

TOSHIBA Transistor Silicon NPN Epitaxial Type

2SC3673

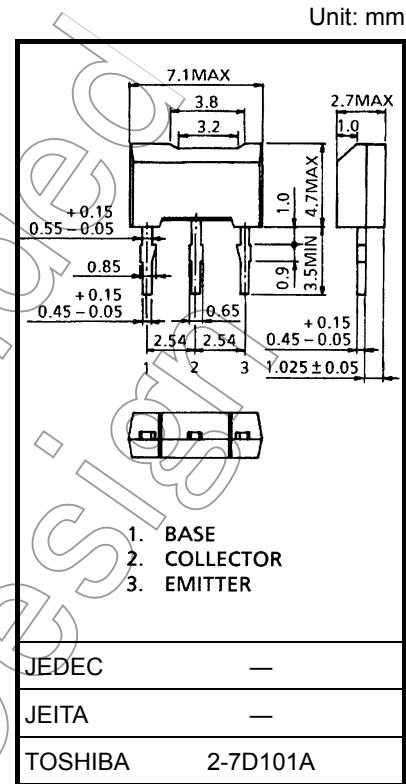
Switching Applications
Solenoid Drive Applications

- High DC current gain : $h_{FE} = 500$ (min) ($I_C = 400$ mA)
- Low collector-emitter saturation voltage : $V_{CE}(\text{sat}) = 0.5$ V (max) ($I_C = 300$ mA)

Absolute Maximum Ratings (Ta = 25°C)

Characteristics	Symbol	Rating	Unit
Collector-base voltage	V_{CBO}	40	V
Collector-emitter voltage	V_{CEO}	40	V
Emitter-base voltage	V_{EBO}	7	V
Collector current	I_C	2	A
Base current	I_B	0.5	A
Collector power dissipation	P_C	1000	mW
Junction temperature	T_j	150	°C
Storage temperature range	T_{stg}	-55 to 150	°C

Note1: Using continuously under heavy loads (e.g. the application of high temperature/current/voltage and the significant change in temperature, etc.) may cause this product to decrease in the reliability significantly even if the operating conditions (i.e. operating temperature/current/voltage, etc.) are within the absolute maximum ratings. Please design the appropriate reliability upon reviewing the Toshiba Semiconductor Reliability Handbook ("Handling Precautions"/Derating Concept and Methods) and individual reliability data (i.e. reliability test report and estimated failure rate, etc).

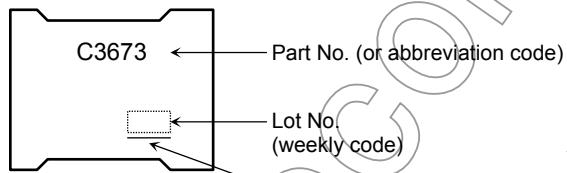


Weight: 0.2 g (typ.)

Electrical Characteristics (Ta = 25°C)

Characteristics	Symbol	Test Condition	Min	Typ.	Max	Unit
Collector cut-off current	I_{CBO}	$V_{CB} = 40 \text{ V}, I_E = 0$	—	—	10	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = 7 \text{ V}, I_C = 0$	—	—	1	μA
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = 10 \text{ mA}, I_B = 0$	40	—	—	V
DC current gain	h_{FE}	$V_{CE} = 1 \text{ V}, I_C = 400 \text{ mA}$	500	—	—	
Collector-emitter saturation voltage	$V_{CE(\text{sat})}$	$I_C = 300 \text{ mA}, I_B = 1 \text{ mA}$	—	0.3	0.5	V
Base-emitter saturation voltage	$V_{BE(\text{sat})}$	$I_C = 300 \text{ mA}, I_B = 1 \text{ mA}$	—	—	1.1	V
Transition frequency	f_T	$V_{CE} = 2 \text{ V}, I_C = 100 \text{ mA}$	220	—	—	MHz
Collector output capacitance	C_{ob}	$V_{CB} = 10 \text{ V}, I_B = 0, f = 1 \text{ MHz}$	—	20	—	pF
Switching time	Turn-on time	t_{on}	 t_{on} is the time interval between the start of the input pulse (I_{B1}) and the start of the output pulse (I_{B2}).	—	1.0	—
	Storage time	t_{stg}		—	3.0	—
	Fall time	t_f		1.2	—	μs

