

TOSHIBA TRANSISTOR SILICON PNP TRIPLE DIFFUSED TYPE

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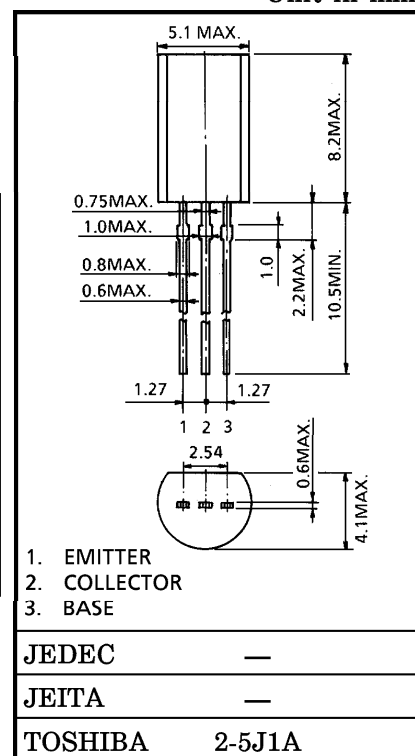
HIGH VOLTAGE SWITCHING APPLICATIONS

Unit in mm

- High Voltage : $V_{CE} = -400 \text{ V}$

MAXIMUM RATINGS (Ta = 25°C)

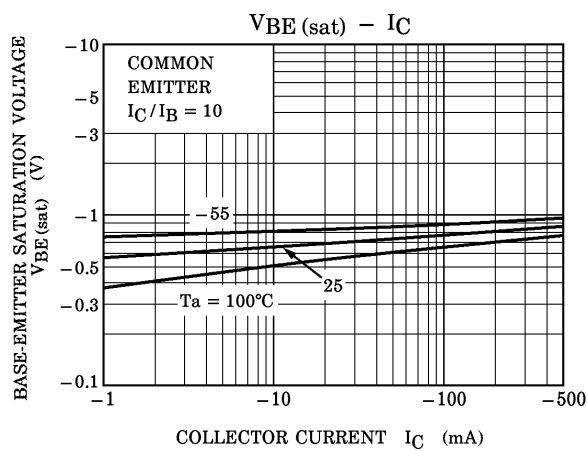
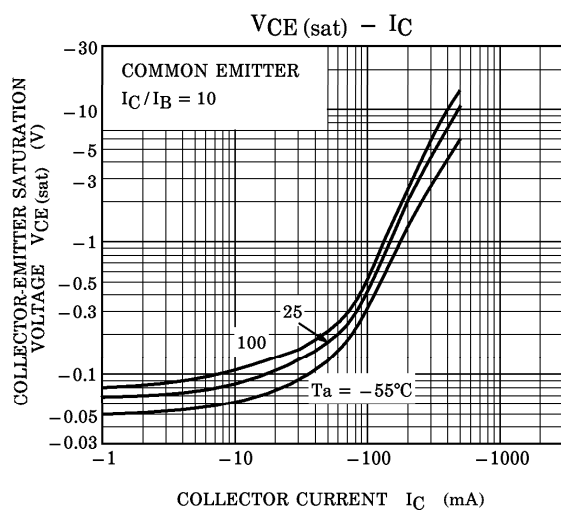
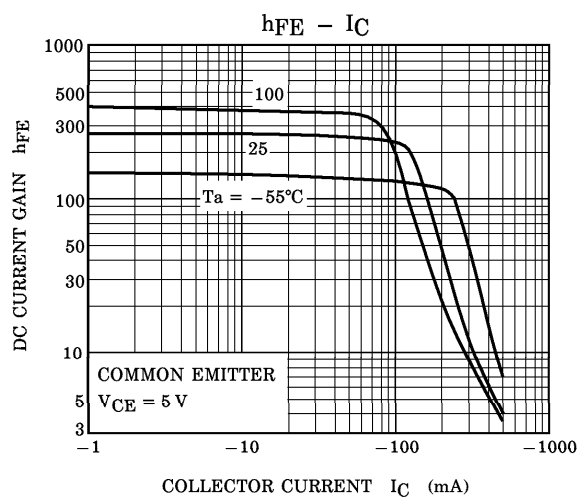
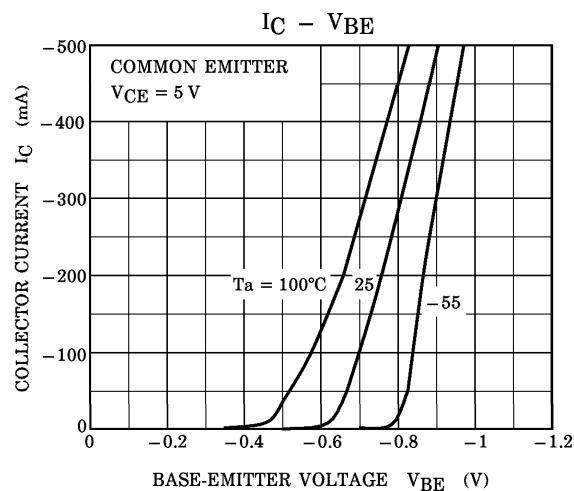
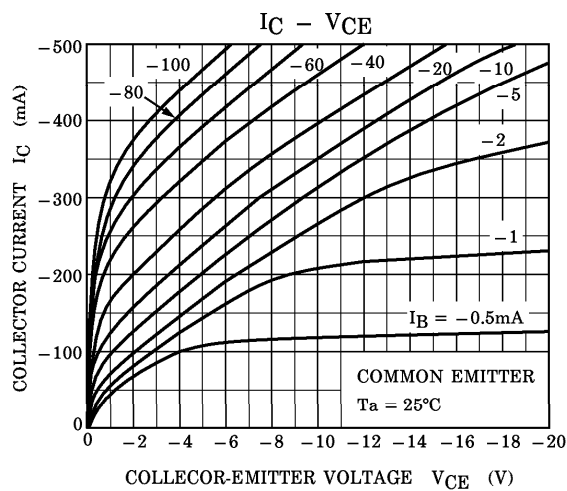
CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage		V_{CBO}	−400	V
Collector-Emitter Voltage		V_{CEO}	−400	V
Emitter-Base Voltage		V_{EBO}	−7	V
Collector Current	DC	I_C	−0.5	A
	Pulse	I_{CP}	−1	
Base Current		I_B	−0.25	A
Collector Power Dissipation		P_C	900	mW
Junction Temperature		T_j	150	°C
Storage Temperature Range		T_{stg}	−55~150	°C

