

TOSHIBA Transistor Silicon PNP Epitaxial Type (PCT Process)

2SA1887

High-Current Switching Applications

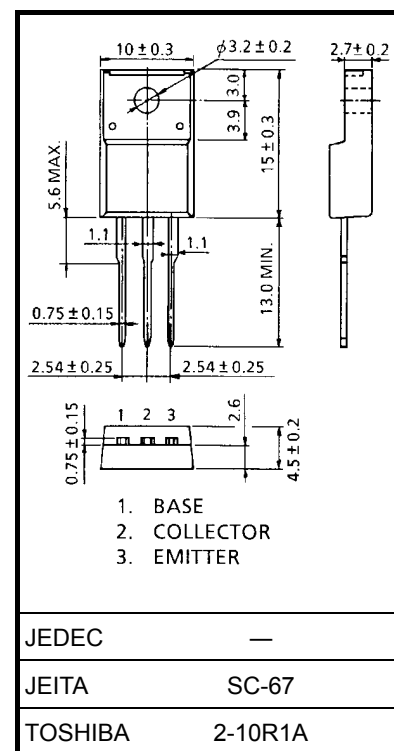
Unit: mm

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

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

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	$T_a = 25^\circ\text{C}$	P_C 2.0	W
	$T_c = 25^\circ\text{C}$	25	
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature range	T_{stg}	-55 to 150	$^\circ\text{C}$

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).

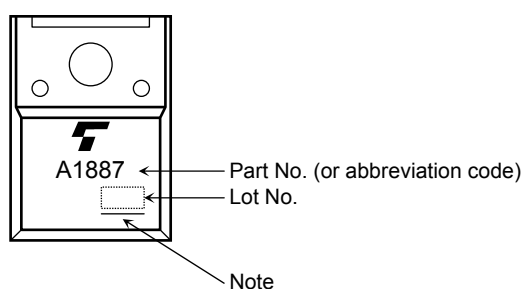


Weight: 1.7 g (typ.)

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	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = -7\text{ V}, I_C = 0$	—	—	-1	μA
Collector-emitter breakdown voltage	$V_{(BR)\text{ CEO}}$	$I_C = -10\text{ mA}, I_B = 0$	-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

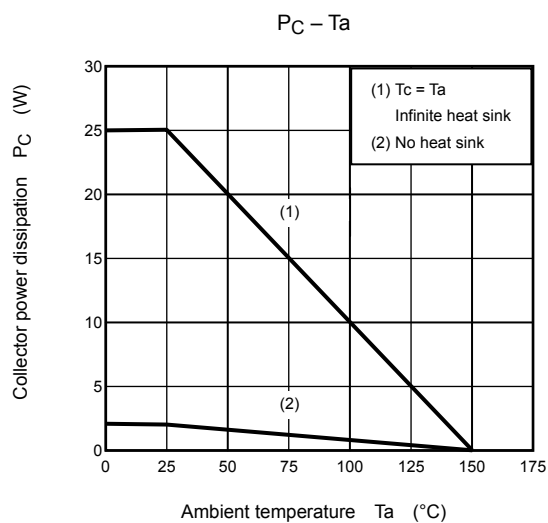
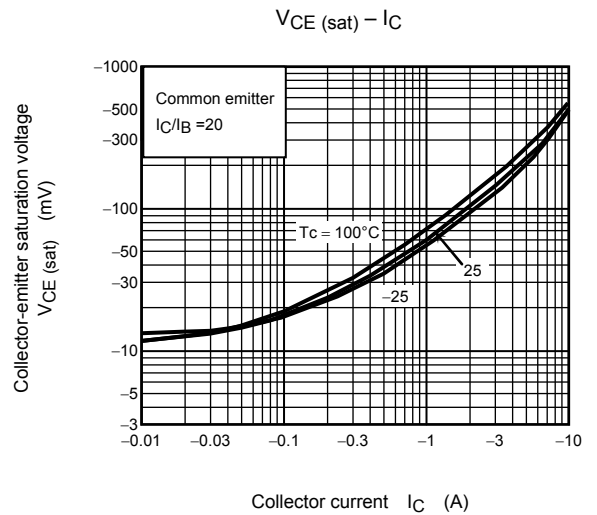
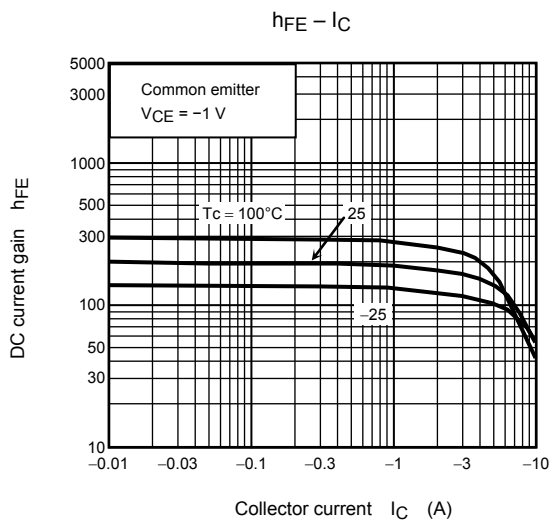
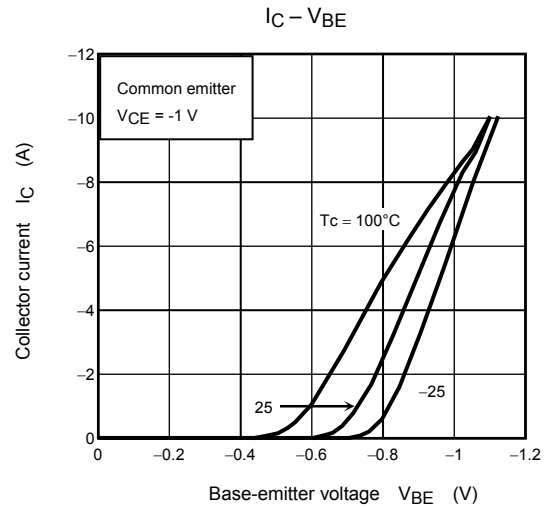
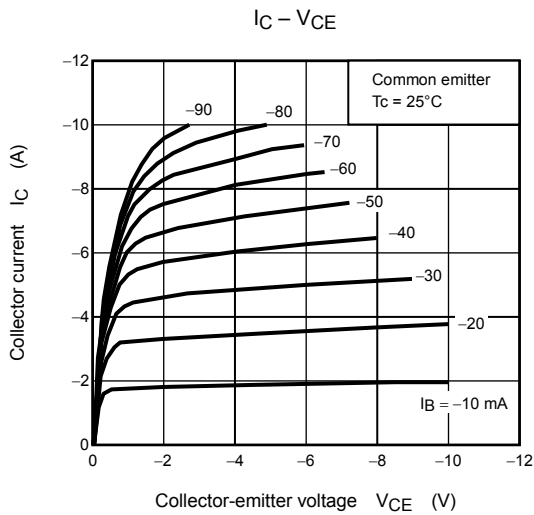