Marking

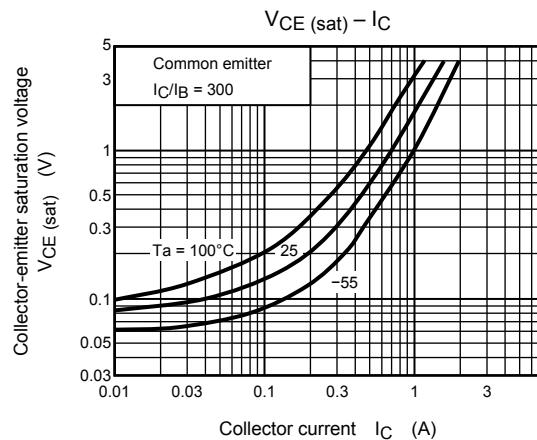
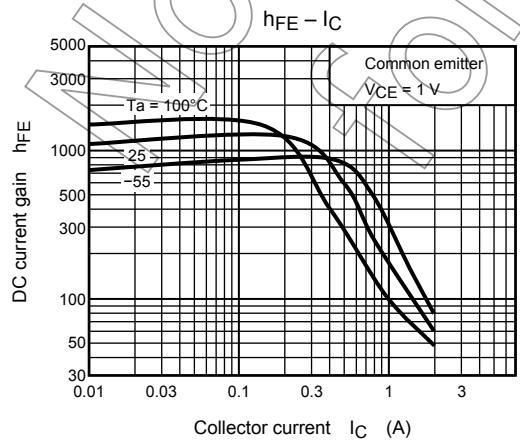
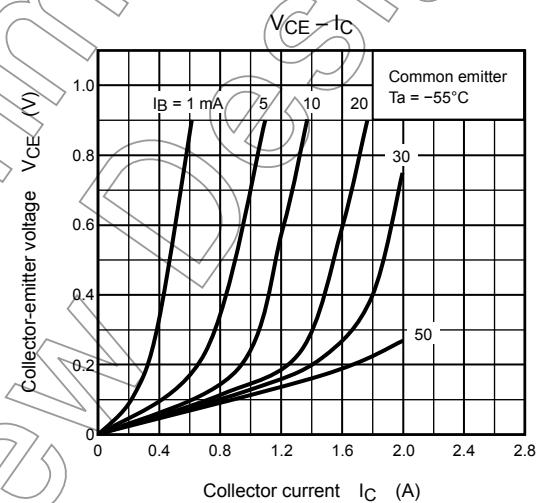
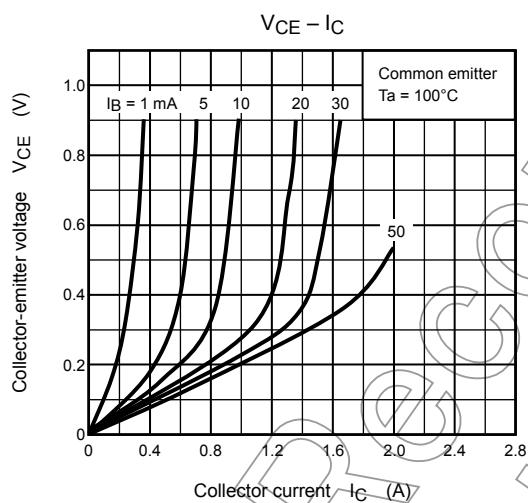
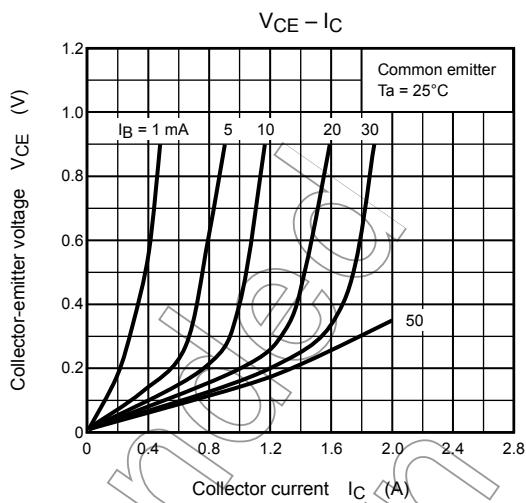
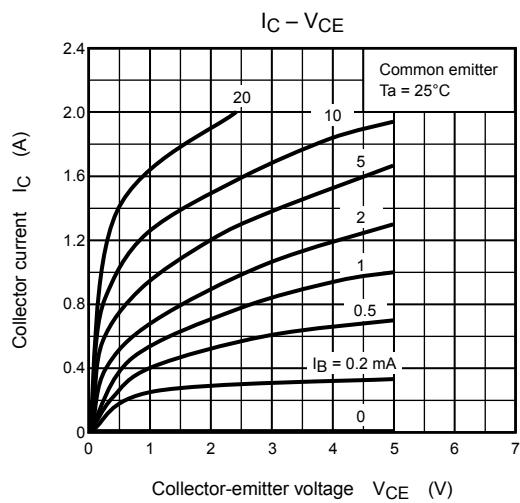