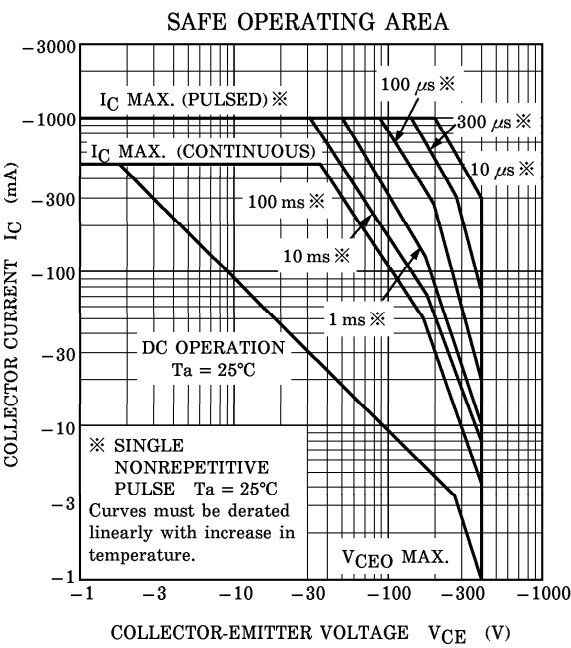


Weight : 0.36 g (Typ.)

ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		I_{CBO}	$V_{CB} = -400 \text{ V}, I_E = 0$	—	—	−10	μA
Emitter Cut-off Current		I_{EBO}	$V_{EB} = -7 \text{ V}, I_C = 0$	—	—	−1	μA
Collector-Emitter Breakdown Voltage		$V_{(BR) \text{ CEO}}$	$I_C = -10 \text{ mA}, I_B = 0$	−400	—	—	V
DC Current Gain		$h_{FE} (1)$	$V_{CE} = -5 \text{ V}, I_C = -20 \text{ mA}$	140	—	450	
		$h_{FE} (2)$	$V_{CE} = -5 \text{ V}, I_C = -100 \text{ mA}$	140	—	400	
Collector-Emitter Saturation Voltage		$V_{CE} (\text{sat})$	$I_C = -100 \text{ mA}, I_B = -10 \text{ mA}$	—	−0.4	−1.0	V
Base-Emitter Saturation Voltage		$V_{BE} (\text{sat})$	$I_C = -100 \text{ mA}, I_B = -10 \text{ mA}$	—	−0.76	−0.9	V
Transition Frequency		f_T	$V_{CE} = -5 \text{ V}, I_C = -50 \text{ mA}$	—	35	—	MHz
Collector Output Capacitance		C_{ob}	$V_{CB} = -10 \text{ V}, I_E = 0, f = 1 \text{ MHz}$	—	18	—	pF
Switching Time	Turn-on Time	t_{on}	<p>$20 \mu\text{s}$ INPUT I_{B1} I_{B2} OUTPUT $2 \text{ k}\Omega$ $V_{CC} = -200 \text{ V}$ DUTY CYCLE $\leq 1\%$</p>	—	0.2	—	μs
	Storage Time	t_{stg}		—	2.3	—	
	Fall Time	t_f		$I_{B1} = -10 \text{ mA}, I_{B2} = 20 \text{ mA}$	—	0.2	





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