

TOSHIBA Transistor Silicon PNP Epitaxial Type (PCT Process)

# 2SA1887

## High-Current Switching Applications

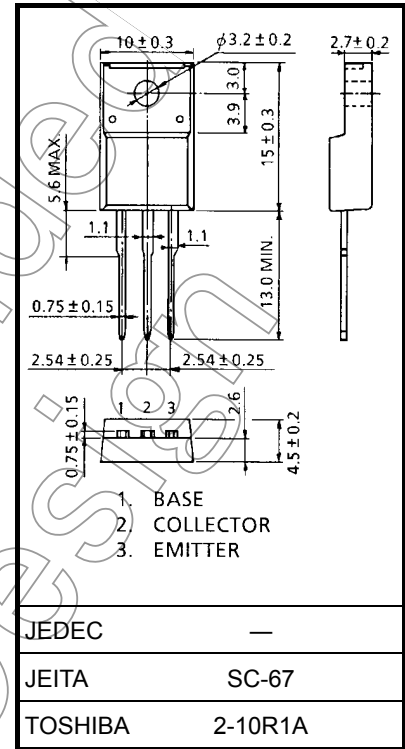
- Low collector saturation voltage:  $V_{CE(sat)} = -0.4 \text{ V (max)}$   
at  $I_C = -5 \text{ A}$

## Absolute Maximum Ratings (Ta = 25°C)

Characteristics		Symbol	Rating	Unit
Collector-base voltage		$V_{CBO}$	-80	V
Collector-emitter voltage		$V_{CEO}$	-50	V
Emitter-base voltage		$V_{EBO}$	-7	V
Collector current		$I_C$	-10	A
Base current		$I_B$	-1	A
Collector power dissipation	Ta = 25°C	Pc	2.0	W
	Tc = 25°C		25	
Junction temperature		$T_j$	150	°C
Storage temperature range		$T_{stg}$	-55 to 150	°C

Note: 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).

Unit: mm



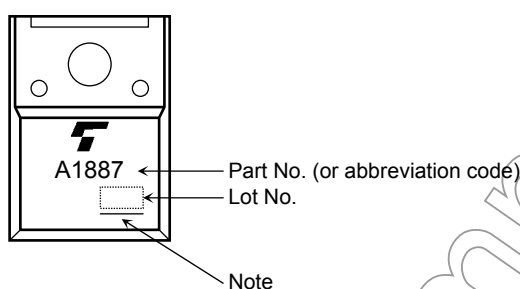
Weight: 1.7 g (typ.)

Not for New

## Electrical Characteristics (Ta = 25°C)

Characteristics	Symbol	Test Condition	Min	Typ.	Max	Unit
Collector cut-off current	$I_{CBO}$	$V_{CB} = -70\text{ V}, I_E = 0$	—	—	-1	$\mu\text{A}$
Emitter cut-off current	$I_{EBO}$	$V_{EB} = -7\text{ V}, I_C = 0$	—	—	-1	$\mu\text{A}$
Collector-emitter breakdown voltage	$V_{(BR) CEO}$	$I_C = -10\text{ mA}, I_B = 0$	-50	—	—	V
DC current gain	$h_{FE}$	$V_{CE} = -1\text{ V}, I_C = -1\text{ A}$	120	—	400	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -5\text{ A}, I_B = -0.25\text{ A}$	—	-0.2	-0.4	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = -5\text{ A}, I_B = -0.25\text{ A}$	—	-0.95	-1.4	V
Transition frequency	$f_T$	$V_{CE} = -1\text{ V}, I_C = -1\text{ A}$	—	45	—	MHz
Collector output capacitance	$C_{ob}$	$V_{CB} = -10\text{ V}, I_E = 0, f = 1\text{ MHz}$	—	215	—	pF

