

TOSHIBA TRANSISTOR SILICON NPN TRIPLE DIFFUSED TYPE

2SD1410A

IGNITER APPLICATIONS

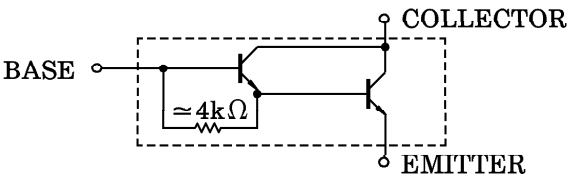
HIGH VOLTAGE SWITCHING APPLICATIONS

- High DC Current Gain :  $h_{FE}=2000$  (Min.) ( $V_{CE}=2V$ ,  $I_C=2A$ )

MAXIMUM RATINGS (Ta = 25°C)

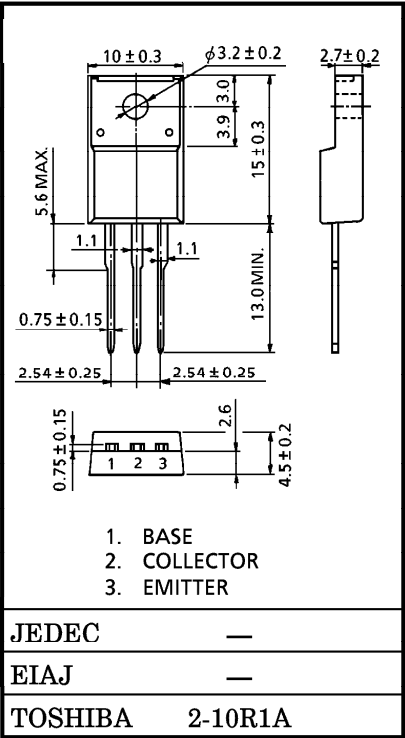
CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	$V_{CBO}$	300	V
Collector-Emitter Voltage	$V_{CEO}$	250	V
Emitter-Base Voltage	$V_{EBO}$	5	V
Collector Current	$I_C$	6	A
Base Current	$I_B$	1	A
Collector Power	$P_C$	2.0	W
Dissipation (Tc = 25°C)		25	
Junction Temperature	$T_j$	150	°C
Storage Temperature Range	$T_{stg}$	-55~150	°C

EQUIVALENT CIRCUIT



INDUSTRIAL APPLICATIONS

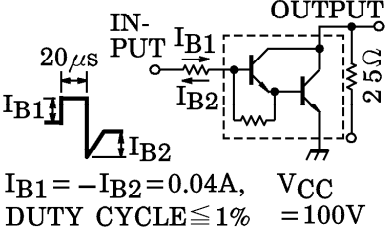
Unit in mm



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ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		ICBO	V <sub>CB</sub> = 300V, I <sub>E</sub> = 0	—	—	0.5	mA
Emitter Cut-off Current		IEBO	V <sub>EB</sub> = 5V, I <sub>C</sub> = 0	—	—	0.5	mA
Collector-Emitter Breakdown Voltage		V <sub>(BR)</sub> CEO	I <sub>C</sub> = 0.5A, L = 40mH	250	—	—	V
DC Current Gain		h <sub>FE</sub> (1)	V <sub>CE</sub> = 2V, I <sub>C</sub> = 2A	2000	—	—	
		h <sub>FE</sub> (2)	V <sub>CE</sub> = 2V, I <sub>C</sub> = 4A	200	—	—	
Collector-Emitter Saturation Voltage		V <sub>CE</sub> (sat)	I <sub>C</sub> = 4A, I <sub>B</sub> = 0.04A	—	—	2.0	V
Base-Emitter Saturation Voltage		V <sub>BE</sub> (sat)	I <sub>C</sub> = 4A, I <sub>B</sub> = 0.04A	—	—	2.5	V
Collector Output Capacitance		C <sub>ob</sub>	V <sub>CB</sub> = 50V, I <sub>E</sub> = 0, f = 1MHz	—	30	—	pF
Switching Time	Turn-on Time	t <sub>on</sub>	 I <sub>B1</sub> = -I <sub>B2</sub> = 0.04A, V <sub>CC</sub> = 100V DUTY CYCLE ≤ 1%	—	0.2	—	μs
	Storage Time	t <sub>stg</sub>		—	1.0	—	
	Fall Time	t <sub>f</sub>		—	0.2	—	

