

TOSHIBA Transistor Silicon PNP Triple Diffused Type

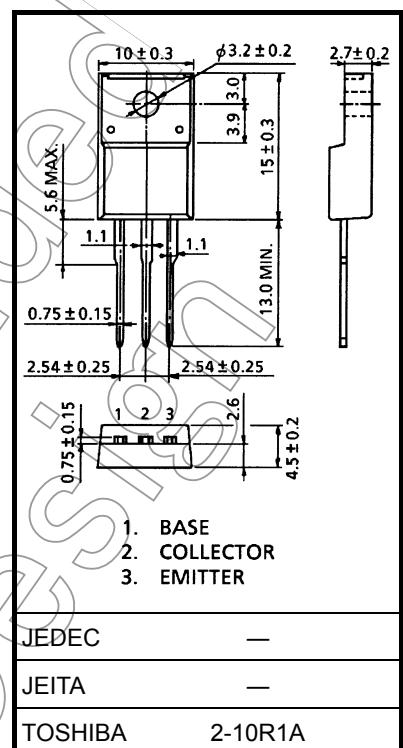
2SA1822

High-Voltage Switching Applications
 High-Speed DC-DC Converter Application

- Excellent switching times
 $t_{on} = 1.0 \mu\text{s}$ (max), $t_f = 1.0 \mu\text{s}$ (max) at $I_C = -0.3 \text{ A}$
- High collector breakdown voltage: $V_{CEO} = -400 \text{ V}$

Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

Characteristics		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	-1	A
	Pulse	I_{CP}	-2	
Base current		I_B	-0.5	A
Collector power dissipation	$T_a = 25^\circ\text{C}$	P_C	2.0	W
	$T_c = 25^\circ\text{C}$		25	
Junction temperature		T_j	150	°C
Storage temperature range		T_{stg}	-55 to 150	°C



Weight: 1.7 g (typ.)

Note 1: 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.

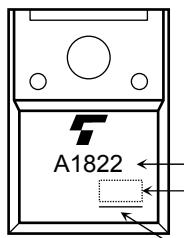
Please design the appropriate reliability upon reviewing the Toshiba Semiconductor Reliability Handbook ("Handling Precautions"/"Derating Concept and Methods") and individual reliability data (i.e. reliability test report and estimated failure rate, etc.).

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Electrical Characteristics (Ta = 25°C)

Characteristics	Symbol	Test Condition	Min	Typ.	Max	Unit
Collector cut-off current	I_{CBO}	$V_{CB} = -400 \text{ V}, I_E = 0$	—	—	-1	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}	$V_{CE} = -5 \text{ V}, I_C = -0.3 \text{ A}$	30	—	100	
		$V_{CE} = -5 \text{ V}, I_C = -0.5 \text{ A}$	20	—	—	
Collector-emitter saturation voltage	$V_{CE} \text{ (sat)}$	$I_C = -0.3 \text{ A}, I_B = -30 \text{ mA}$	—	-0.25	-1.0	V
Base-emitter saturation voltage	$V_{BE} \text{ (sat)}$	$I_C = -0.3 \text{ A}, I_B = -30 \text{ mA}$	—	-0.75	-1.2	V
Switching time	Rise time	t_{on}		—	—	1.0
	Storage time	t_{stg}		—	—	5.0
	Fall time	t_f		—	—	1.0

