

TOSHIBA TRANSISTOR SILICON NPN EPITAXIAL TYPE (PCT PROCESS)

2SC3074

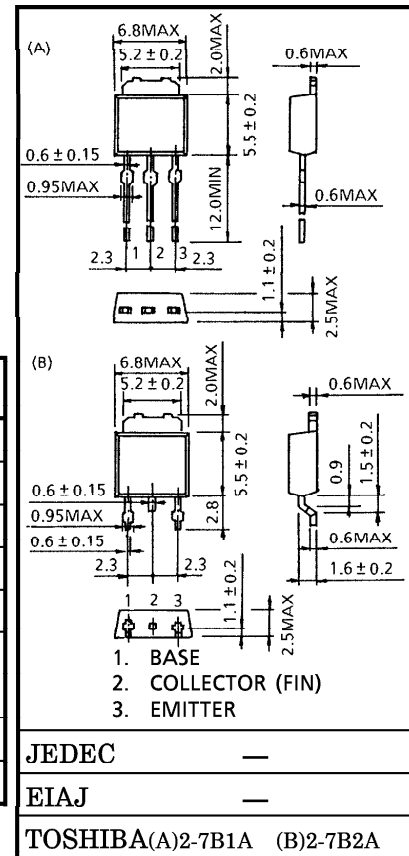
HIGH CURRENT SWITCHING APPLICATIONS.

- 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 2SA1244

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	$T_a = 25^\circ C$	1.0	W
	$T_c = 25^\circ C$	20	
Junction Temperature	T_j	150	$^\circ C$
Storage Temperature Range	T_{stg}	-55~150	$^\circ C$

Unit in mm



Weight : 0.36g

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ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		I_{CBO}	$V_{CB} = 50V, I_E = 0$	—	—	1	μA
Emitter Cut-off Current		I_{EBO}	$V_{EB} = 5V, I_C = 0$	—	—	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> $20\mu s$ IN-PUT I_{B1} OUTPUT I_{B1} I_{B2} $V_{CC} = 30V$ </p>	—	0.1	—	μs
	Storage Time	t_{stg}		—	1.0	—	
	Fall Time	t_f		$I_{B1} = -I_{B2} = 0.15A,$ $DUTY\ CYCLE \leq 1\%$	—	0.1	

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

