

TOSHIBA TRANSISTOR SILICON PNP EPITAXIAL TYPE (PCT PROCESS)

2SA1241

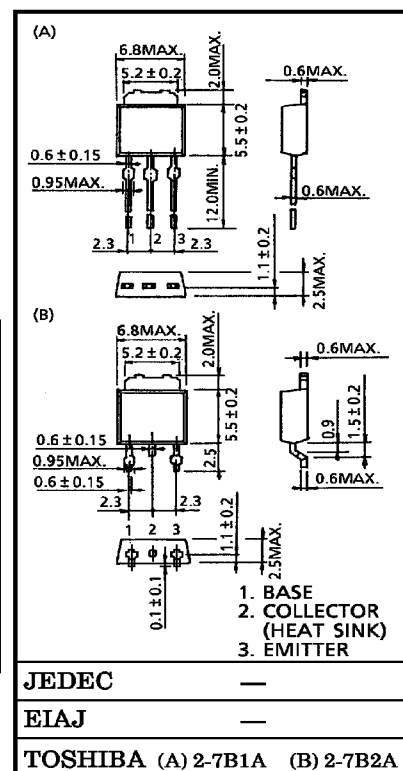
POWER AMPLIFIER APPLICATIONS
POWER SWITCHING APPLICATIONS

- Low Collector Saturation Voltage
: $V_{CE(sat)} = -0.5 \text{ V (Max.) (} I_C = -1 \text{ A)}$
- Excellent Switching Time : $t_{stg} = 1.0 \mu\text{s (Typ.)}$
- Complementary to 2SC3076

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

CHARACTERISTIC	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	P_C	1.0	W
Dissipation		10	
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-55~150	$^\circ\text{C}$

Unit in mm



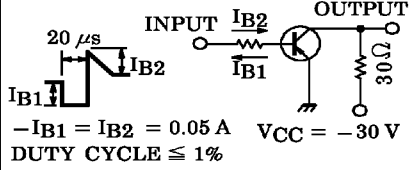
Weight : 0.36 g

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ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		I_{CBO}	$V_{CB} = -50\text{ V}, I_E = 0$	—	—	-1.0	μA
Emitter Cut-off Current		I_{EBO}	$V_{EB} = -5\text{ V}, I_C = 0$	—	—	-1.0	μA
Collector-Emitter Breakdown Voltage		$V_{(BR)CEO}$	$I_C = -10\text{ mA}, I_B = 0$	-50	—	—	V
DC Current Gain		$h_{FE(1)}$ (Note)	$V_{CE} = -2\text{ V}, I_C = -0.5\text{ A}$	70	—	240	
		$h_{FE(2)}$	$V_{CE} = -2\text{ V}, I_B = -1.5\text{ A}$	40	—	—	
Collector-Emitter Saturation Voltage		$V_{CE(sat)}$	$I_C = -1\text{ A}, I_B = -0.05\text{ A}$	—	—	-0.5	V
Base-Emitter Saturation Voltage		$V_{BE(sat)}$	$I_C = -1\text{ A}, I_B = -0.05\text{ A}$	—	—	-1.2	V
Transition Frequency		f_T	$V_{CE} = -2\text{ V}, I_C = -0.5\text{ A}$	—	100	—	MHz
Collector Output Capacitance		C_{ob}	$V_{CB} = -10\text{ V}, I_E = 0,$ $f = 1\text{ MHz}$	—	40	—	pF
Switching Time	Turn-on Time	t_{on}	 $20\text{ }\mu\text{s}$ I_{B1} I_{B2} $-I_{B1} = I_{B2} = 0.05\text{ A}$ $DUTY\ CYCLE \leq 1\%$ $V_{CC} = -30\text{ V}$	—	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

