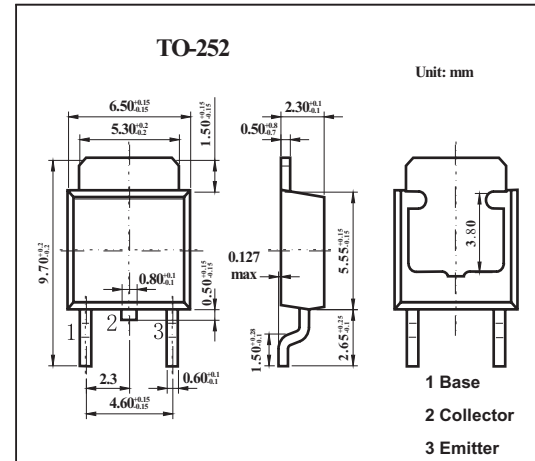


## Silicon NPN Epitaxial

## 2SD1918

## ■ Features

- High breakdown voltage.( $V_{CE0} = 160V$ )
- Low collector output capacitance.Typ. 20pF at  $V_{CB} = 10V$
- High transition frequency.( $f_T = 80MHz$ )

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

Parameter	Symbol	Rating	Unit
Collector-base voltage	$V_{CBO}$	160	V
Collector-emitter voltage	$V_{CEO}$	160	V
Emitter-base voltage	$V_{EBO}$	5	V
Collector current	$I_c$	1.5	A(DC)
		3	A(Pulse) *
Collector power dissipation	$P_c$	1	W
		10	W
$T_c = 25^\circ C$			
Junction temperature	$T_j$	150	$^\circ C$
Storage temperature	$T_{stg}$	-55 to +150	$^\circ C$

\*  $P_w=200msec$  duty=1/2■ Electrical Characteristics  $T_a = 25^\circ C$ 

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Collector to base breakdown voltage	$V_{(BR)CBO}$	$I_c = 50\mu A$	160			V
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	$I_c = 1mA$	160			V
Emitter to base breakdown voltage	$V_{(BR)EBO}$	$I_E = 50\mu A$	5			V
Collector cutoff current	$I_{CBO}$	$V_{CB} = 120V$			1	$\mu A$
Emitter cutoff current	$I_{EBO}$	$V_{EB} = 4V$			1	$\mu A$
Collector to emitter saturation voltage *	$V_{CE(sat)}$	$I_C/I_B = 1A/0.1A$			2	V
Base to emitter voltage *	$V_{BE(sat)}$	$I_C/I_B = 1A/0.1A$			1.5	V
DC current transfer ratio	$h_{FE}$	$V_{CE}/I_C = 5V/0.1A$	120		390	
Transition frequency	$f_T$	$V_{CE} = 5V, I_E = -0.1A, f = 30MHz$		80		MHz
Output capacitance	$C_{ob}$	$V_{CB} = 10V, I_E = 0A, f = 1MHz$		20		pF

\* Measured using pulse current.

## ■ hFE Classification

Rank	Q	R
hFE	120 to 270	180 to 390