TOSHIBA Transistor Silicon NPN Epitaxial Type (PCT Process)

# 2SC3421

### Audio Frequency Power Amplifier Applications

Unit: mm

- Complementary to 2SA1358
- Suitable for driver of 60 to 80 watts audio amplifier
- High breakdown voltage

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

Characteristics		Symbol	Rating	Unit	
Collector-base voltage		$V_{CBO}$	120	V	
Collector-emitter voltage		V <sub>CEO</sub>	120	V	
Emitter-base voltage		V <sub>EBO</sub>	5	V	
Collector current		Ic	1	Α	
Base current		Ι <sub>Β</sub>	100	mA	
Collector power dissipation	Ta = 25°C	P <sub>C</sub>	1.5	W	
	Tc = 25°C	FC	10		
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.

8.3MAX.
5.8

9.3.1±0.1

1.0MAX.
1.9MAX.
0.75±0.15

1 2 3
9.1

2.3±0.1

2.3±0.1

2.3±0.1

XVWY E

2. COLLECTOR
3. BASE

JEDEC

JEITA

TOSHIBA

2-8H1A

Weight: 0.82 g (typ.)

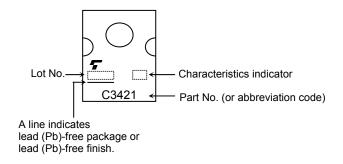
operating temperature/current/voltage, etc.) are within the absolute maximum ratings. Please design the appropriate reliability upon reviewing the Toshiba Semiconductor Reliability Handbook ("Handling Precautions"/Derating Concept and Methods) and individual reliability data (i.e. reliability test report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

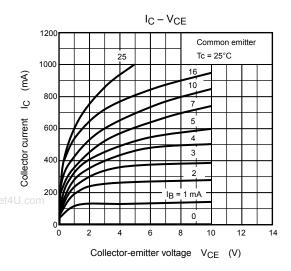
## **Electrical Characteristics (Tc = 25°C)**

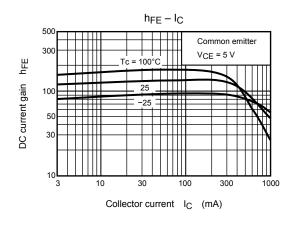
Characteristics	Symbol	Test Condition	Min	Тур.	Max	Unit
Collector cut-off current	I <sub>CBO</sub>	V <sub>CB</sub> = 120 V, I <sub>E</sub> = 0	_	_	100	nA
Emitter cut-off current	I <sub>EBO</sub>	V <sub>EB</sub> = 5 V, I <sub>C</sub> = 0	_	_	100	nA
Collector-emitter breakdown voltage	V (BR) CEO	I <sub>C</sub> = 10 mA, I <sub>B</sub> = 0	120	_	_	V
DC current gain	h <sub>FE</sub> (Note)	V <sub>CE</sub> = 5 V, I <sub>C</sub> = 100 mA	80	_	240	
Collector-emitter saturation voltage	V <sub>CE</sub> (sat)	I <sub>C</sub> = 500 mA, I <sub>B</sub> = 50 mA	_	0.30	1.0	V
Base-emitter voltage	V <sub>BE</sub>	V <sub>CE</sub> = 5 V, I <sub>C</sub> = 500 mA	_	0.78	1.0	V
Transition frequency	f <sub>T</sub>	V <sub>CE</sub> = 5 V, I <sub>C</sub> = 100 mA	_	120	_	MHz
Collector output capacitance	C <sub>ob</sub>	V <sub>CB</sub> = 10 V, I <sub>E</sub> = 0, f = 1 MHz	_	15	_	pF

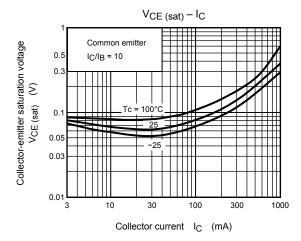
Note: hFE classification O: 80 to 160, Y: 120 to 240

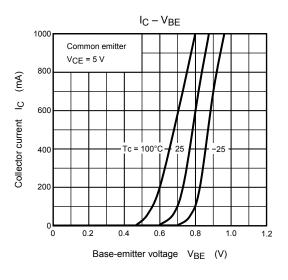
### Marking

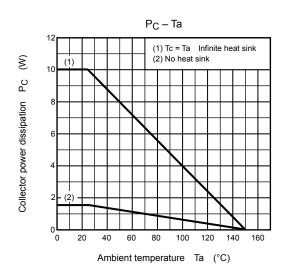


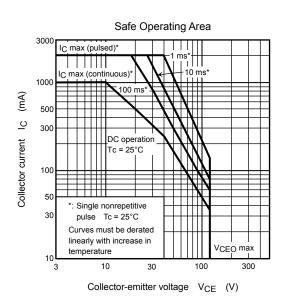












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