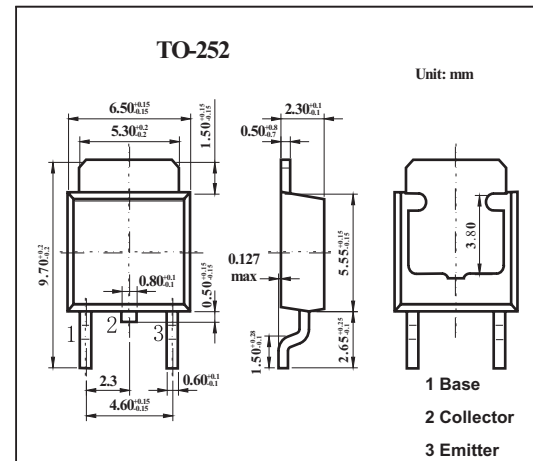


Silicon NPN Epitaxial

2SC3074



■ Features

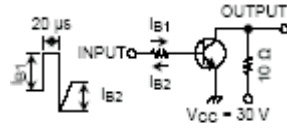
- Low collector saturation voltage.
- High speed switching time.

■ 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 $T_a = 25^\circ\text{C}$

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit	
Collector cut-off current	I_{CBO}	$V_{CB} = 50\text{ V}, I_E = 0$			1	μA	
Emitter cut-off current	I_{EBO}	$V_{EB} = 5\text{ V}, I_C = 0$			1	μA	
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = 10\text{ mA}, I_B = 0$	50			V	
DC current gain	hFE	$V_{CE} = 1\text{ V}, I_C = 1\text{ A}$	70		240		
		$V_{CE} = 1\text{ V}, I_C = 3\text{ A}$	30				
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 3\text{ A}, I_B = 0.15\text{ A}$		0.2	0.4	V	
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = 3\text{ A}, I_B = 0.15\text{ A}$		0.9	1.2	V	
Transition frequency	f_T	$V_{CE} = 4\text{ V}, I_C = 1\text{ A}$		120		MHz	
Collector output capacitance	C_{ob}	$V_{CB} = 10\text{ V}, I_E = 0, f = 1\text{ MHz}$		80		pF	
Turn-on time	t_{on}	 <p>$I_{B1} = -I_{B2} = 0.15\text{ A}$, DUTY CYCLE $\leq 1\%$</p>		0.1		μs	
Storage time	t_{stg}				1		μs
Fall time	t_f				0.1		μs

■ hFE Classification

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