Marking



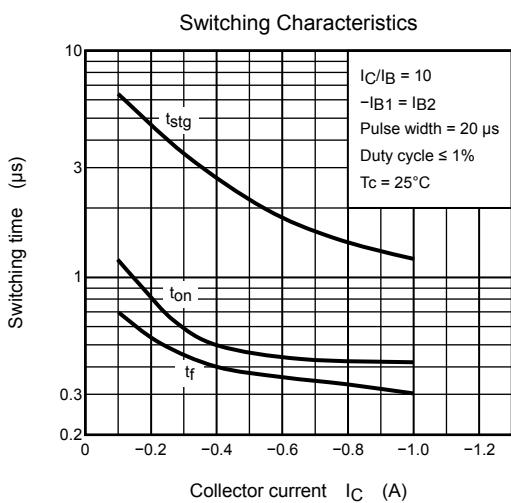
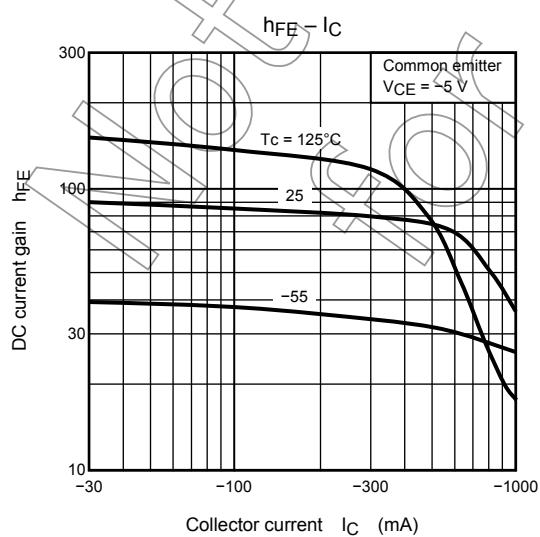
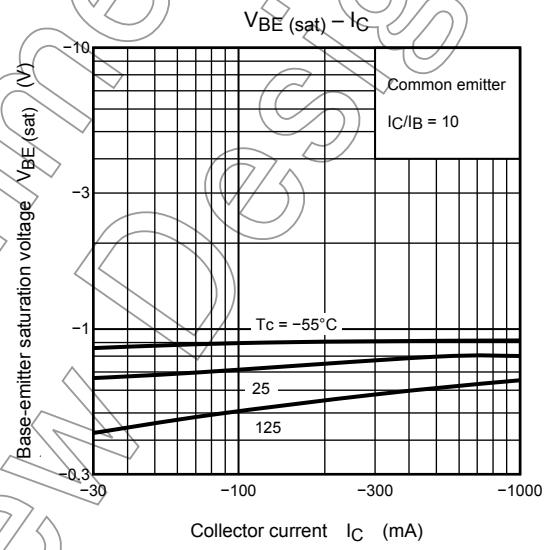
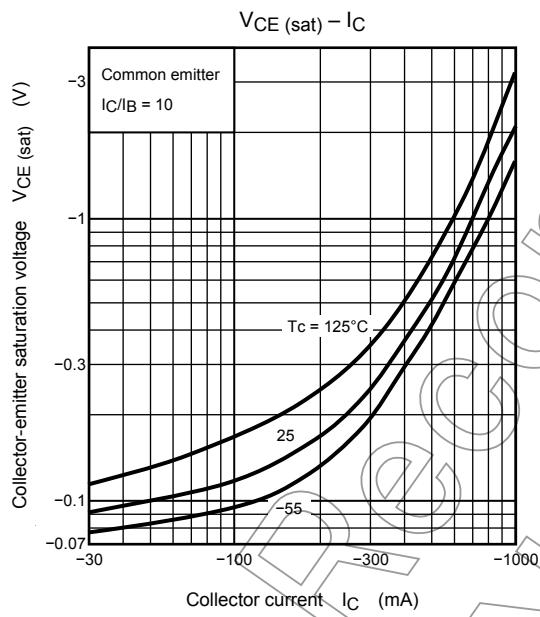
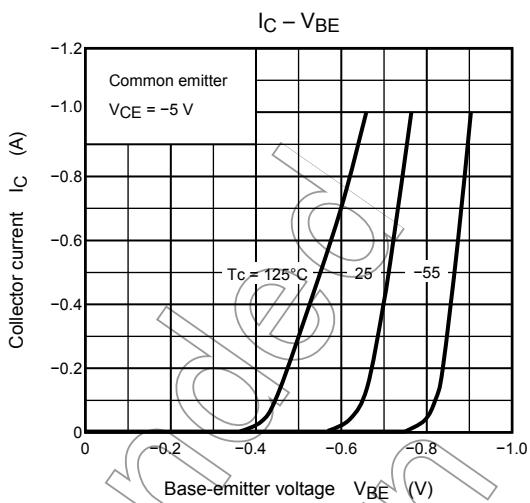
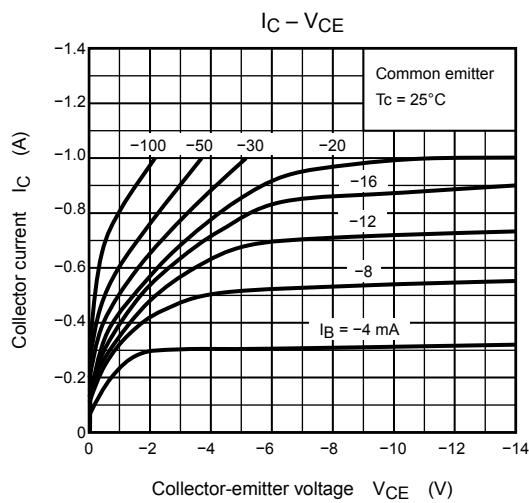
Part No. (or abbreviation code)
Lot No.
Note 2