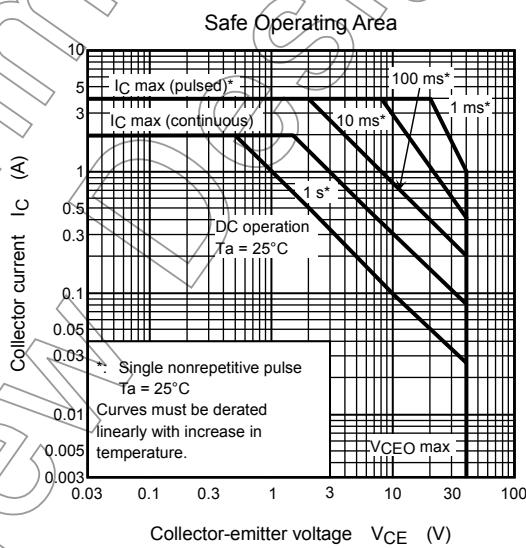
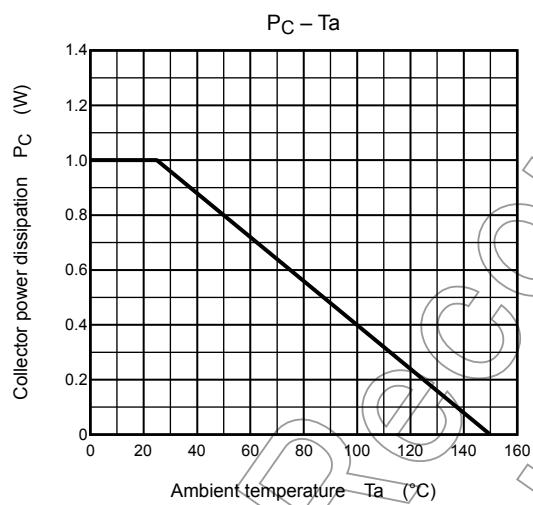
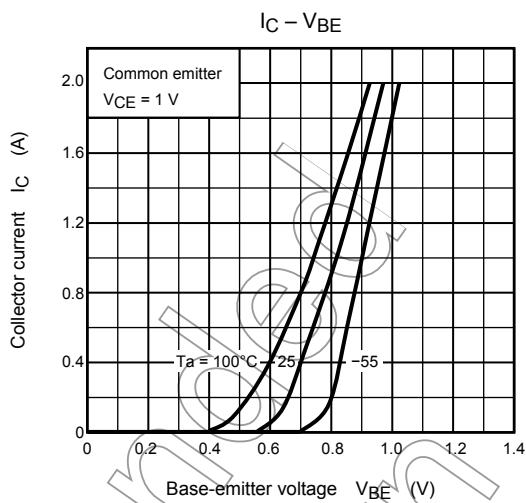
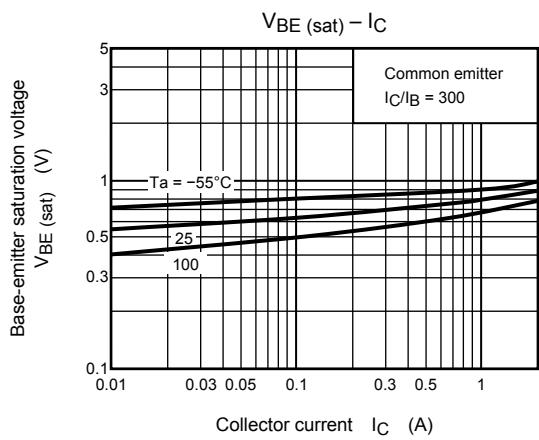
Note2: A line under a Lot No. identifies the indication of product Labels.

Not underlined: [[Pb]]/INCLUDES > MCV

Underlined: [[G]]/RoHS COMPATIBLE or [[G]]/RoHS [[Pb]]

Please contact your TOSHIBA sales representative for details as to environmental matters such as the RoHS compatibility of Product. The RoHS is the Directive 2002/95/EC of the European Parliament and of the Council of 27 January 2003 on the restriction of the use of certain hazardous substances in electrical and electronic equipment.





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