

TOSHIBA TRANSISTOR SILICON NPN TRIPLE DIFFUSED TYPE

2SD1410A

IGNITER APPLICATIONS

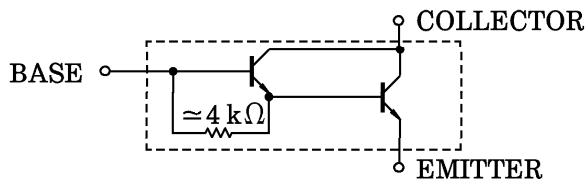
HIGH VOLTAGE SWITCHING APPLICATIONS

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

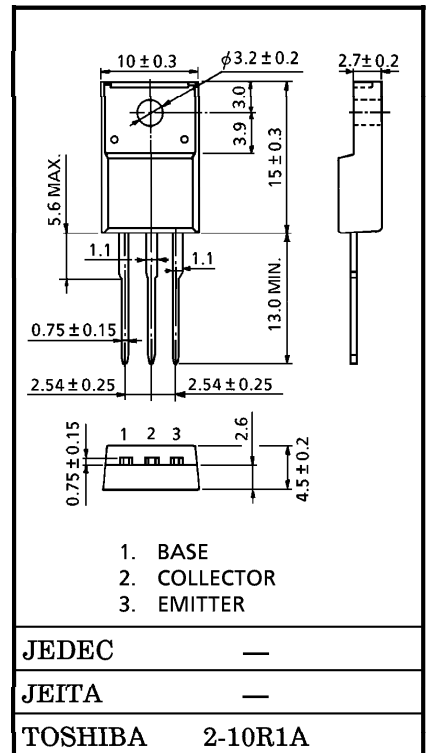
MAXIMUM RATINGS ($T_c = 25^\circ\text{C}$)

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 Dissipation ($T_c = 25^\circ\text{C}$)	$T_a = 25^\circ\text{C}$	P_C	2.0	W
	$T_c = 25^\circ\text{C}$		25	
Junction Temperature		T_j	150	$^\circ\text{C}$
Storage Temperature Range		T_{stg}	-55~150	$^\circ\text{C}$

