

**TOSHIBA****2SA2121**

TOSHIBA Transistor Silicon PNP Triple Diffused Type

# 2SA2121

## Power Amplifier Applications

- Complementary to 2SC5949
- Recommended for audio frequency amplifier output stage.

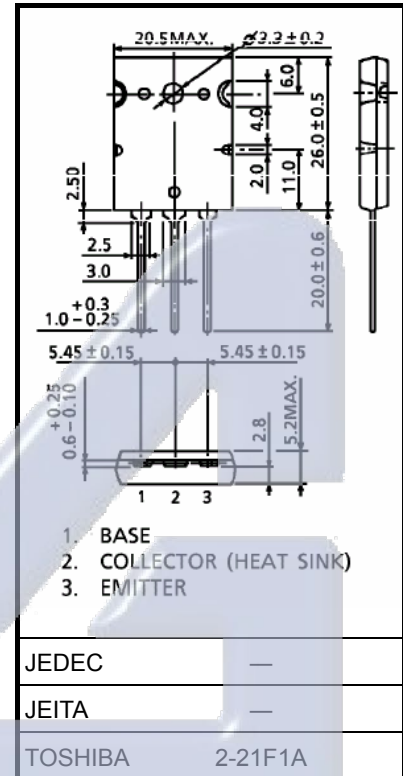
## Absolute Maximum Ratings (T<sub>c</sub> = 25°C)

Characteristic	Symbol	Rating	Unit
Collector-base voltage	V <sub>CBO</sub>	-200	V
Collector-emitter voltage	V <sub>CEO</sub>	-200	V
Emitter-base voltage	V <sub>EBO</sub>	-5	V
Collector current	I <sub>C</sub>	-15	A
Base current	I <sub>B</sub>	-1.5	A
Collector power dissipation	P <sub>C</sub>	220	W
Junction temperature	T <sub>j</sub>	150	°C
Storage temperature range	T <sub>stg</sub>	-55 to 150	°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).

Unit: mm



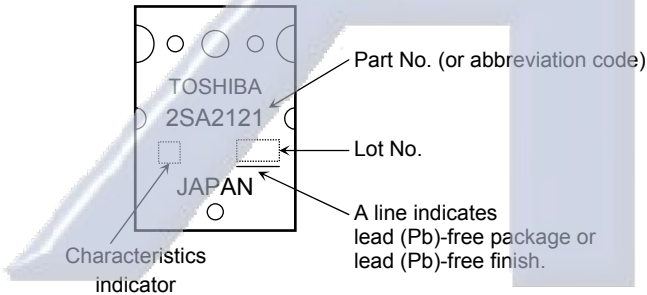
Weight: 9.75 g (typ.)

Electrical Characteristics (Tc = 25°C)

