Unit: mm

#### TOSHIBA Transistor Silicon NPN Triple Diffused Type

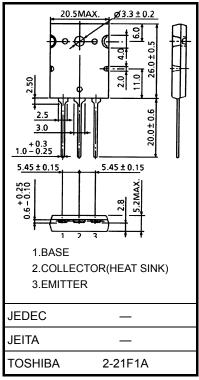
# **TTC5200**

### O Power Amplifier Applications

- High collector voltage: V<sub>CEO</sub> = 230 V (min)
- Complementary to TTA1943
- Recommended for 100-W high-fidelity audio frequency amplifier output stage.

#### Absolute Maximum Ratings (Ta = 25°C)

Characteristics	Symbol	Rating	Unit	
Collector-base voltage	V <sub>CBO</sub>	230	V	
Collector-emitter voltage	V <sub>CEO</sub>	230	V	
Emitter-base voltage	V <sub>EBO</sub>	5	V	
Collector current	IC	15	Α	
Base current	ΙΒ	1.5	Α	
Collector power dissipation (Tc=25°C)	PC	150	W	
Junction temperature	Tj	150	°C	
Storage temperature range	T <sub>stg</sub>	−55 to 150	°C	



Weight: 9.75 g (typ)

Note 1: 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.

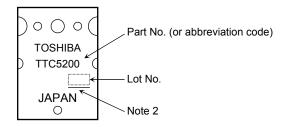
Please design the appropriate reliability upon reviewing the Toshiba Semiconductor Reliability Handbook ("Handling Precautions"/"Derating Concept and Methods") and individual reliability data (i.e. reliability test report and estimated failure rate, etc).



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

Characteristics	Symbol	Test Condition	Min	Тур	Max	Unit
Collector cut-off current	I <sub>CBO</sub>	V <sub>CB</sub> = 230V, I <sub>E</sub> = 0	_	_	5.0	μΑ
Emitter cut-off current	I <sub>EBO</sub>	V <sub>EB</sub> = 5 V, I <sub>C</sub> = 0	_	_	5.0	μΑ
Collector-emitter breakdown voltage	V (BR) CEO	I <sub>C</sub> = 50 mA, I <sub>B</sub> = 0	230	_	_	٧
DC current gain	h <sub>FE (1)</sub>	V <sub>CE</sub> = 5 V, I <sub>C</sub> = 1 A	80	_	160	
	h <sub>FE (2)</sub>	V <sub>CE</sub> = 5 V, I <sub>C</sub> = 7 A	35	_	_	
Collector-emitter saturation voltage	V <sub>CE</sub> (sat)	I <sub>C</sub> = 8 A, I <sub>B</sub> = 0.8 A	_	_	3.0	V
Base-emitter voltage	V <sub>BE</sub>	V <sub>CE</sub> = 5 V, I <sub>C</sub> = 7 A	_		1.5	>
Transition frequency	f <sub>T</sub>	V <sub>CE</sub> = 5 V, I <sub>C</sub> = 1 A	_	30	_	MHz
Collector output capacitance	C <sub>ob</sub>	V <sub>CB</sub> = 10 V, I <sub>E</sub> = 0, f = 1 MHz	_	145	_	pF

### Marking

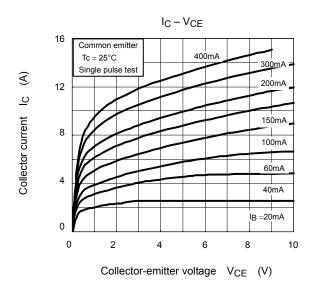


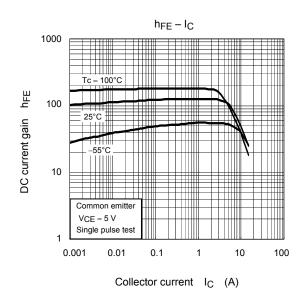
Note 2 : A line under a Lot No. identifies the indication of product Labels.  $\hbox{[[G]]/RoHS COMPATIBLE or [[G]]/RoHS [[Pb]]}$ 

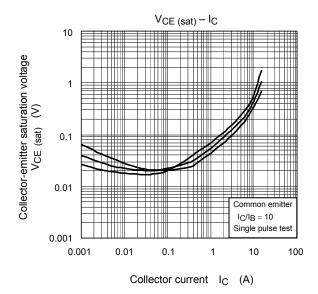
Please contact your TOSHIBA sales representative for details as to environmental matters such as the RoHS compatibility of Product.

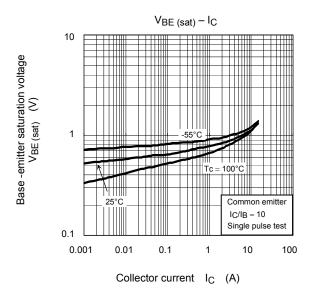
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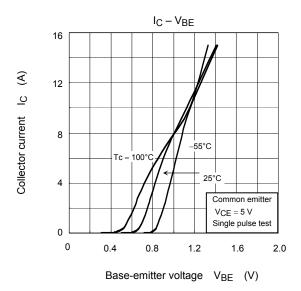
The RoHS is the Directive 2002/95/EC of the European Parliament and of the Council of 27 January 2003 on the restriction of the use of certain hazardous substances in electrical and electronic equipment.

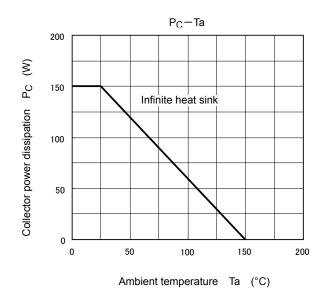


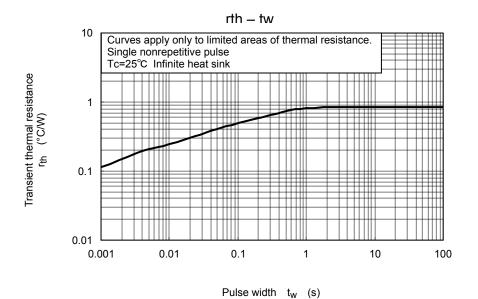


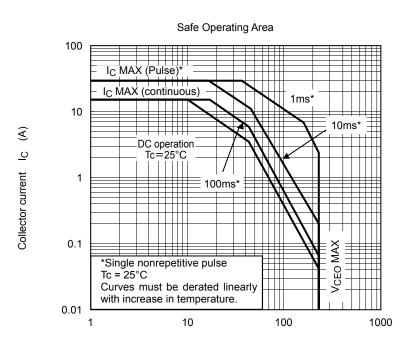












Collector-emitter voltage V<sub>CE</sub> (V)

4

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5