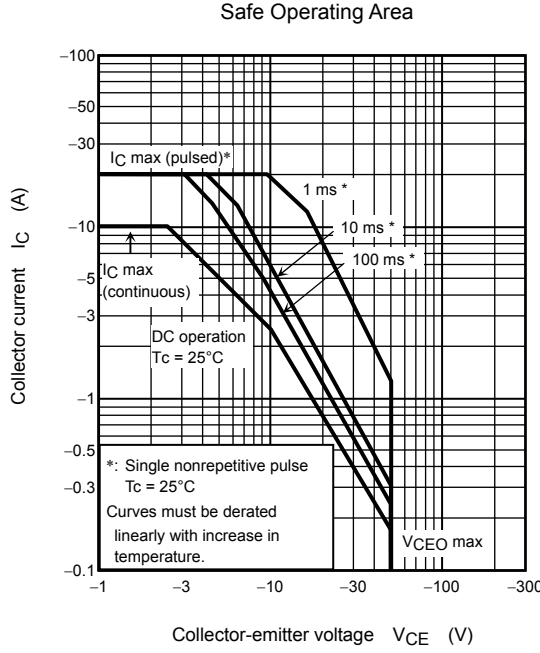
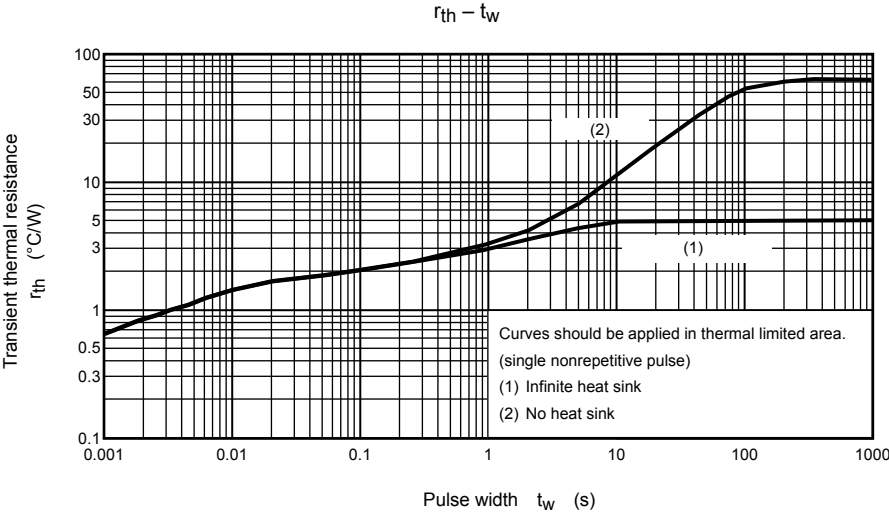
Note: A line under a Lot No. identifies the indication of product Labels.

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

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

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