

TOSHIBA Transistor Silicon NPN Triple Diffused Type

# 2SC6127

High Voltage Switching Applications  
 High Voltage Amplifier Applications

- High voltage:  $V_{CEO} = 800\text{ V}$

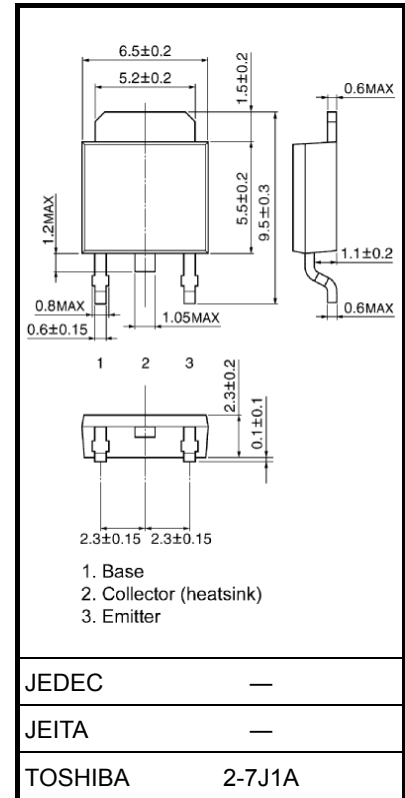
### Absolute Maximum Ratings ( $T_a = 25^\circ\text{C}$ )

Characteristics		Symbol	Rating	Unit
Collector-base voltage		$V_{CBO}$	800	V
Collector-emitter voltage		$V_{CEO}$	800	V
Emitter-base voltage		$V_{EBO}$	5	V
Collector current		$I_C$	50	mA
Base current		$I_B$	25	mA
Collector power dissipation	$T_a = 25^\circ\text{C}$	$P_C$	1.0	W
	$T_c = 25^\circ\text{C}$		10	
Junction temperature		$T_j$	150	$^\circ\text{C}$
Storage temperature range		$T_{stg}$	-55 to 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).

Unit: mm



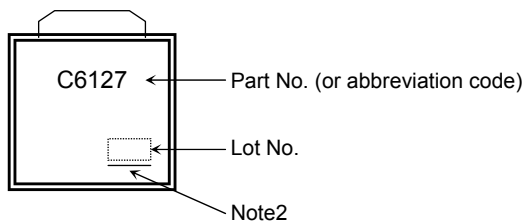
Weight: 0.36 g (typ.)

Start of commercial production  
 2008-11

## Electrical Characteristics (Ta = 25°C)

Characteristics	Symbol	Test Condition	Min	Typ.	Max	Unit
Collector cut-off current	$I_{CBO}$	$V_{CB} = 640\text{ V}, I_E = 0$	—	—	1.0	$\mu\text{A}$
Emitter cut-off current	$I_{EBO}$	$V_{EB} = 5\text{ V}, I_C = 0$	—	—	10	$\mu\text{A}$
DC current gain	$h_{FE}$	$V_{CE} = 5\text{ V}, I_C = 7\text{ mA}$	15	—	—	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 20\text{ mA}, I_B = 4\text{ mA}$	—	—	1.0	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = 20\text{ mA}, I_B = 4\text{ mA}$	—	—	1.5	V
Transition frequency	$f_T$	$V_{CE} = 10\text{ V}, I_C = 3\text{ mA}$	—	15	—	MHz
Collector output capacitance	$C_{ob}$	$V_{CB} = 100\text{ V}, f = 1\text{ MHz}$	—	1.8	—	pF