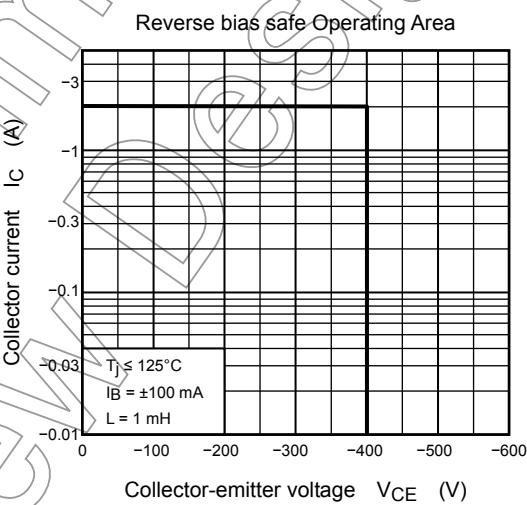
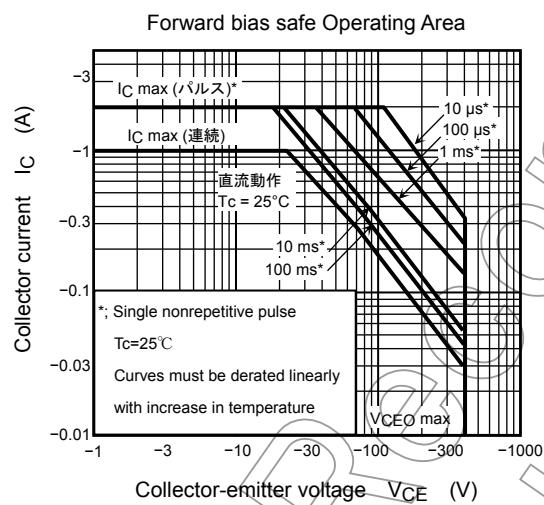
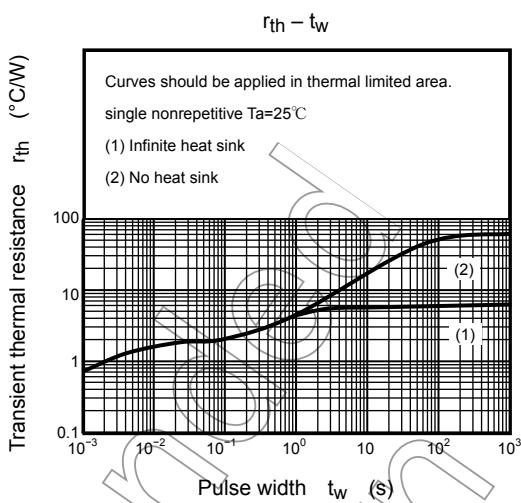
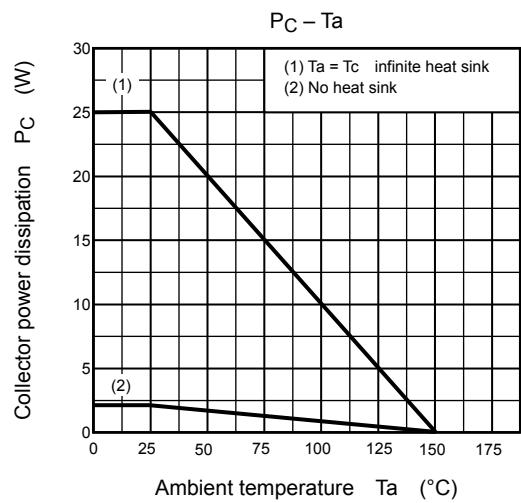
Note 2: A line under a Lot No. identifies the indication of product Labels.

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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