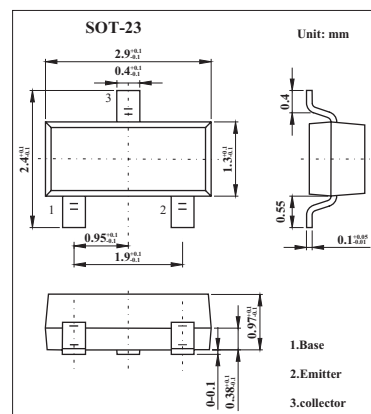


## Power Transistor

## 2SD1782K

## ■ Features

- Low  $V_{CE(sat)}$ .  $V_{CE(sat)} = 0.2V(\text{Typ.})$  ( $I_C / I_B = 0.5A / 50mA$ )
- High  $V_{CEO}$ ,  $V_{CEO} = 80V$ .

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

Parameter	Symbol	Rating	Unit
Collector-base voltage	$V_{CBO}$	80	V
Collector-emitter voltage	$V_{CEO}$	80	V
Emitter-base voltage	$V_{EBO}$	5	V
Collector current	$I_C$	0.5	A
Collector power dissipation	$P_C$	0.2	W
Junction temperature	$T_j$	150	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-55 to +150	$^\circ\text{C}$

■ Electrical Characteristics  $T_a = 25^\circ\text{C}$ 

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$BV_{CBO}$	$I_C = 50\mu\text{A}$	80			V
Collector-emitter breakdown voltage	$BV_{CEO}$	$I_C = 2\text{mA}$	80			V
Emitter-base breakdown voltage	$BV_{EBO}$	$I_E = 50\mu\text{A}$	5			V
Collector cutoff current	$I_{CBO}$	$V_{CB} = 50V$			0.5	$\mu\text{A}$
Emitter cutoff current	$I_{EBO}$	$V_{EB} = 4V$			0.5	$\mu\text{A}$
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C / I_B = 500\text{mA} / 50\text{mA}$		0.2	0.5	V
DC current transfer ratio	$h_{FE}$	$V_{CE} = 3V, I_C = 100\text{mA}$	120		390	
Output capacitance	$f_T$	$V_{CE} = 10V, I_E = -50\text{mA}, f = 100\text{MHz}$		120		MHz
Transition frequency	$C_{ob}$	$V_{CB} = 10V, I_E = 0, f = 1\text{MHz}$		7.5		pF

■  $h_{FE}$  Classification

Marking	AJ	
	Q	R
$h_{FE}$	120~270	180~390