

TOSHIBA TRANSISTOR SILICON NPN TRIPLE DIFFUSED TYPE

2SD1410A

IGNITER APPLICATIONS

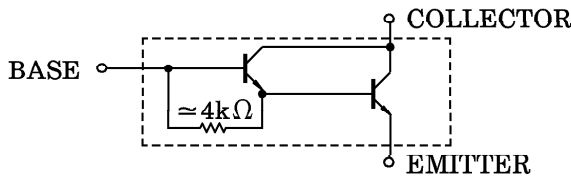
HIGH VOLTAGE SWITCHING APPLICATIONS

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

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

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

EQUIVALENT CIRCUIT



INDUSTRIAL APPLICATIONS

Unit in mm

JEDEC	—
EIAJ	—
TOSHIBA	2-10R1A

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ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		I_{CBO}	$V_{CB} = 300V, I_E = 0$	—	—	0.5	mA
Emitter Cut-off Current		I_{EBO}	$V_{EB} = 5V, I_C = 0$	—	—	0.5	mA
Collector-Emitter Breakdown Voltage		$V_{(BR) CEO}$	$I_C = 0.5A, L = 40mH$	250	—	—	V
DC Current Gain		$h_{FE(1)}$	$V_{CE} = 2V, I_C = 2A$	2000	—	—	
		$h_{FE(2)}$	$V_{CE} = 2V, I_C = 4A$	200	—	—	
Collector-Emitter Saturation Voltage		$V_{CE(sat)}$	$I_C = 4A, I_B = 0.04A$	—	—	2.0	V
Base-Emitter Saturation Voltage		$V_{BE(sat)}$	$I_C = 4A, I_B = 0.04A$	—	—	2.5	V
Collector Output Capacitance		C_{ob}	$V_{CB} = 50V, I_E = 0, f = 1MHz$	—	30	—	pF
Switching Time	Turn-on Time	t_{on}	<p> $I_{B1} = -I_{B2} = 0.04A, V_{CC} = 100V$ $DUTY\ CYCLE \leq 1\%$ </p>	—	0.2	—	μs
	Storage Time	t_{stg}		—	1.0	—	
	Fall Time	t_f		—	0.2	—	

