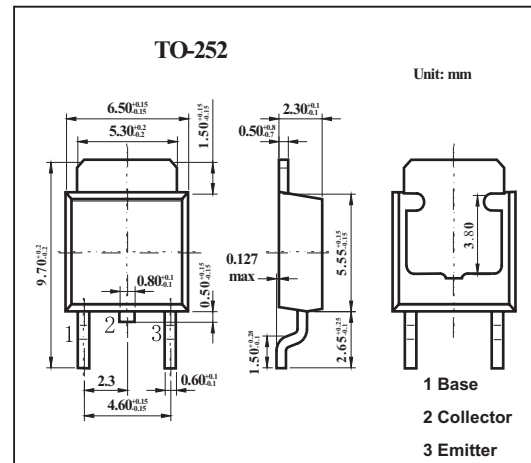


Silicon NPN Epitaxial

2SC3076

■ Features

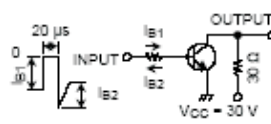
- Low Collector Saturation Voltage: $V_{CE(sat)}=0.5V(\text{Max.})(I_C=1A)$
- Excellent Switching Time : $t_{stg}=1.0\mu s(\text{Typ.})$

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

Parameter	Symbol	Rating	Unit	
Collector-base voltage	V_{CBO}	50	V	
Collector-emitter voltage	V_{CEO}	50	V	
Emitter-base voltage	V_{EBO}	5	V	
Collector current	I_C	2	A	
Base Current	I_B	1	A	
Collector power dissipation		$T_a=25^\circ\text{C}$	1.0	A
		$T_C=25^\circ\text{C}$	10	W
Junction temperature	T_j	150	$^\circ\text{C}$	
Storage temperature	T_{stg}	-55 to 150	$^\circ\text{C}$	

2SC3076

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit	
Collector cut-off current	IcBO	V _{CB} = 50 V, I _E = 0			1.0	μA	
Emitter cut-off current	I _{EBO}	V _{EB} = 5 V, I _C = 0			1.0	μA	
Collector-emitter breakdown voltage	V _{(BR)CEO}	I _C = 10 mA, I _B = 0	50			V	
DC current gain	h _{FE}	V _{CE} = 2 V, I _C = 0.5 A	70		240		
		V _{CE} = 2 V, I _C = 1.5A	40				
Collector-emitter saturation voltage	V _{CE(sat)}	I _C = 1A, I _B = 0.05A			0.5	V	
Base-emitter saturation voltage	V _{BE(sat)}	I _C = 1A, I _B = 0.05A			1.2	V	
Transition Frequency	f _T	V _{CE} =2V, I _C =0.5A		80		MHz	
Collector output capacitance	C _{ob}	V _{CB} = 10V, I _E = 0, f = 1 MHz		30		pF	
Switching Time Ture-on Time	t _{on}	 <p>I_{B1} = -I_{B2} = 0.05 A, DUTY CYCLE ≤ 1%</p>		0.1		μS	
switching Time Storage Time	t _{stg}				1		μS
Switching Fall Time	t _f				0.1		μS

■ hFE Classification

Marking	C3076	
Rank	O	Y
hFE	70~140	120~240