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  $I_C = -5 A$ 

# Absolute Maximum Ratings (Ta = 25°C)

Characteristics		Symbol	Rating	Unit
Collector-base voltage		V <sub>CBO</sub>	-80	V
Collector-emitter voltage		V <sub>CEO</sub>	-50	$(\mathcal{N} \land)$
Emitter-base voltage		V <sub>EBO</sub>	-7	(V)
Collector current		IC	-10	Ą
Base current		ΙΒ	7	A
Collector power dissipation	Ta = 25°C	PC	2.0	w
	Tc = 25°C	- FC	25	VV
Junction temperature		T <sub>j</sub>	150	/°C
Storage temperature range		T <sub>stg</sub>	-55 to 150	⟨⟨c
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Note: Using continuously under heavy loads (e.g.) the application of high

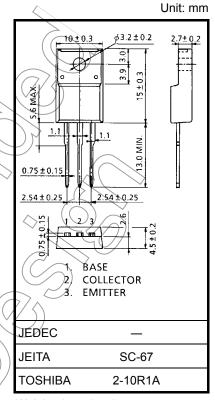
temperature/current/voltage and the significant change in temperature, etc.) may cause this product to decrease in the

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).



Weight: 1.7 g (typ.)

### **Electrical Characteristics (Ta = 25°C)**

Characteristics	Symbol	Test Condition	Min	Тур.	Max	Unit
Collector cut-off current	I <sub>CBO</sub>	V <sub>CB</sub> = -70 V, I <sub>E</sub> = 0	_	_	-1	μΑ
Emitter cut-off current	I <sub>EBO</sub>	V <sub>EB</sub> = -7 V, I <sub>C</sub> = 0	_	_	-1	μΑ
Collector-emitter breakdown voltage	V (BR) CEO	I <sub>C</sub> = -10 mA, I <sub>B</sub> = 0	-50	_	_	V
DC current gain	h <sub>FE</sub>	V <sub>CE</sub> = -1 V, I <sub>C</sub> = -1 A	120	_	400	
Collector-emitter saturation voltage	V <sub>CE</sub> (sat)	I <sub>C</sub> = -5 A, I <sub>B</sub> = -0.25 A	(F	0.2	-0.4	V
Base-emitter saturation voltage	V <sub>BE</sub> (sat)	I <sub>C</sub> = -5 A, I <sub>B</sub> = -0.25 A	>_	-0.95	-1.4	V
Transition frequency	f <sub>T</sub>	V <sub>CE</sub> = -1 V, I <sub>C</sub> = -1 A	$\bigcirc ))$	45	_	MHz
Collector output capacitance	C <sub>ob</sub>	V <sub>CB</sub> = -10 V, I <sub>E</sub> = 0, f = 1 MHz	_	215	_	pF



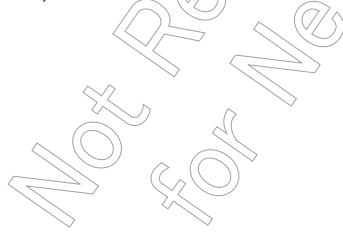


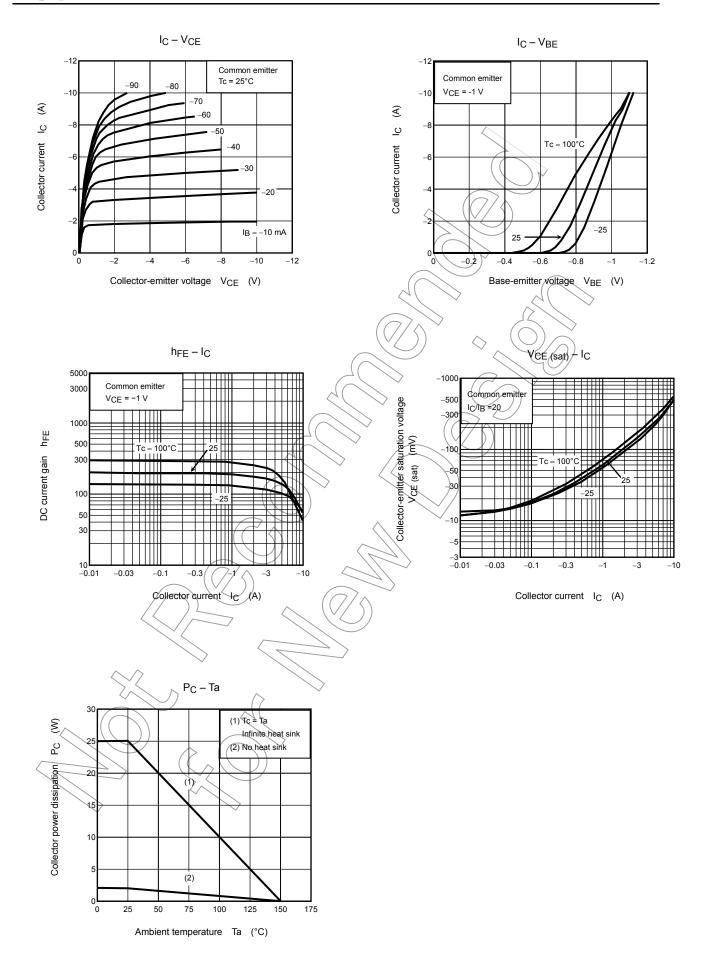
Note: A line under a Lot No. identifies the indication of product Labels.

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

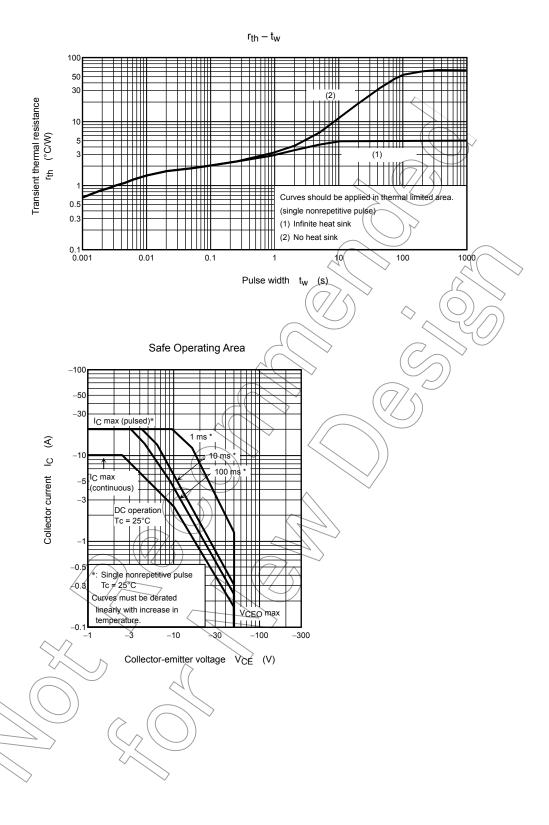
Underlined: [[G]]/RoHS COMPATIBLE or [[G]]/RoHS [[Pb]]

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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