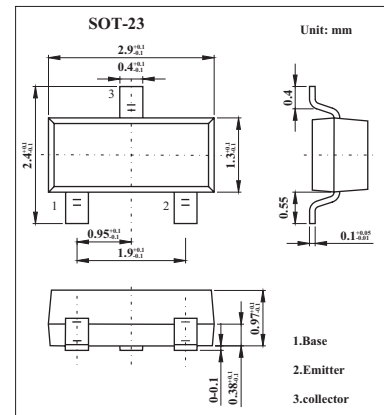


Power Transistor

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	μA
Emitter cutoff current	I_{EBO}	$V_{EB} = 4V$			0.5	μA
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	
Rank	Q	R
h_{FE}	120~270	180~390