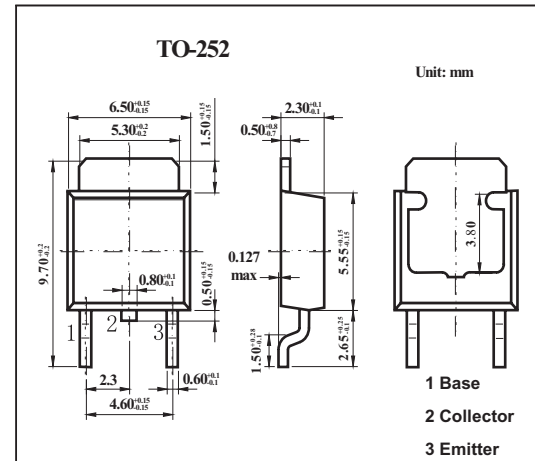


## High-current gain Power Transistor

## 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	$\mu\text{A}$
Emitter cutoff current	$I_{EBO}$	$V_{EB}=6\text{V}$			100	$\mu\text{A}$
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