TOSHIBA Transistor Silicon PNP Triple Diffused Type

# 2SA1987

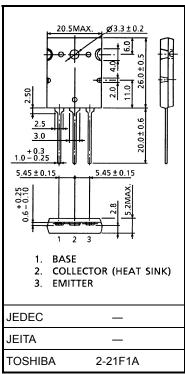
#### **Power Amplifier Applications**

Unit: mm

- High breakdown voltage:  $V_{CEO} = -230 \text{ V (min)}$
- Complementary to 2SC5359
- Recommended for 100-W high-fidelity audio frequency amplifier output stage.

## **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	V
Emitter-base voltage	V <sub>EBO</sub>	-5	V
Collector current	IC	-15	Α
Base current	Ι <sub>Β</sub>	-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



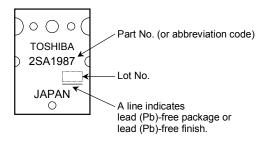
Weight: 9.75 g (typ.)

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

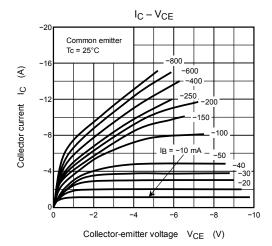
Characteristics	Symbol	Test Condition	Min	Тур.	Max	Unit
Collector cut-off current	I <sub>CBO</sub>	V <sub>CB</sub> = -230 V, I <sub>E</sub> = 0	_	_	-5.0	μΑ
Emitter cut-off current	I <sub>EBO</sub>	V <sub>EB</sub> = -5 V, I <sub>C</sub> = 0	_	_	-5.0	μA
Collector-emitter breakdown voltage	V (BR) CEO	$I_C = -50 \text{ mA}, I_B = 0$	-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	70	_	
Collector-emitter saturation voltage	V <sub>CE (sat)</sub>	I <sub>C</sub> = -8 A, I <sub>B</sub> = -0.8 A	_	-1.5	-3.0	V
Base-emitter voltage	$V_{BE}$	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	_	360	_	pF

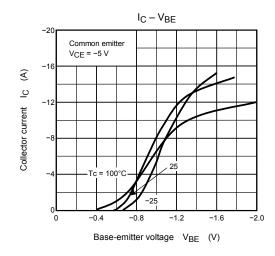
Note:  $h_{FE\ (1)}$  classification R: 55 to 110, O: 80 to 160

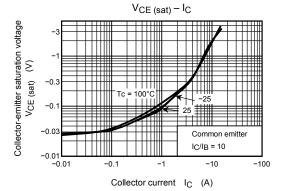
# Marking

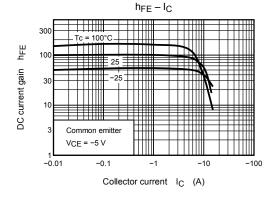


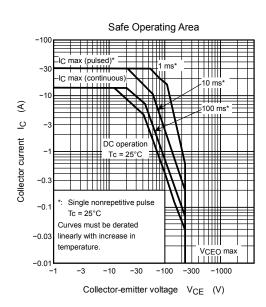
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