

TOSHIBA TRANSISTOR SILICON NPN EPITAXIAL TYPE (PCT PROCESS)

2SC5076

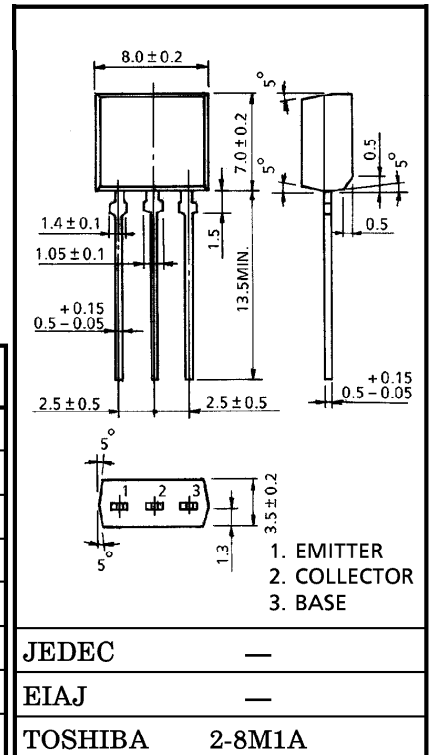
HIGH CURRENT SWITCHING APPLICATIONS

- Low Collector Saturation Voltage : $V_{CE(sat)}=0.4V$ (Max.)
(at $I_C=3A$)
- High Speed Switching Time : $t_{stg}=1.0\mu s$ (Typ.)
- Complementary to 2SA1905

MAXIMUM RATINGS ($T_a = 25^\circ C$)

CHARACTERISTIC	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	P_C	1.3	W
Junction Temperature	T_j	150	$^\circ C$
Storage Temperature Range	T_{stg}	-55~150	$^\circ C$

Unit in mm



Weight : 0.55g

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ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		ICBO	V _{CB} = 50V, I _E = 0	—	—	1	μA
Emitter Cut-off Current		IEBO	V _{EB} = 5V, I _C = 0	—	—	1	μA
Collector-Emitter Breakdown Voltage		V _{(BR) CEO}	I _C = 10mA, I _B = 0	50	—	—	V
DC Current Gain		h _{FE} (1) (Note)	V _{CE} = 1V, I _C = 1A	70	—	240	
		h _{FE} (2)	V _{CE} = 1V, I _C = 3A	30	—	—	
Saturation Voltage	Collector-Emitter	V _{CE (sat)}	I _C = 3A, I _B = 0.15A	—	0.2	0.4	V
	Base-Emitter	V _{BE (sat)}	I _C = 3A, I _B = 0.15A	—	0.9	1.2	
Transition Frequency		f _T	V _{CE} = 4V, I _C = 1A	—	120	—	MHz
Collector Output Capacitance		C _{ob}	V _{CB} = 10V, I _E = 0, f = 1MHz	—	80	—	pF
Switching Time	Turn-on Time	t _{on}	<p>20 μs I_{B1} INPUT I_{B2} OUTPUT 10 Ω V_{CC} = 30V I_{B1} = -I_{B2} = 0.15A, DUTY CYCLE ≤ 1%</p>	—	0.1	—	μs
	Storage Time	t _{stg}		—	1.0	—	
	Fall Time	t _f		—	—	0.1	

Note : h_{FE} (1) Classification O : 70~140, Y : 120~240

