

## TO-252 Plastic-Encapsulate Transistors

### Features

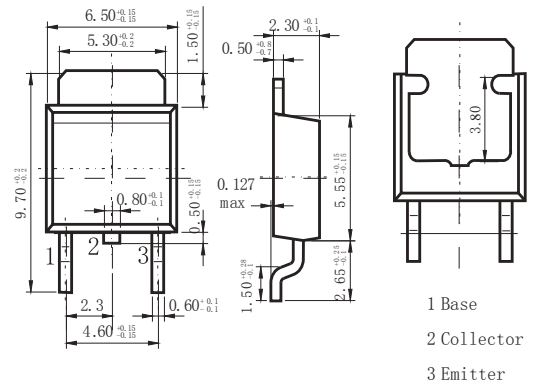
- Low  $V_{CE(sat)}$ .  $V_{CE(sat)} = -0.5V$
- Complementary to 2SD1758
- PNP Transistors

### MECHANICAL DATA

- Case style: SOT-89 molded plastic
- Mounting position: any

TO-252

Unit: mm



## MAXIMUM RATINGS AND CHARACTERISTICS

@ 25°C Ambient Temperature (unless otherwise noted)

Parameter	Symbol	Rating	Unit	
Collector - Base Voltage	$V_{CBO}$	-40	V	
Collector - Emitter Voltage	$V_{CEO}$	-32		
Emitter - Base Voltage	$V_{EBO}$	-5		
Collector Current - Continuous	$I_C$	-2	A	
Collector current -Pulse	$I_{CP}$	-3		
Collector Power Dissipation	$P_C$	$T_c=25^\circ C$	10	W
		$T_a = 25^\circ C$	1	
Junction Temperature	$T_J$	150	°C	
Storage Temperature range	$T_{stg}$	-55 to 150		

### PACKAGE INFORMATION

Device	Package	Shipping
2SB1182	TO-252	2500/Tape&Reel

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	$V_{CBO}$	$I_C = -100 \mu A, I_E = 0$	-40			V
Collector- emitter breakdown voltage	$V_{CEO}$	$I_C = -1 mA, I_B = 0$	-32			
Emitter - base breakdown voltage	$V_{EBO}$	$I_E = -100 \mu A, I_C = 0$	-5			
Collector-base cut-off current	$I_{CBO}$	$V_{CB} = -30V, I_E = 0$			-1	uA
Emitter cut-off current	$I_{EBO}$	$V_{EB} = -4V, I_C = 0$			-1	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -2 A, I_B = -200mA$		-0.5	-0.8	V
Base - emitter saturation voltage	$V_{BE(sat)}$	$I_C = -2 A, I_B = -200mA$			-1.2	
DC current gain	$h_{FE}$	$V_{CE} = -3V, I_C = -500 mA$	120		390	
Collector output capacitance	$C_{ob}$	$V_{CB} = -10V, I_E = 0, f = 1MHz$		50		pF
Transition frequency	$f_T$	$V_{CE} = -5V, I_E = 500mA, f = 100MHz$		100		MHz

### Classification of $h_{FE}$

Type	2SB1182-Q	2SB1182-R
Range	120-270	180-390

# RATINGS AND CHARACTERISTIC CURVES

## ■ Typical Characteristics

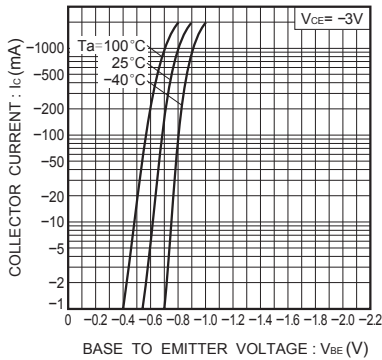


Fig.1 Grounded emitter propagation characteristics

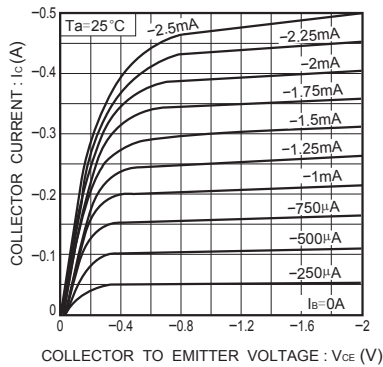


Fig.2 Grounded emitter output characteristics

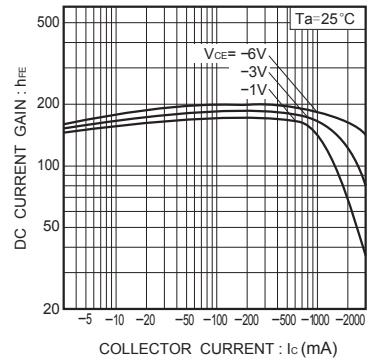


Fig.3 DC current gain vs. collector current ( I )

