

TOSHIBA TRANSISTOR SILICON NPN EPITAXIAL TYPE (PCT PROCESS)

2SC3671

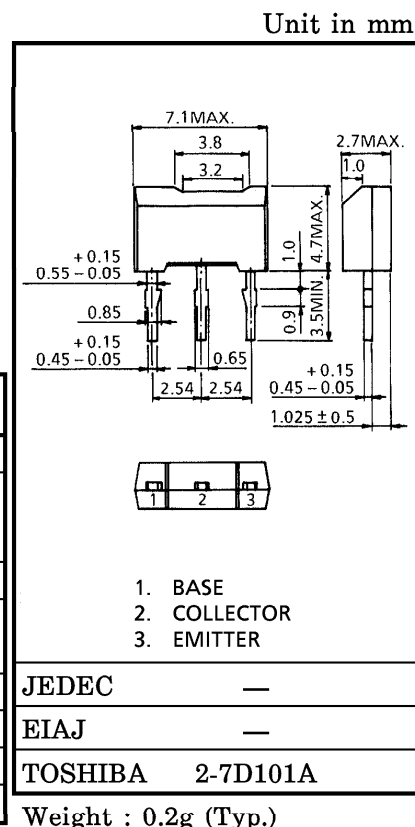
STORBE FLASH APPLICATIONS

MEDIUM POWER AMPLIFIER APPLICATIONS

- High DC Current Gain and Excellent h_{FE} Linearity
 $: h_{FE} (1) = 140 \sim 450$
 $: h_{FE} (2) = 70 \text{ (Min.)}$
- Low Saturation Voltage $: V_{CE} (\text{sat}) = 1.0\text{V} \text{ (Max.)}$

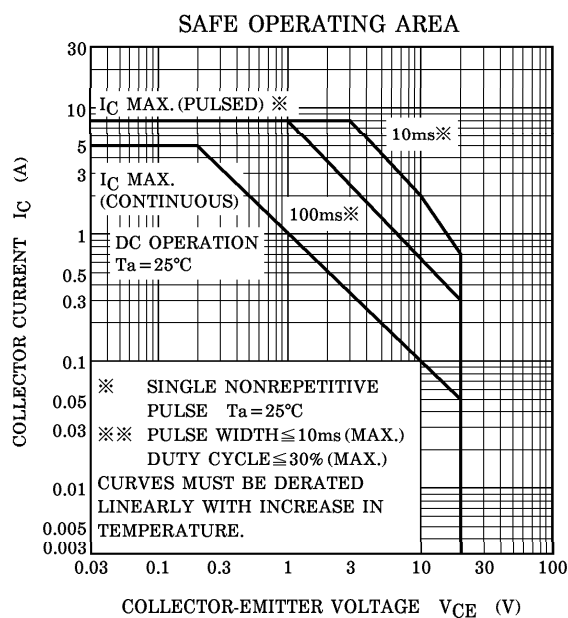
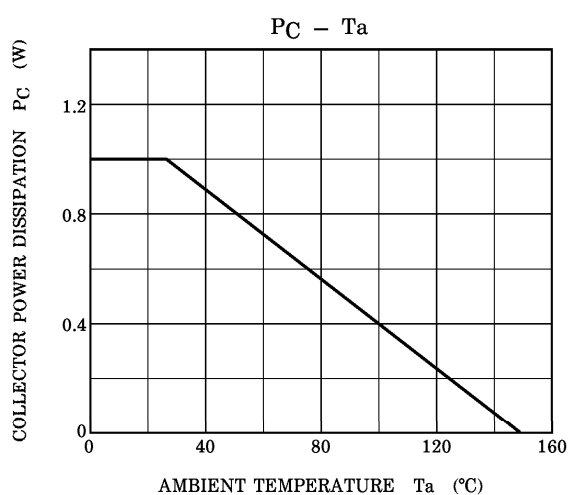
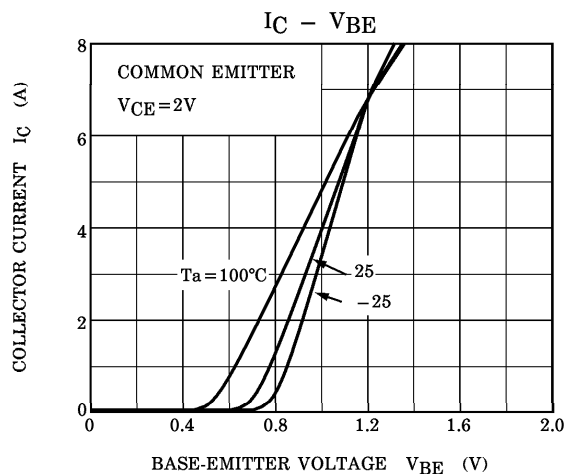
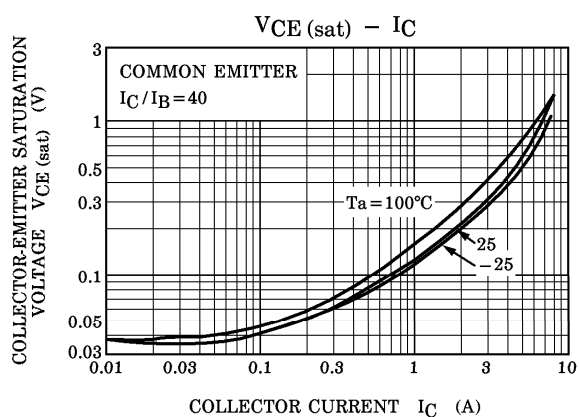
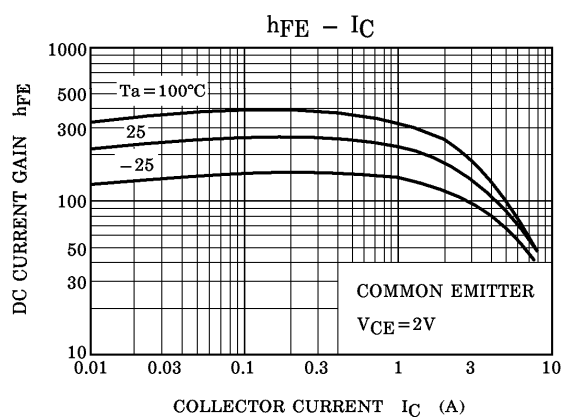
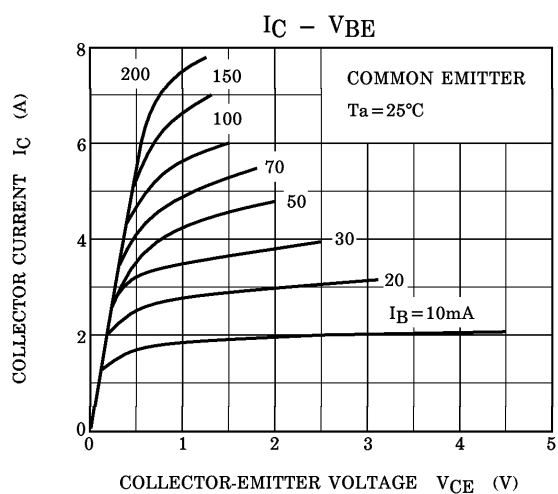
MAXIMUM RATINGS ($T_a = 25^\circ\text{C}$)

CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage		V_{CBO}	50	V
Collector-Emitter Voltage		V_{CES}	40	V
		V_{CEO}	20	
Emitter-Base Voltage		V_{EBO}	8	V
Collector Current	DC	I_C	5	A
	Pulse (Note 1)	I_{CP}	8	
Base Current		I_B	0.5	A
Collector Power Dissipation		P_C	1000	mW
Junction Temperature		T_j	150	$^\circ\text{C}$
Storage Temperature Range		T_{stg}	$-55 \sim 150$	$^\circ\text{C}$

Note 1 : Pulse Width $\leq 10\text{ms}$, Duty Cycle $\leq 30\%$ ELECTRICAL CHARACTERISTICS ($T_a = 25^\circ\text{C}$)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I_{CBO}	$V_{CB} = 40\text{V}, I_E = 0$	—	—	100	nA
Emitter Cut-off Current	I_{EBO}	$V_{EB} = 8\text{V}, I_C = 0$	—	—	100	nA
Collector-Emitter Breakdown Voltage	V_{CEO}	$I_C = 10\text{mA}, I_B = 0$	20	—	—	V
Emitter-Base Breakdown Voltage	V_{EBO}	$I_E = 1\text{mA}, I_C = 0$	8	—	—	V
DC Current Gain	$h_{FE} (1)$ (Note 2)	$V_{CE} = 2\text{V}, I_C = 0.5\text{A}$	140	—	450	
	$h_{FE} (2)$	$V_{CE} = 2\text{V}, I_C = 4\text{A}$	70	—	—	
Collector-Emitter Saturation Voltage	$V_{CE} (\text{sat})$	$I_C = 4\text{A}, I_B = 0.1\text{A}$	—	—	1.0	V
Base-Emitter Voltage	V_{BE}	$V_{CE} = 2\text{V}, I_C = 4\text{A}$	—	—	1.5	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

Note 2 : $h_{FE} (1)$ Classification A : 140~240, B : 200~330, C : 300~450



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