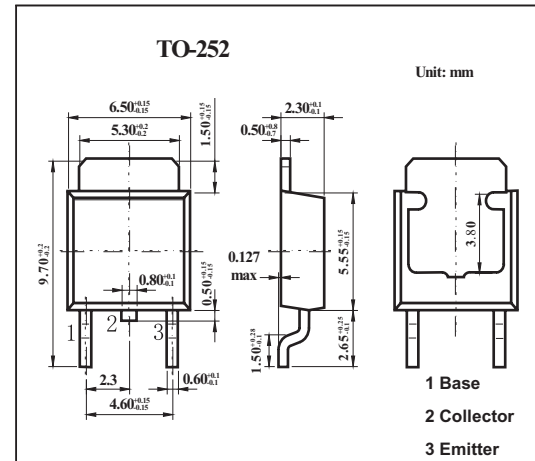


High-current gain Power Transistor

2SD2318

■ Features

- High DC current gain.
- Low saturation voltage.

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

Parameter	Symbol	Rating	Unit
Collector-base voltage	V_{CB0}	80	V
Collector-emitter voltage	V_{CEO}	60	V
Emitter-base voltage	V_{EBO}	6	V
Collector current	I_C	3	A
		4.5	A(Pulse)*
Collector current (pulse) *	I_{CP}	4.5	A
Collector power dissipation $T_c = 25^\circ\text{C}$	P_C	1	W
		15	W
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

* $P_w=100\text{ms}$.

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

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	BV_{CB0}	$I_C=50\mu\text{A}$	80			V
Collector-emitter breakdown voltage	BV_{CEO}	$I_C=1\text{mA}$	60			V
Emitter-base breakdown voltage	BV_{EBO}	$I_E=50\mu\text{A}$	6			V
Collector cutoff current	I_{CBO}	$V_{CB}=80\text{V}$			100	μA
Emitter cutoff current	I_{EBO}	$V_{EB}=6\text{V}$			100	μA
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=2\text{A}, I_B=0.05\text{A}$			1.0	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=2\text{A}, I_B=0.05\text{A}$			1.5	V
DC current transfer ratio	h_{FE}	$V_{CE}=4\text{V}, I_C=0.5\text{A}$	560		1800	
Output capacitance	f_T	$V_{CE}=5\text{V}, I_E=-0.2\text{A}, f=10\text{MHz}$		50		MHz
Transition frequency	C_{ob}	$V_{CB}=10\text{V}, I_E=0\text{A}, f=1\text{MHz}$		60		pF

■ h_{FE} Classification

Rank	U	V
h_{FE}	560~1200	820~1800