TOSHIBA Transistor Silicon NPN Triple Diffused Type

2SC6127

High Voltage Switching Applications
High Voltage Amplifier Applications

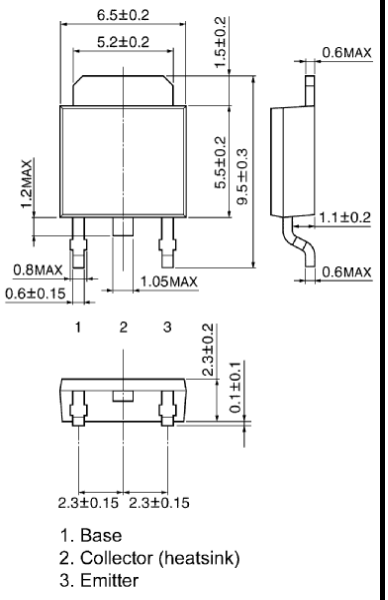
- High voltage: V_{CEO} = 800 V

Absolute Maximum Ratings (Ta = 25°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	Ta = 25°C	P_C	1.0	W
	Tc = 25°C		10	
Junction temperature		T_j	150	°C
Storage temperature range		T_{stg}	−55 to 150	°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



JEDEC	—
JEITA	—
TOSHIBA	2-7J1A

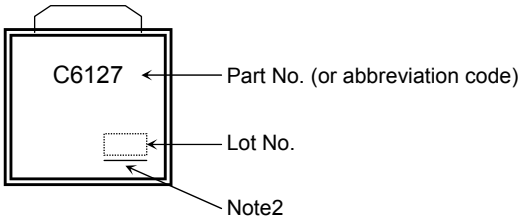
Weight: 0.36 g (typ.)

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 V, I_E = 0	—	—	1.0	μA
Emitter cut-off current	I_{EBO}	V_{EB} = 5 V, I_C = 0	—	—	10	μA
DC current gain	h_{FE}	V_{CE} = 5 V, I_C = 7 mA	15	—	—	
Collector-emitter saturation voltage	$V_{CE\ (sat)}$	I_C = 20 mA, I_B = 4 mA	—	—	1.0	V
Base-emitter saturation voltage	$V_{BE\ (sat)}$	I_C = 20 mA, I_B = 4 mA	—	—	1.5	V
Transition frequency	f_T	V_{CE} = 10 V, I_C = 3 mA	—	15	—	MHz
Collector output capacitance	C_{ob}	V_{CB} = 100 V, f = 1 MHz	—	1.8	—	pF

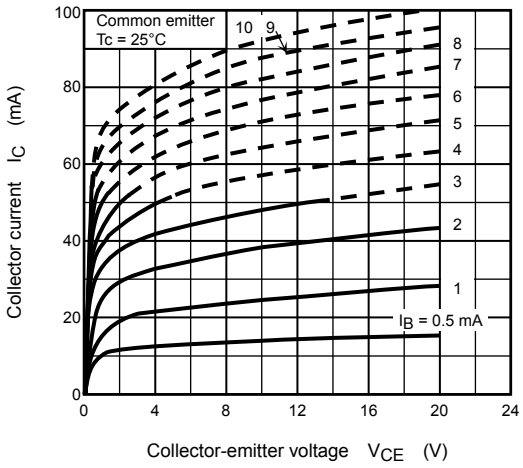
Marking



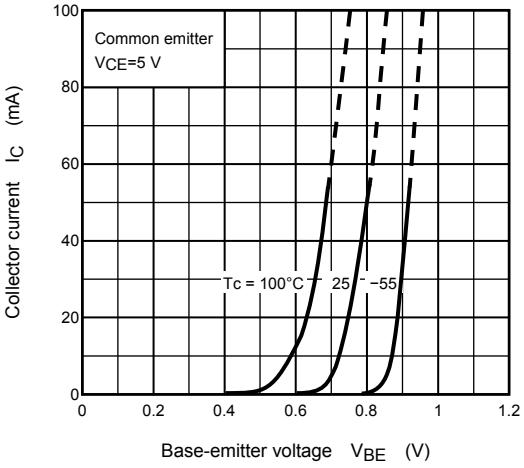
Note2: A line under a Lot No. identifies the indication of product Labels.
Not underlined: [[Pb]]/INCLUDES > MCV
Underlined: [[G]]/RoHS COMPATIBLE or [[G]]/RoHS [[Pb]]

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.