## Marking

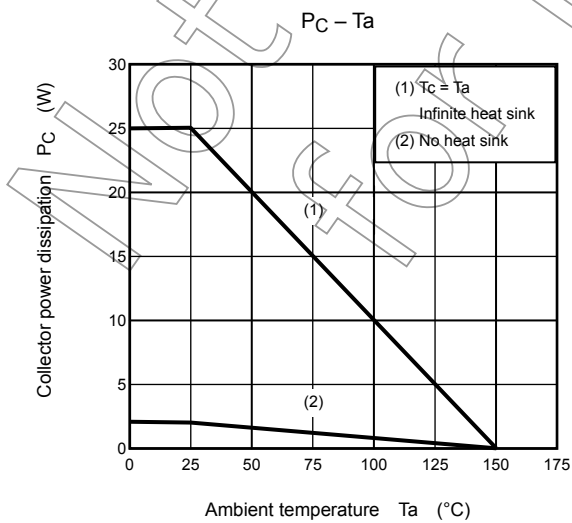
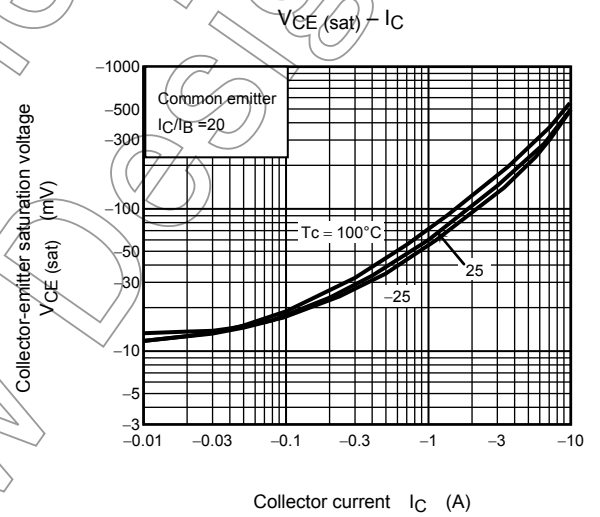
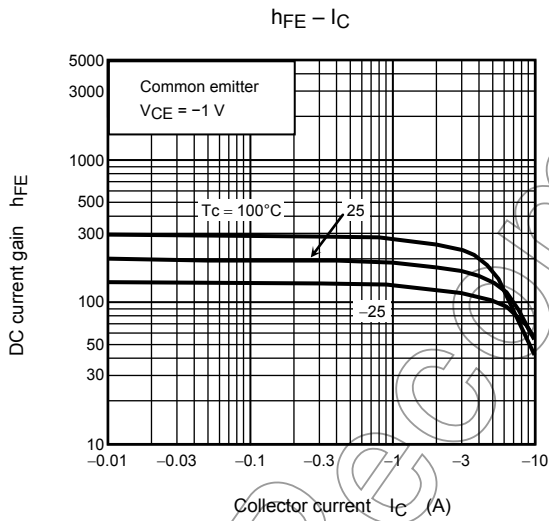
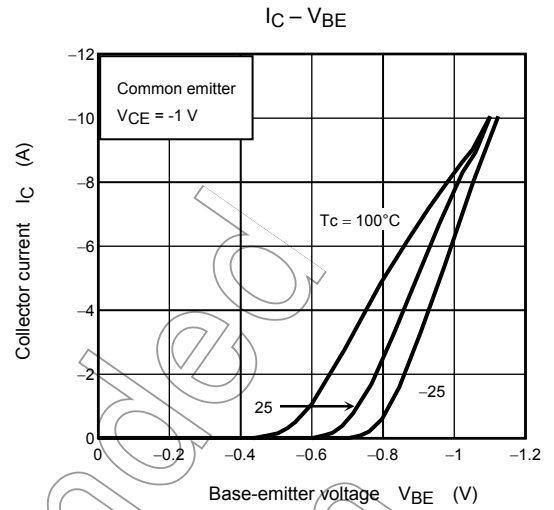
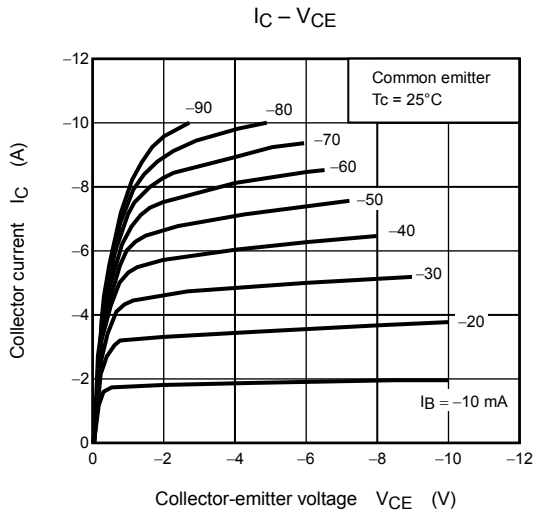


