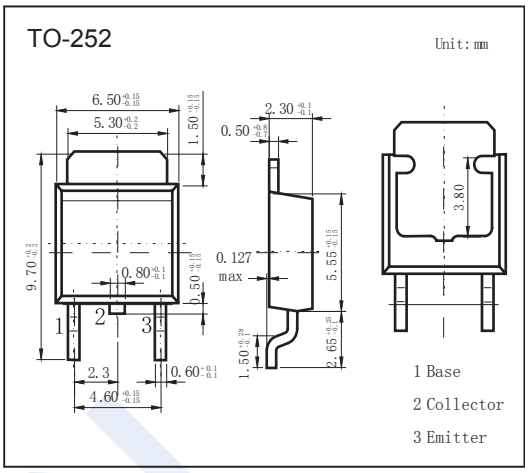
PNP Transistors

2SB1181



■ Features

- Hight breakdown voltage and high current.
- Low collector-emitter saturation voltage $V_{CE(sat)}$
- Good h_{FE} linearty.
- Complementary to 2SD1733

■ Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V_{CBO}	-80	V
Collector - Emitter Voltage	V_{CEO}	-80	
Emitter - Base Voltage	V_{EBO}	-5	
Collector Current - Continuous	I_C	-1	A
Collector current -Pulse	I_{CP}	-2	
Collector Power Dissipation Tc=25°C	P_C	10	W
Collector Power Dissipation Ta = 25℃		1	
Junction Temperature	T_J	150	℃
Storage Temperature range	T_{stg}	-55 to 150	

■ Electrical Characteristics Ta = 25℃

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V_{CBO}	I_C= -100 μA, I_E=0	-80			V
Collector- emitter breakdown voltage	V_{CEO}	I_C= -1 mA, I_B=0	-80			
Emitter - base breakdown voltage	V_{EBO}	I_E= -100 μ A, I_C=0	-5			
Collector-base cut-off current	I_{CBO}	V_{CB}= -60V , I_E=0			-1	uA
Emitter cut-off current	I_{EBO}	V_{EB}= -4V , I_C=0			-1	
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=-500 mA, I_B=-50mA			-0.4	V
Base - emitter saturation voltage	$V_{BE(sat)}$	I_C=-500 mA, I_B=-50mA			-1.2	
DC current gain	h_{FE}	V_{CE}= -3V, I_C= -100 mA	120		390	
Collector output capacitance	C_{ob}	V_{CB}= -10V, I_E= 0,f=1MHz		25		pF
Transition frequency	f_T	V_{CE}= -10V, I_E= 50mA,f=100MHz		100		MHz

■ Classification of h_{fe}

Type	2SB1181-Q	2SB1181-R
Range	120-270	180-390

PNP Transistors

2SB1181

■ Typical Characterisitics

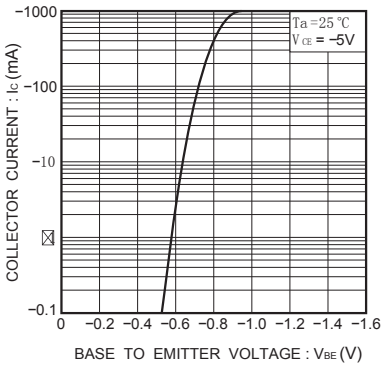


Fig.1 Grounded emitter propagation characteristics

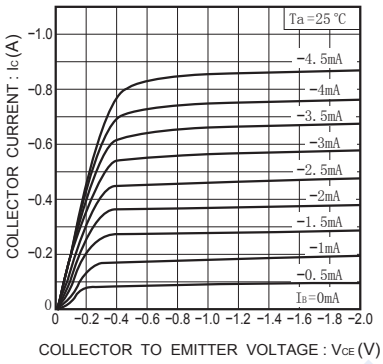


Fig.2 Grounded emitter output characteristics

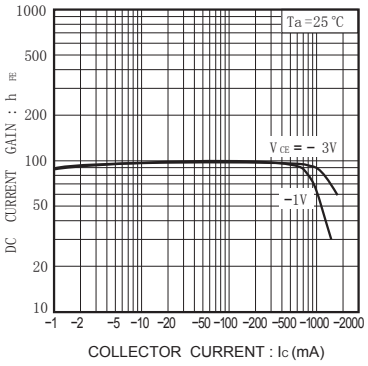


Fig.3 DC current gain vs. collector current

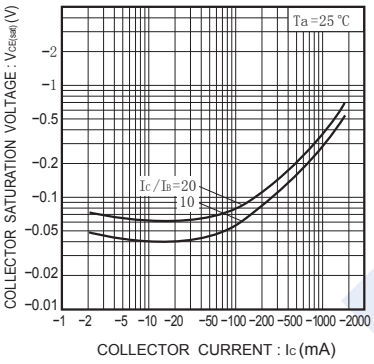


Fig.4 Collector-emitter saturation voltage vs. collector current

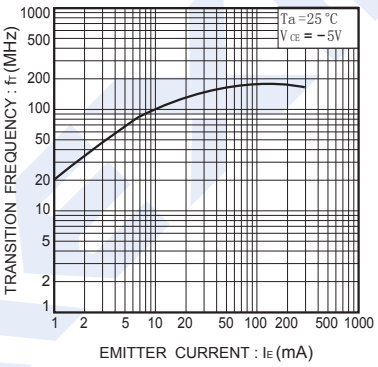


Fig.5 Gain bandwidth product vs. emitter current

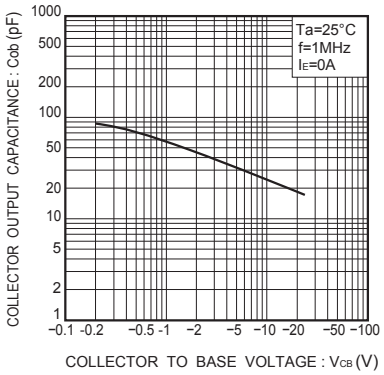


Fig.6 Collector output capacitance vs. collector-base voltage