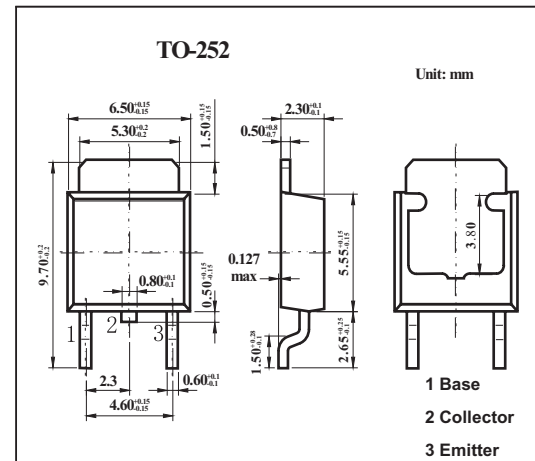


## Silicon NPN Epitaxial

## 2SC3074

## ■ Features

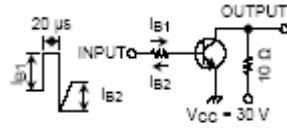
- Low collector saturation voltage.
- High speed switching time.

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

Parameter	Symbol	Rating	Unit
Collector-base voltage	$V_{CBO}$	60	V
Collector-emitter voltage	$V_{CEO}$	50	V
Emitter-base voltage	$V_{EBO}$	5	V
Collector current	$I_C$	5	A
Base current	$I_B$	1	A
Collector power dissipation $T_a = 25^\circ\text{C}$ $T_c = 25^\circ\text{C}$	$P_C$	1.0	W
		20	W
Junction temperature	$T_j$	150	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-55 to +150	$^\circ\text{C}$

## 2SC3074

## ■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit	
Collector cut-off current	I <sub>CBO</sub>	V <sub>CB</sub> = 50 V, I <sub>E</sub> = 0			1	μA	
Emitter cut-off current	I <sub>EBO</sub>	V <sub>EB</sub> = 5 V, I <sub>C</sub> = 0			1	μA	
Collector-emitter breakdown voltage	V <sub>(BR)CEO</sub>	I <sub>C</sub> = 10 mA, I <sub>B</sub> = 0	50			V	
DC current gain	h <sub>FE</sub>	V <sub>CE</sub> = 1 V, I <sub>C</sub> = 1 A	70		240		
		V <sub>CE</sub> = 1 V, I <sub>C</sub> = 3 A	30				
Collector-emitter saturation voltage	V <sub>CE (sat)</sub>	I <sub>C</sub> = 3 A, I <sub>B</sub> = 0.15 A		0.2	0.4	V	
Base-emitter saturation voltage	V <sub>BE (sat)</sub>	I <sub>C</sub> = 3 A, I <sub>B</sub> = 0.15 A		0.9	1.2	V	
Transition frequency	f <sub>T</sub>	V <sub>CE</sub> = 4 V, I <sub>C</sub> = 1 A		120		MHz	
Collector output capacitance	C <sub>ob</sub>	V <sub>CB</sub> = 10 V, I <sub>E</sub> = 0, f = 1 MHz		80		pF	
Turn-on time	t <sub>on</sub>	 <p>I<sub>B1</sub> = -I<sub>B2</sub> = 0.15 A, DUTY CYCLE ≦ 1%</p>		0.1		μs	
Storage time	t <sub>stg</sub>				1		μs
Fall time	t <sub>f</sub>				0.1		μs

## ■ hFE Classification

Marking	C3074	
Rank	O	Y
hFE	70~140	120~240