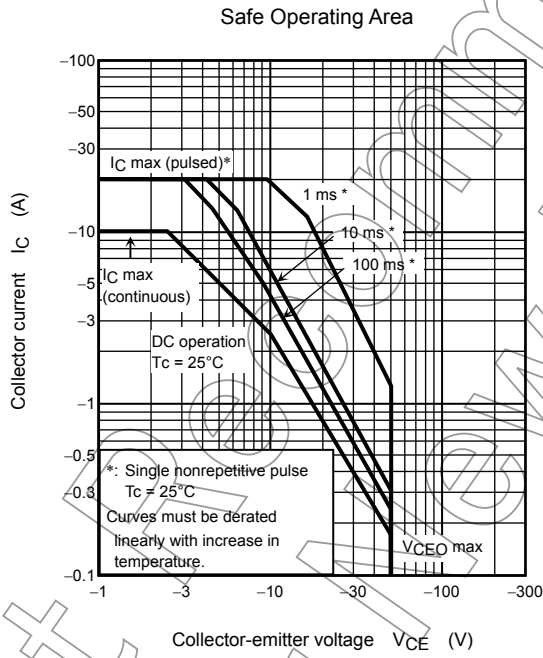
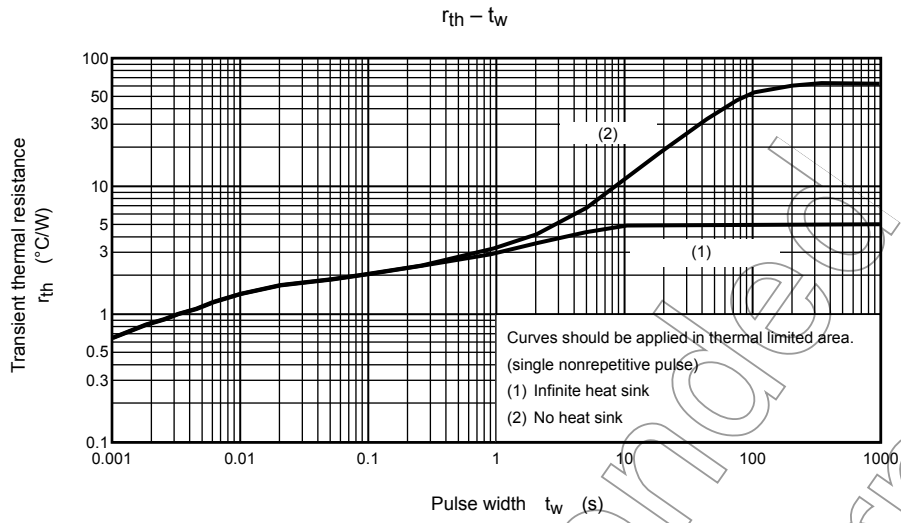
Note: A line under a Lot No. identifies the indication of product Labels.

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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