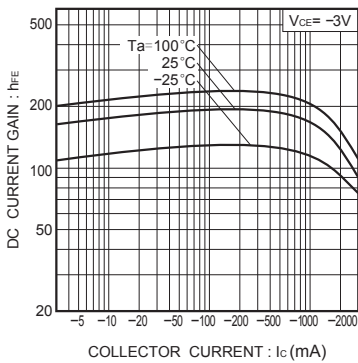


Fig.4 DC current gain vs. collector current (II)

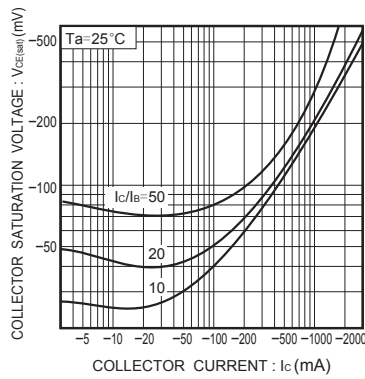


Fig.5 Collector-emitter saturation voltage vs. collector current ( I )

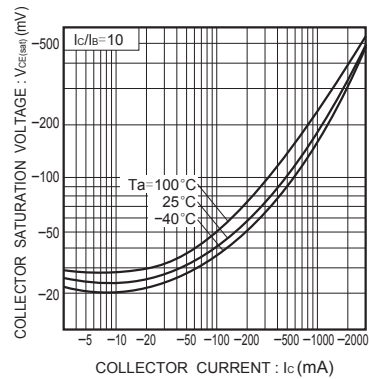


Fig.6 Collector-emitter saturation voltage vs. collector current (II)

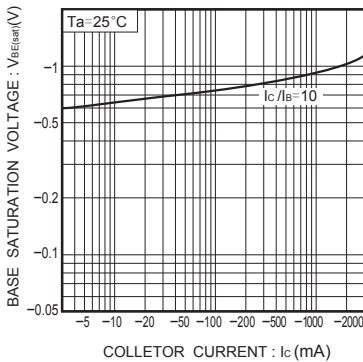


Fig.7 Base-emitter saturation voltage vs. collector current

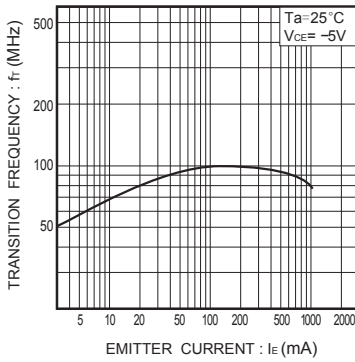


Fig.8 Gain bandwidth product vs. emitter current

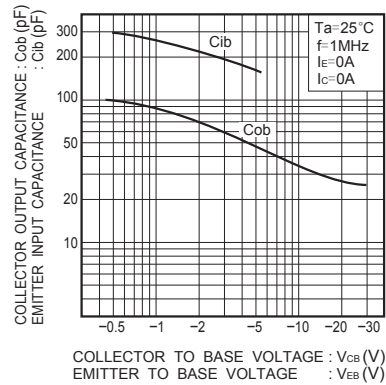


Fig.9 Collector output capacitance vs. collector-base voltage  
Emitter input capacitance vs. emitter-base voltage

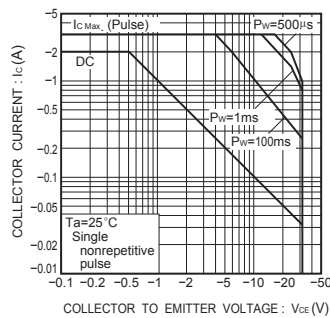


Fig.10 Safe operation area