

# 2SC6072

Power Amplifier Applications

Driver Stage Amplifier Applications

- High transition frequency:  $f_T = 200 \text{ MHz (typ.)}$

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

Characteristic	Symbol	Rating	Unit
Collector-base voltage	$V_{CB0}$	180	V
Collector-emitter voltage	$V_{CE0}$	180	V
Emitter-base voltage	$V_{EB0}$	5	V
Collector current	$I_C$	2.0	A
Base current	$I_B$	1.0	A
Collector power dissipation	$T_a = 25^\circ\text{C}$	$P_C$	2.0
	$T_c = 25^\circ\text{C}$		20
Junction temperature	$T_j$	150	$^\circ\text{C}$
Storage temperature range	$T_{stg}$	-55~150	$^\circ\text{C}$

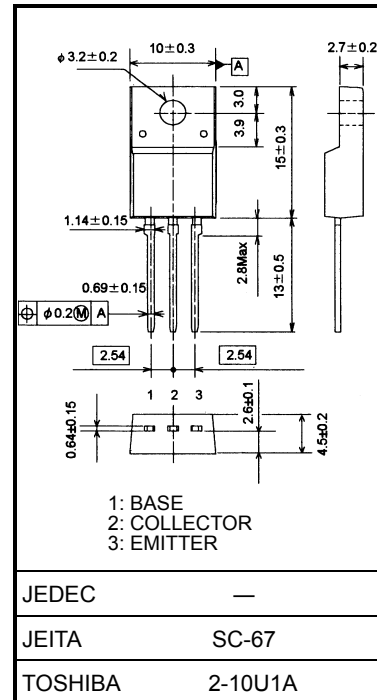
Note1: Using continuously under heavy loads (e.g. the application of high temperature/current/voltage and the significant change in temperature, etc.) may cause this product to decrease in the reliability significantly even if the operating conditions (i.e. operating temperature/current/voltage, etc.) 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).

## Electrical Characteristics ( $T_a = 25^\circ\text{C}$ )

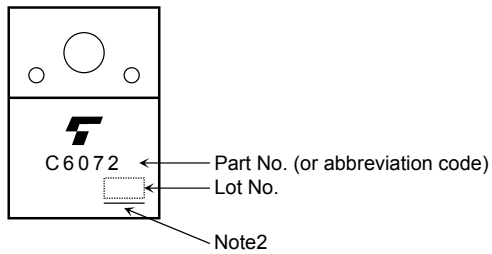
Characteristic	Symbol	Test Conditions	Min	Typ.	Max	Unit
Collector cut-off current	$I_{CBO}$	$V_{CB} = 180 \text{ V}, I_E = 0$	—	—	5.0	$\mu\text{A}$
Emitter cut-off current	$I_{EBO}$	$V_{EB} = 5 \text{ V}, I_C = 0$	—	—	5.0	$\mu\text{A}$
Collector-emitter breakdown voltage	$V_{(BR)CE0}$	$I_C = 10 \text{ mA}, I_B = 0$	180	—	—	V
DC current gain	$h_{FE} (1)$	$V_{CE} = 5 \text{ V}, I_C = 0.1 \text{ A}$	100	—	320	—
	$h_{FE} (2)$	$V_{CE} = 5 \text{ V}, I_C = 1 \text{ A}$	50	—	—	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 1 \text{ A}, I_B = 0.1 \text{ A}$	—	—	1.0	V
Base-emitter voltage	$V_{BE}$	$V_{CE} = 5 \text{ V}, I_C = 1 \text{ A}$	—	—	1.5	V
Transition frequency	$f_T$	$V_{CE} = 5 \text{ V}, I_C = 0.3 \text{ A}$	—	200	—	MHz
Collector output capacitance	$C_{ob}$	$V_{CB} = 10 \text{ V}, I_E = 0, f = 1 \text{ MHz}$	—	16	—	pF

Unit: mm



Weight: 1.7 g (typ.)