## Marking

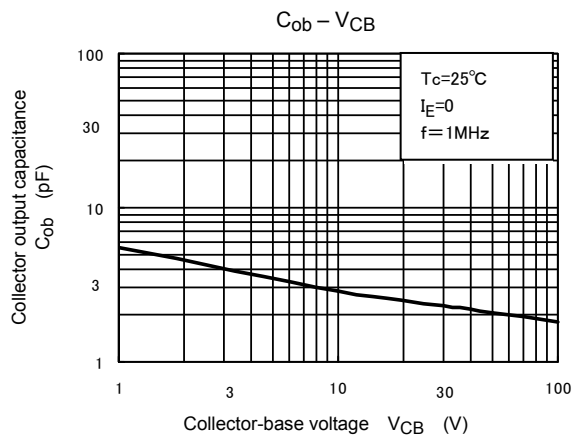
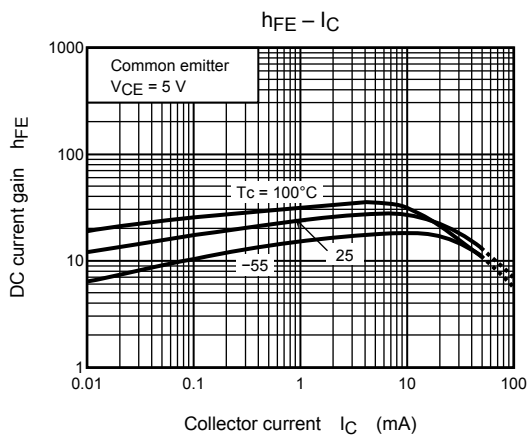
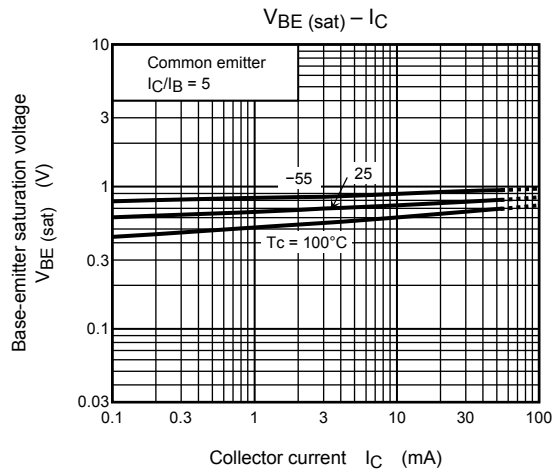
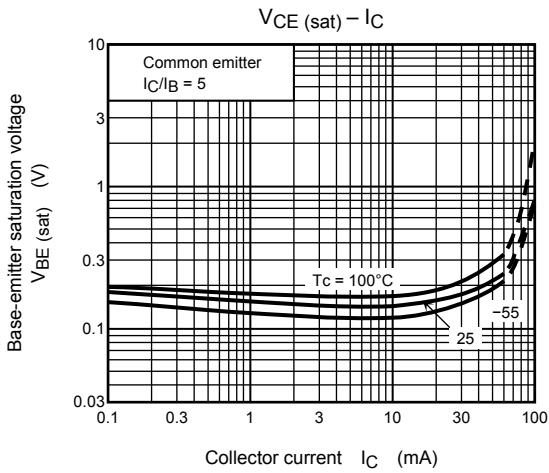
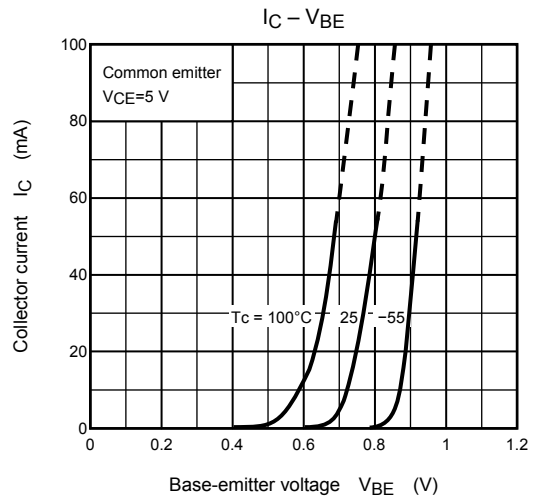
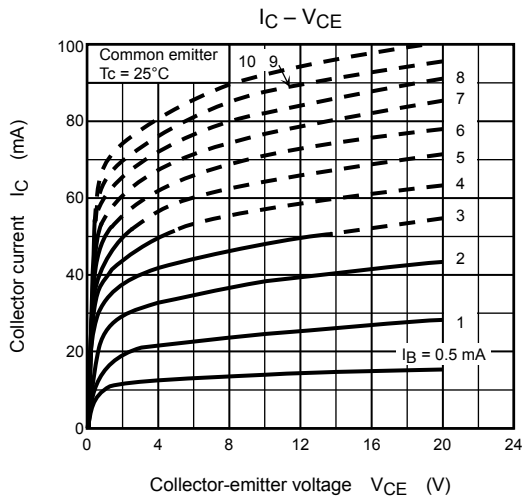


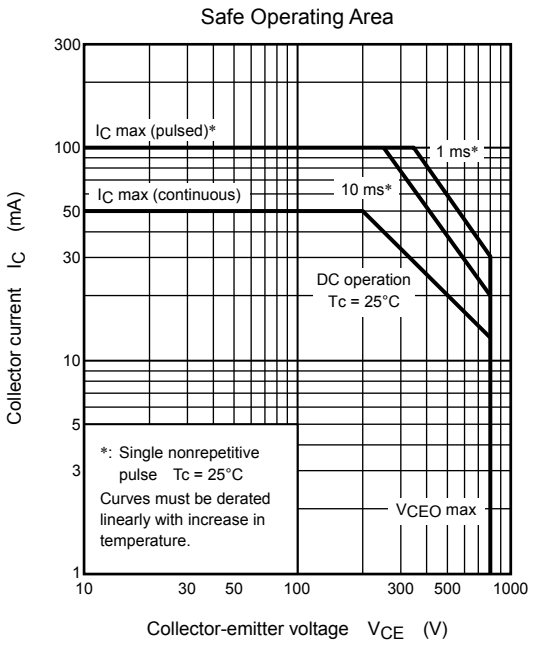
Note2: A line under a Lot No. identifies the indication of product Labels.

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 2011/65/EU of the European Parliament and of the Council of 8 June 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment.





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