TOSHIBA Transistor Silicon NPN Triple Diffused Type

# 2SC5359

### **Power Amplifier Applications**

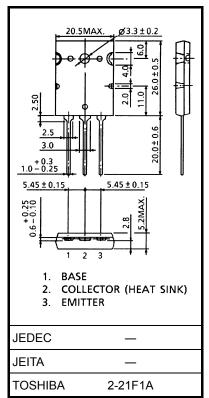
Unit: mm

- High breakdown voltage: VCEO = 230 V
- Complementary to 2SA1987
- Suitable for use in 100-W high fidelity audio amplifier's output stage.

### **Absolute Maximum Ratings (Tc = 25°C)**

Characteristics	Symbol	Rating	Unit
Collector-base voltage	V <sub>CBO</sub>	230	V
Collector-emitter voltage	V <sub>CEO</sub>	230	٧
Emitter-base voltage	V <sub>EBO</sub>	5	٧
Collector current	IC	15	Α
Base current	ΙΒ	1.5	Α
Collector power dissipation (Tc = 25°C)	P <sub>C</sub>	180	W
Junction temperature	Tj	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.



Weight: 9.75 g (typ.)

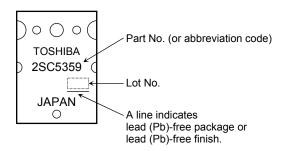
operating temperature/current/voltage, etc.) are within the absolute maximum ratings. Please design the appropriate reliability upon reviewing the Toshiba Semiconductor Reliability Handbook ("Handling Precautions"/Derating Concept and Methods) and individual reliability data (i.e. reliability test report and estimated failure rate, etc).

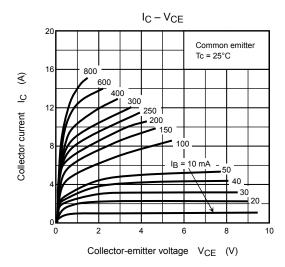
## **Electrical Characteristics (Tc = 25°C)**

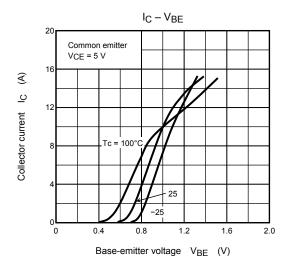
Characteristics	Symbol	Test Condition	Min	Тур.	Max	Unit
Collector cut-off current	I <sub>CBO</sub>	V <sub>CB</sub> = 230 V, I <sub>E</sub> = 0	_	_	5.0	μA
Emitter cut-off current	I <sub>EBO</sub>	V <sub>EB</sub> = 5 V, I <sub>C</sub> = 0	_	_	5.0	μA
Collector-emitter breakdown voltage	V (BR) CEO	I <sub>C</sub> = 50 mA, I <sub>B</sub> = 0	230	_	_	V
DC current gain	h <sub>FE (1)</sub> (Note)	V <sub>CE</sub> = 5 V, I <sub>C</sub> = 1 A	55	_	160	
	h <sub>FE (2)</sub>	V <sub>CE</sub> = 5 V, I <sub>C</sub> = 7 A	35	87	_	
Collector-emitter saturation voltage	V <sub>CE</sub> (sat)	I <sub>C</sub> = 8 A, I <sub>B</sub> = 0.8 A	_	0.4	3.0	V
Base-emitter voltage	V <sub>BE</sub>	V <sub>CE</sub> = 5 V, I <sub>C</sub> = 7 A	_	1.0	1.5	V
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	_	200	_	pF

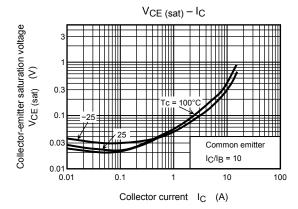
Note: hFE (1) classification R: 55 to 110, O: 80 to 160

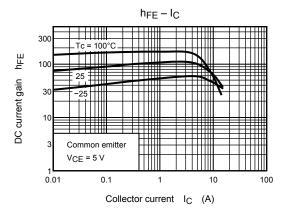
### Marking

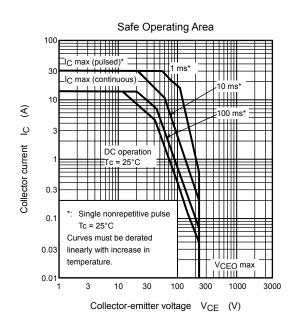












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