit	
Collector - Base Voltage	V_{CB0}	-60	V	
Collector - Emitter Voltage	V_{CE0}	-60		
Emitter - Base Voltage	V_{EB0}	-7		
Collector Current - Continuous	I_C	-3	A	
Base Current	I_B	-0.5		
Collector Power Dissipation	P_C	$T_a = 25^\circ\text{C}$	1	W
		$T_c = 25^\circ\text{C}$		
Junction Temperature	T_J	150	°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}	$I_C = -100 \mu\text{A}$, $I_E = 0$	-60			V
Collector- emitter breakdown voltage	V_{CE0}	$I_C = -50 \text{ mA}$, $I_B = 0$	-60			
Emitter - base breakdown voltage	V_{EB0}	$I_E = -100 \mu\text{A}$, $I_C = 0$	-7			
Collector-base cut-off current	I_{CB0}	$V_{CB} = -60\text{V}$, $I_E = 0$			-100	nA
Emitter cut-off current	I_{EB0}	$V_{EB} = -7\text{V}$, $I_C = 0$			-100	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -3 \text{ A}$, $I_B = -300\text{mA}$		-1	-1.7	V
Base - emitter saturation voltage	$V_{BE(sat)}$	$I_C = -3 \text{ A}$, $I_B = -300\text{mA}$			-1.2	
Base - emitter voltage	V_{BE}	$V_{CE} = -5\text{V}$, $I_C = -500\text{mA}$		-1	-1.5	
DC current gain	$h_{FE(1)}$	$V_{CE} = -5\text{V}$, $I_C = -500\text{mA}$	60		200	
	$h_{FE(2)}$	$V_{CE} = -5\text{V}$, $I_C = -3\text{A}$	20			
Turn-on time	t_{on}	See specified Test Circuit		0.4		us
Storage time	t_{stg}			1.7		
Fall time	t_f			0.5		
Collector output capacitance	C_{ob}	$V_{CB} = -10\text{V}$, $I_E = 0$, $f = 1\text{MHz}$		90		pF
Transition frequency	f_T	$V_{CE} = -5\text{V}$, $I_C = -500\text{mA}$		9		MHz

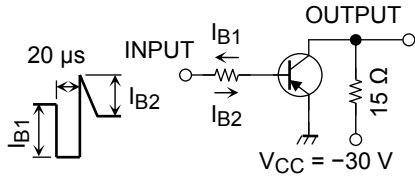
■ Classification of $h_{FE(1)}$

Type	2SB906-O	2SB906-O
Range	60-120	100-200

PNP Transistors

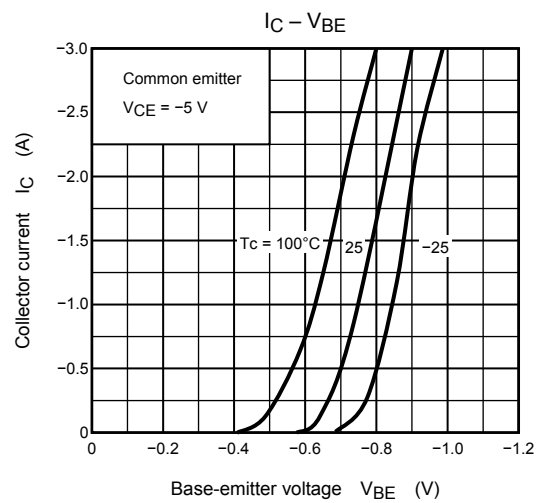
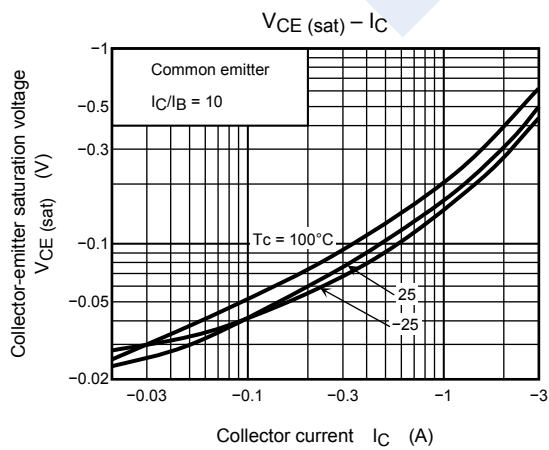
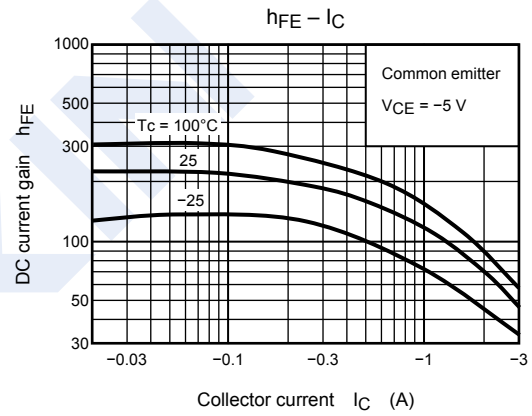
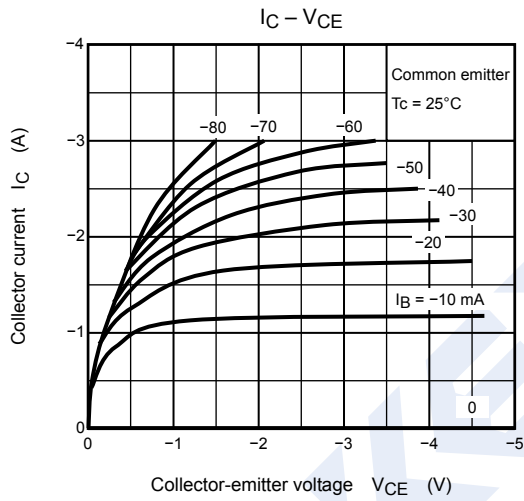
2SB906

Switching Time Test Circuit



$-I_{B1} = I_{B2} = 0.2 \text{ A}$, DUTY CYCLE $\leq 1\%$

Typical Characteristics



PNP Transistors

2SB906

Typical Characteristics

