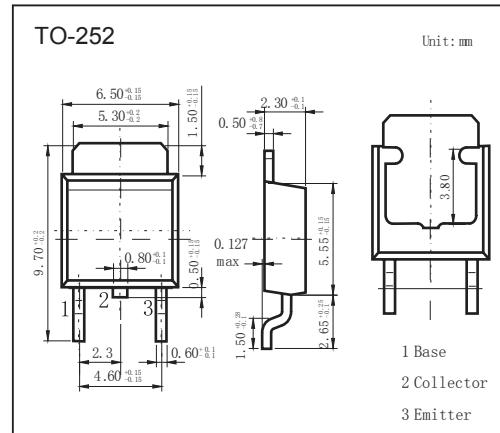


PNP Transistors

2SB1667

■ Features

- Low saturation voltage
- Audio Frequency Power Amplifier Applications



■ Absolute Maximum Ratings Ta = 25°C

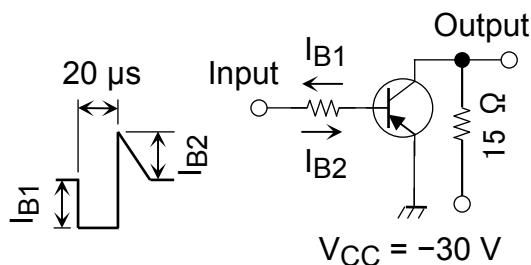
Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V _{CB0}	-60	V
Collector - Emitter Voltage	V _{C0E}	-60	
Emitter - Base Voltage	V _{E0B}	-7	
Collector Current - Continuous	I _C	-3	A
Base current	I _B	-0.5	
Collector Power Dissipation T _c = 25°C T _a = 25°C	P _C	25	W
		1.5	
Junction Temperature	T _J	150	°C
Storage Temperature range	T _{stg}	-55 to 150	

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V _{CB0}	I _C = -100 μA, I _E =0	-60			V
Collector- emitter breakdown voltage	V _{C0E}	I _C = -5 mA, I _B =0	-60			
Emitter - base breakdown voltage	V _{E0B}	I _E = -100 μ A, I _C =0	-7			
Collector-base cut-off current	I _{CBO}	V _{CB} = -60 V , I _E =0			-100	nA
Emitter cut-off current	I _{EBO}	V _{EB} = -7V , I _C =0			-100	
Collector-emitter saturation voltage	V _{CE(sat)}	I _C =-3 A, I _B =-300mA		-0.5	-1.7	V
Base - emitter saturation voltage	V _{BE(sat)}	I _C =-3 A, I _B =-300mA			-1.2	
Base - emitter voltage	V _{BE}	V _{CE} = -5V, I _C = -500mA		-0.7	-1	
DC current gain	h _{FE(1)}	V _{CE} = -5V, I _C = -500mA	60		300	
	h _{FE(2)}	V _{CE} = -5V, I _C = -3 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} = -10V, I _E = 0, f=1MHz		150		pF
Transition frequency	f _T	V _{CE} = -5V, I _C = -500mA		9		MHz

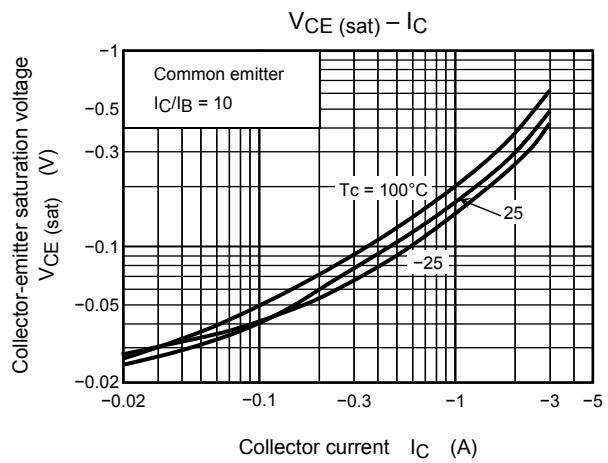
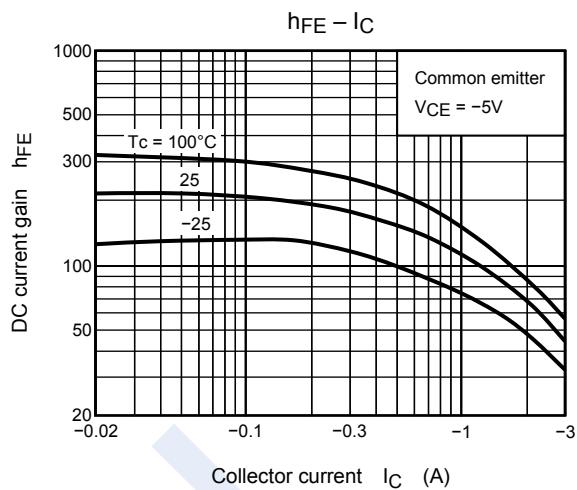
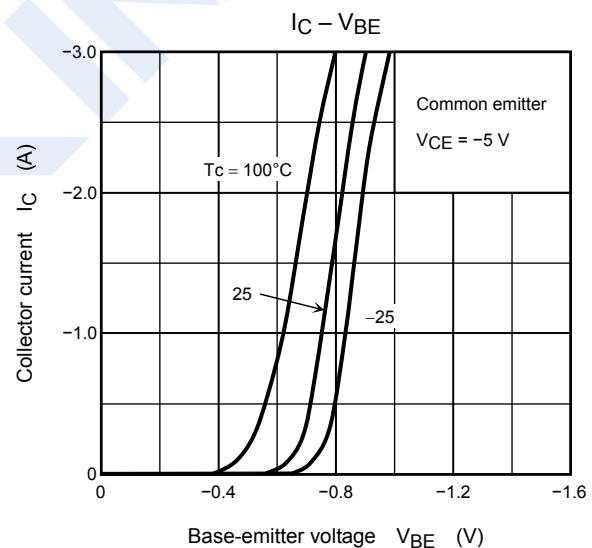
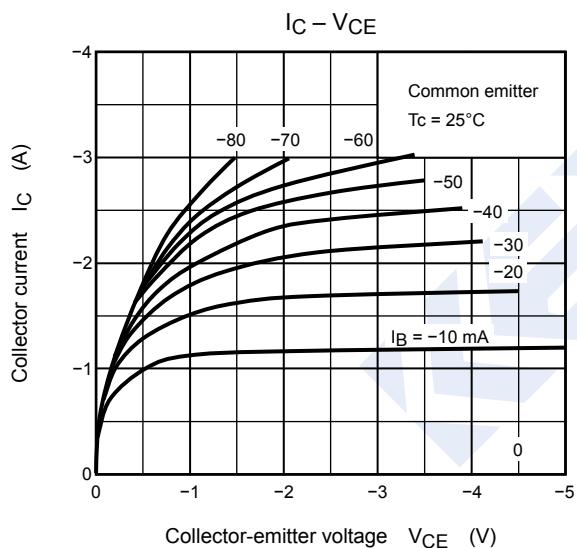
■ Classification of h_{fe(1)}

Type	2SB1667-O	2SB1667-Y	2SB1667-GR
Range	60-120	100-200	150-300

PNP Transistors**2SB1667****Switching Time Test Circuit**

$$I_{B1} = 0.2\text{ A}, I_{B2} = 0.2\text{ A},$$

duty cycle $\leq 1\%$

■ Typical Characteristics

PNP Transistors**2SB1667****■ Typical Characteristics**