EQUIVALENT CIRCUIT

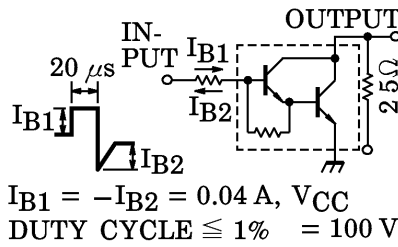


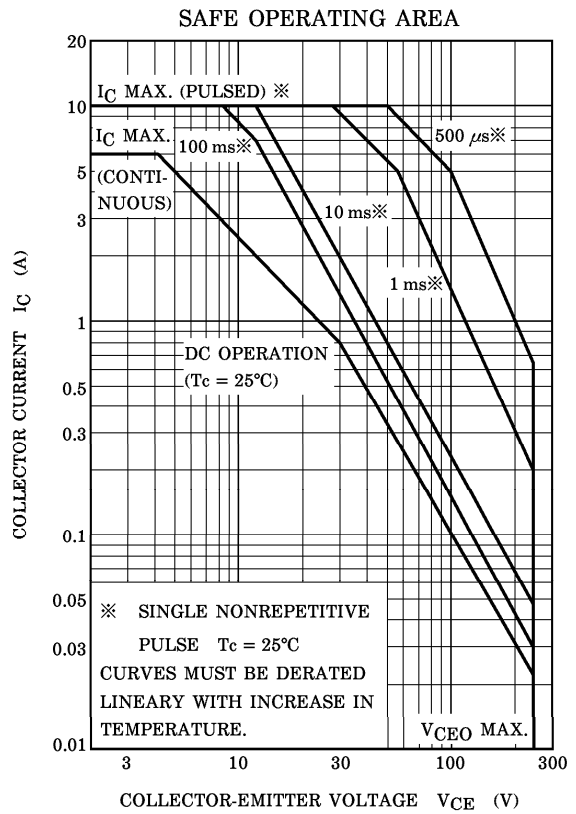
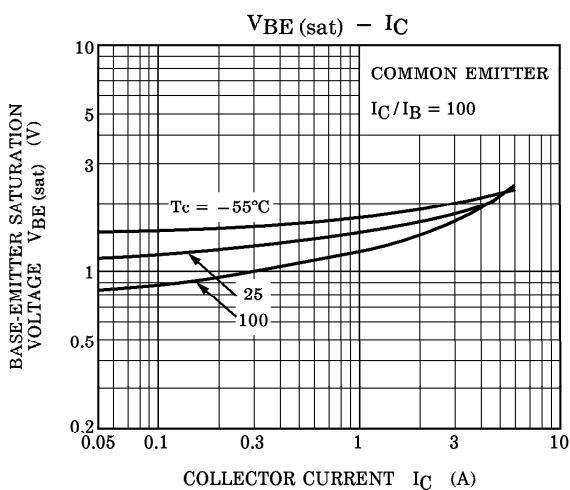
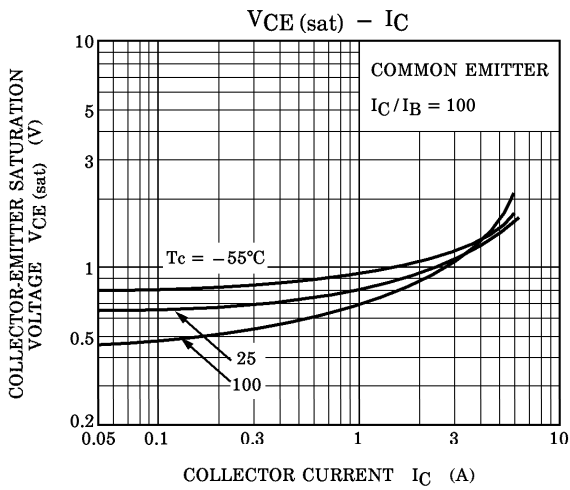
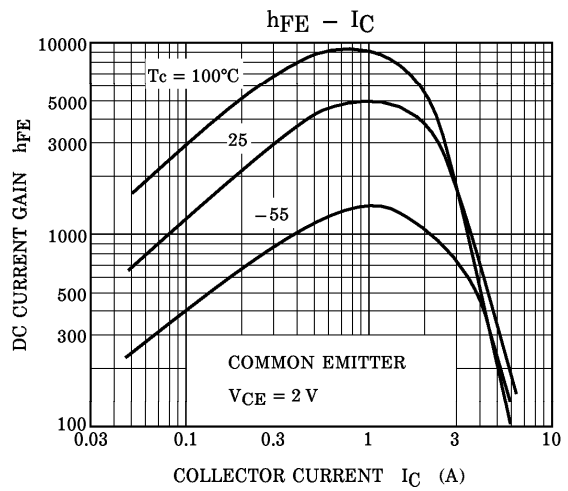
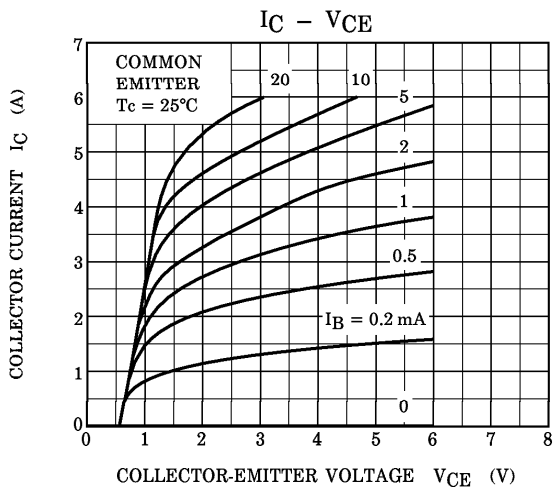
Unit in mm



Weight : 1.7 g (Typ.)

ELECTRICAL CHARACTERISTICS (T_c = 25°C)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		I _{CBO}	V _{CB} = 300 V, I _E = 0	—	—	0.5	mA
Emitter Cut-off Current		I _{EBO}	V _{EB} = 5 V, I _C = 0	—	—	0.5	mA
Collector-Emitter Breakdown Voltage		V _{(BR)CEO}	I _C = 0.5 A, L = 40 mH	250	—	—	V
DC Current Gain		h _{FE} (1)	V _{CE} = 2 V, I _C = 2 A	2000	—	—	
		h _{FE} (2)	V _{CE} = 2 V, I _C = 4 A	200	—	—	
Collector-Emitter Saturation Voltage		V _{CE(sat)}	I _C = 4 A, I _B = 0.04 A	—	—	2.0	V
Base-Emitter Saturation Voltage		V _{BE(sat)}	I _C = 4 A, I _B = 0.04 A	—	—	2.5	V
Collector Output Capacitance		C _{ob}	V _{CB} = 50 V, I _E = 0, f = 1 MHz	—	30	—	pF
Switching Time	Turn-on Time	t _{on}	 <p>IN-PUT</p> <p>OUTPUT</p> <p>20 μs</p> <p>I_{B1}</p> <p>I_{B2}</p> <p>25 Ω</p> <p>I_{B1} = -I_{B2} = 0.04 A, V_{CC} = 100 V DUTY CYCLE ≤ 1%</p>	—	1	—	μs
	Storage Time	t _{stg}		—	8	—	
	Fall Time	t _f		—	5	—	



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