## Marking

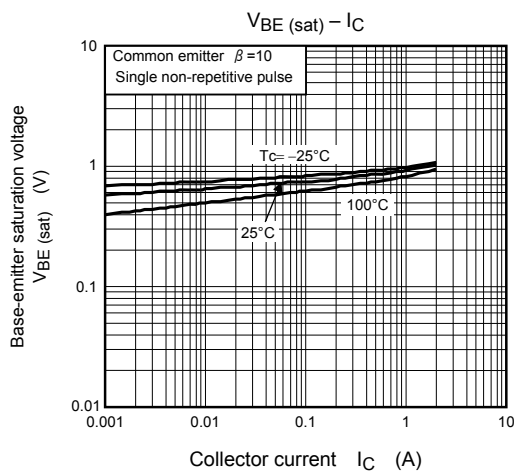
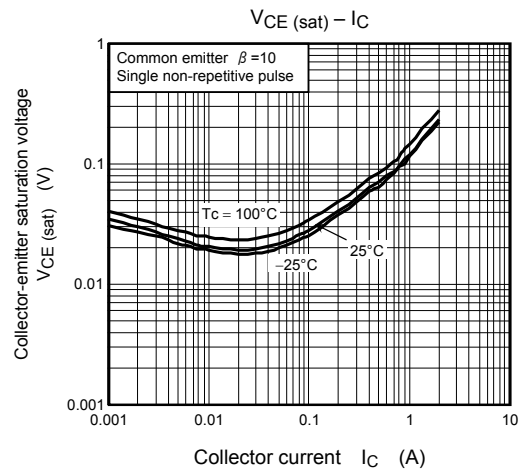
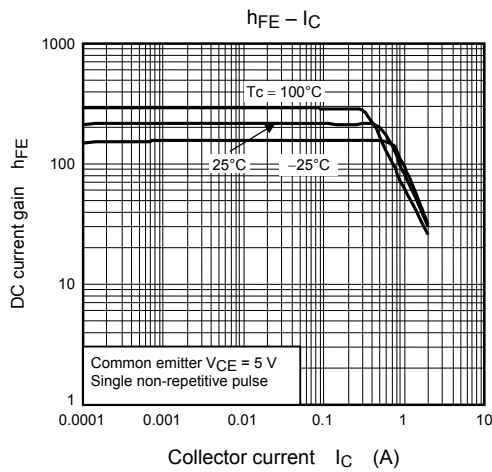
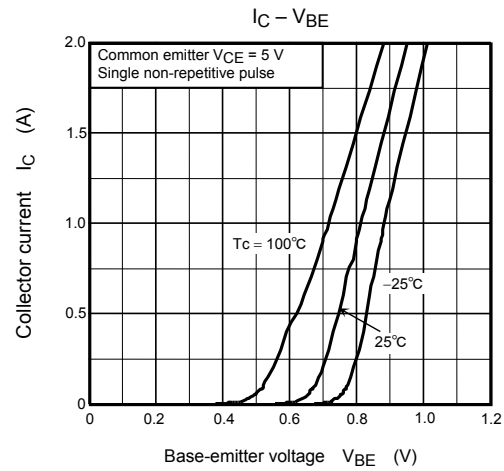
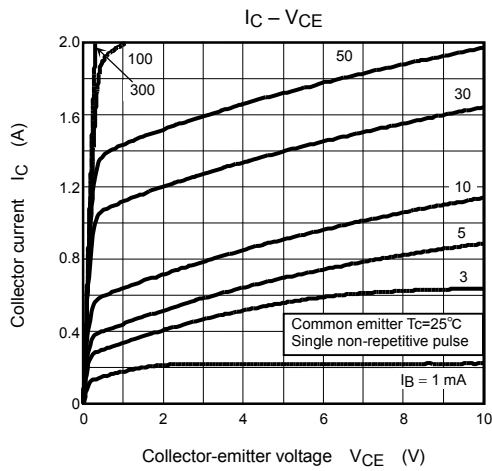


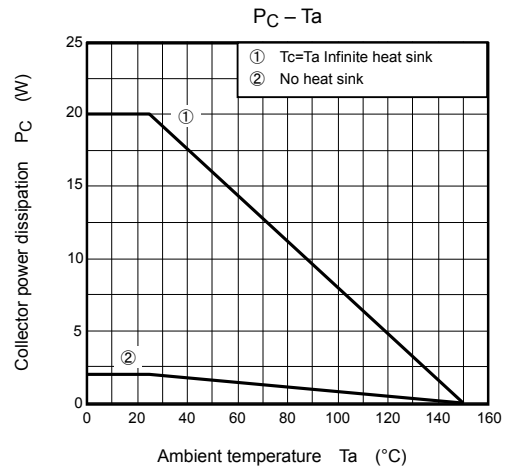
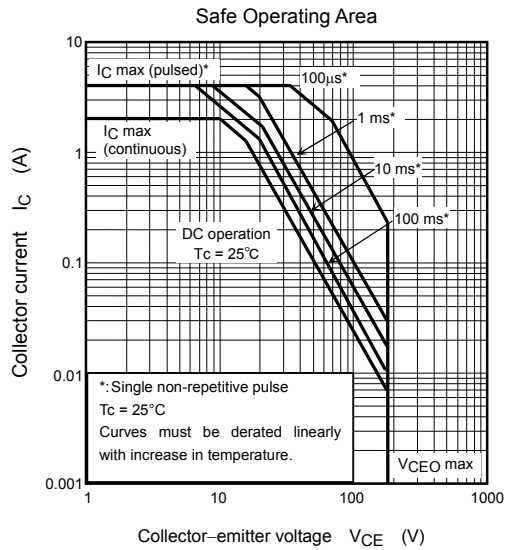
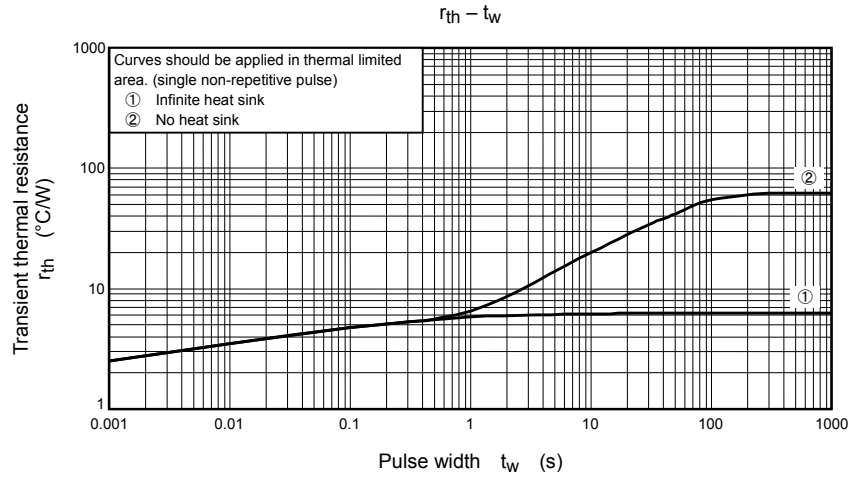
Note2: A line under a Lot No. identifies the indication of product Labels.

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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