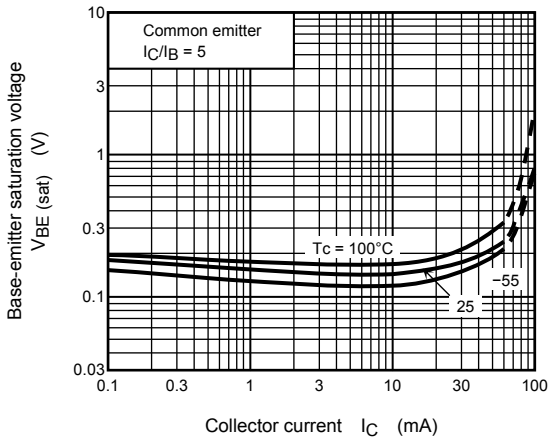
$I_C - V_{CE}$



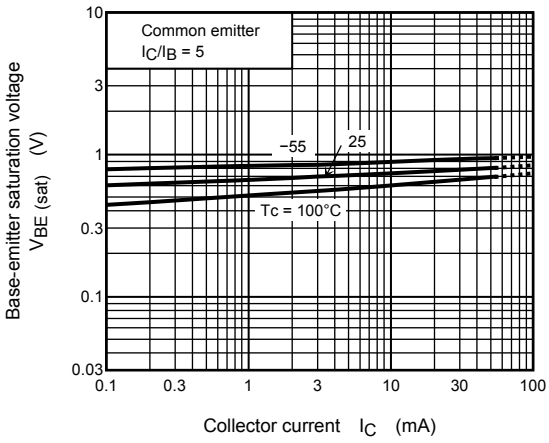
$I_C - V_{BE}$



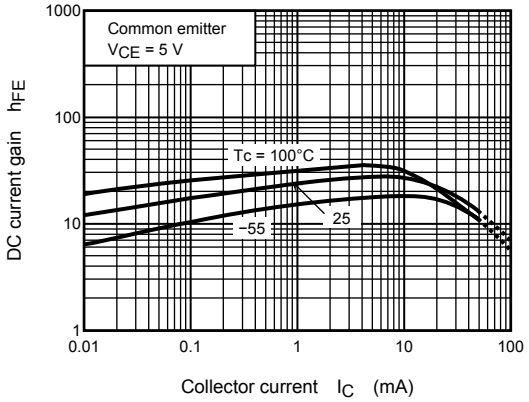
$V_{CE\ (sat)} - I_C$



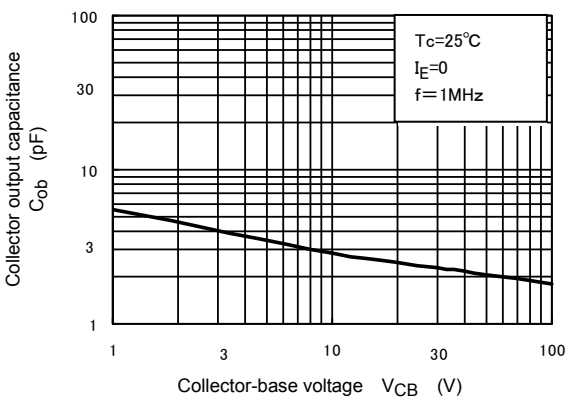
$V_{BE\ (sat)} - I_C$



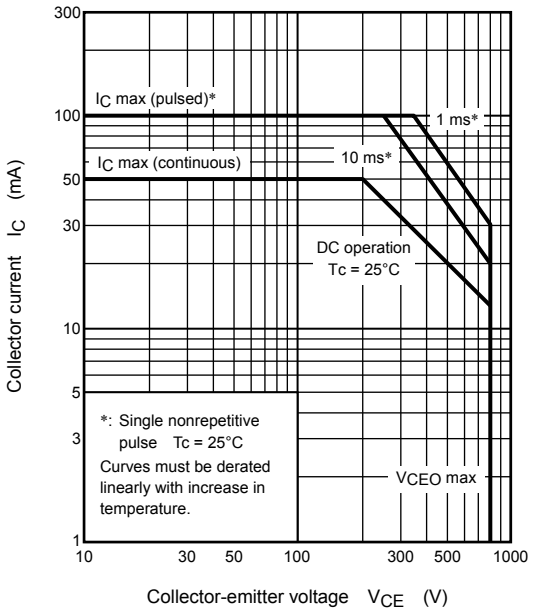
$h_{FE} - I_C$



$C_{ob} - V_{CB}$



Safe Operating Area



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