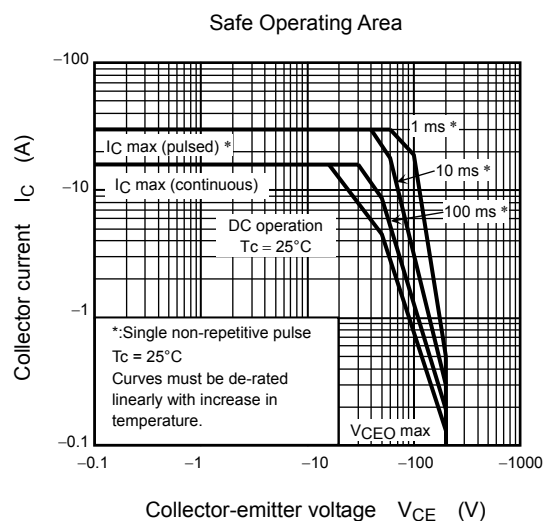
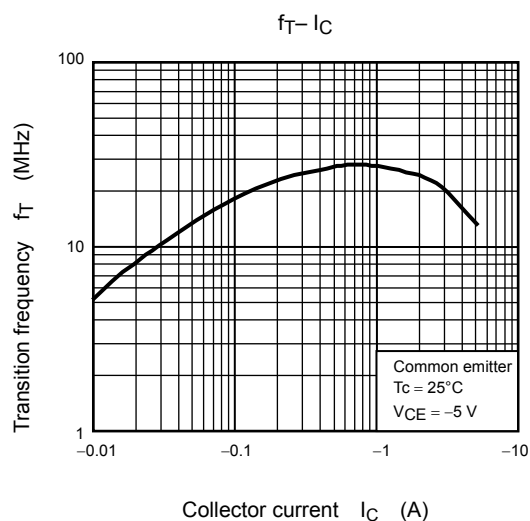
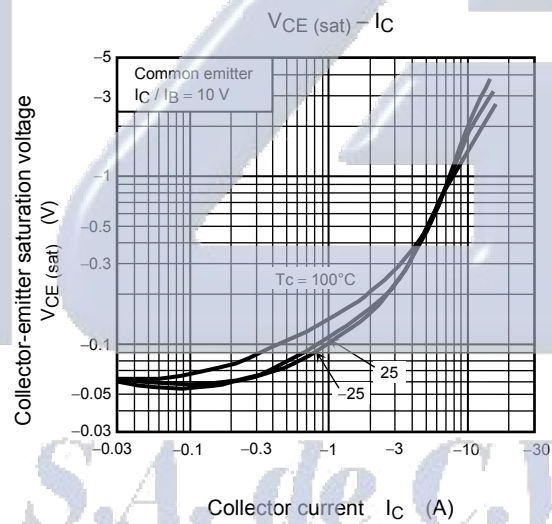
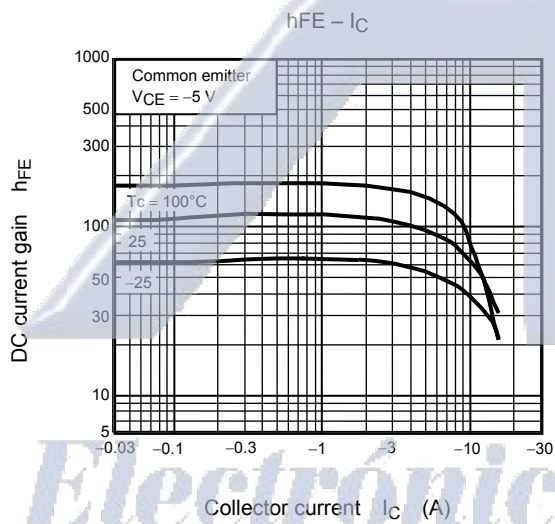
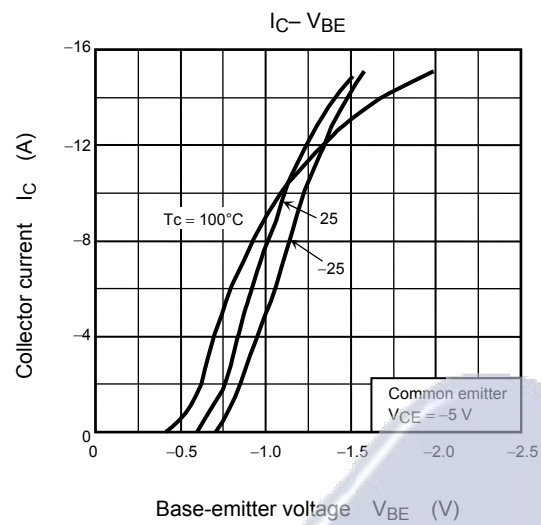
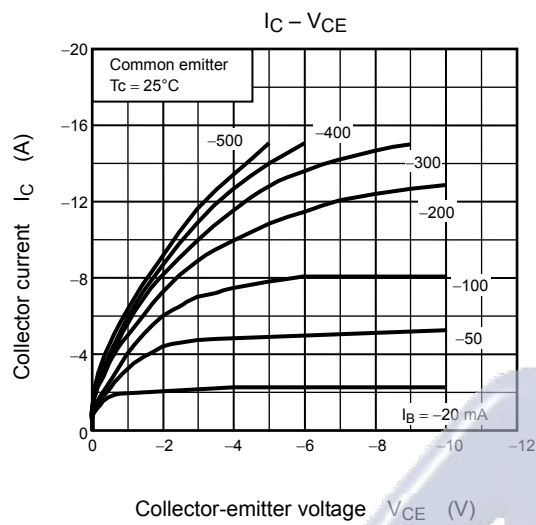
Characteristic	Symbol	Test Conditions	Min	Typ.	Max	Unit
Collector cut-off current	ICBO	V <sub>CB</sub> = -200 V, I <sub>E</sub> = 0	—	—	-5.0	μA
Emitter cut-off current	IEBO	V <sub>EB</sub> = -5 V, I <sub>C</sub> = 0	—	—	-5.0	μA
Collector-emitter breakdown voltage	V (BR) CEO	I <sub>C</sub> = -50 mA, I <sub>B</sub> = 0	-200	—	—	V
DC current gain	h <sub>FE</sub> (1) (Note 1)	V <sub>CE</sub> = -5 V, I <sub>C</sub> = -1 A	55	—	160	
	h <sub>FE</sub> (2)	V <sub>CE</sub> = -5 V, I <sub>C</sub> = -8 A	35	60	—	
Collector-emitter saturation voltage	V <sub>CE</sub> (sat)	I <sub>C</sub> = -10 A, I <sub>B</sub> = -1 A	—	-1.5	-3.0	V
Base-emitter voltage	V <sub>BE</sub>	V <sub>CE</sub> = -5 V, I <sub>C</sub> = -8 A	—	-1.0	-1.5	V
Transition frequency	f <sub>T</sub>	V <sub>CE</sub> = -5 V, I <sub>C</sub> = -1 A	—	25	—	MHz
Collector output capacitance	C <sub>ob</sub>	V <sub>CB</sub> = -10 V, I <sub>E</sub> = 0, f = 1 MHz	—	470	—	pF

Note 1: h<sub>FE</sub>(1) classification R: 55 to 110, O: 80 to 160

Marking



Electrónica S.A. de C.V.

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