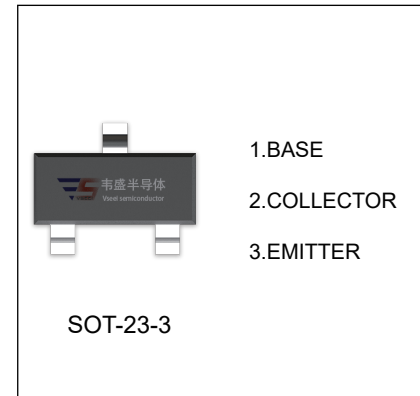


## 2SD1782 TRANSISTOR (NPN)

### FEATURES

- Low  $V_{CE(sat)}$
- High  $BV_{CEO}$
- Complements the 2SB1198



### MAXIMUM RATINGS ( $T_a=25^{\circ}\text{C}$ unless otherwise noted)

Symbol	Parameter	Value	Unit
$V_{CBO}$	Collector-Base Voltage	80	V
$V_{CEO}$	Collector-Emitter Voltage	80	V
$V_{EBO}$	Emitter-Base Voltage	5	V
$I_C$	Collector Current -Continuous	500	mA
$P_C$	Collector Power Dissipation	200	mW
$T_J, T_{stg}$	Operation Junction and Storage Temperature Range	-55-150	$^{\circ}\text{C}$

### ELECTRICAL CHARACTERISTICS ( $T_a=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=50\text{mA}$ , $I_E=0$	80			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=2\text{mA}$ , $I_B=0$	80			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=50\text{mA}$ , $I_C=0$	5			V
Collector cut-off current	$I_{CBO}$	$V_{CB}=50\text{V}$ , $I_E=0$			0.5	$\mu\text{A}$
Emitter cut-off current	$I_{EBO}$	$V_{EB}=4\text{V}$ , $I_C=0$			0.5	$\mu\text{A}$
DC current gain	$h_{FE(1)}$	$V_{CE}=3\text{V}$ , $I_C=100\text{mA}$	120		390	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=500\text{mA}$ , $I_B=50\text{mA}$			0.5	V
Transition frequency	$f_T$	$V_{CE}=10\text{V}$ , $I_C=50\text{mA}$ , $f=100\text{MHz}$		120		MHz
Collector output capacitance	$C_{ob}$	$V_{CB}=10\text{V}$ , $I_E=0$ , $f=1\text{MHz}$		7.5		pF

### CLASSIFICATION OF $h_{FE(1)}$

Rank	Q	R
Range	120-270	180-390
MARKING	AJQ	AJR