Unit: mm

TOSHIBA Transistor Silicon PNP Epitaxial Type (PCT process)

# 2SA1201

### Voltage Amplifier Applications Power Amplifier Applications

- High voltage:  $V_{CEO} = -120 \text{ V}$
- High transition frequency: fT = 120 MHz (typ.)
- Small flat package
- PC = 1 to 2 W (mounted on ceramic substrate)
- Complementary to 2SC2881

#### **Maximum Ratings (Ta = 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	-800	mA	
Base current	Ι <sub>Β</sub>	-160	mA	
Collector power dissipation	P <sub>C</sub>	500	mW	
	PC	1000		
	(Note 1)	1000		
Junction temperature	Tj	150	°C	
Storage temperature range	T <sub>stg</sub>	−55 to 150	°C	

Note 1: Mounted on ceramic substrate (250 mm<sup>2</sup> × 0.8 t)

1.6MAX 4.6MAX 1.7MAX 0.4 ± 0.05 + 0.08 0.4 - 0.05 1.5 ± 0.1 1.5 ± 0.1 1. Base 2. Collector (heat sink) 3. Emitter PW-MINI **JEDEC** JEITA SC-62 TOSHIBA 2-5K1A

Weight: 0.05 g (typ.)

2SA1201

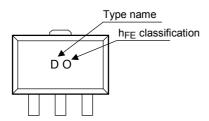


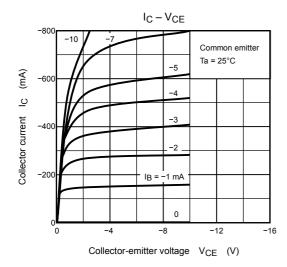
## Electrical Characteristics (Ta = 25°C)

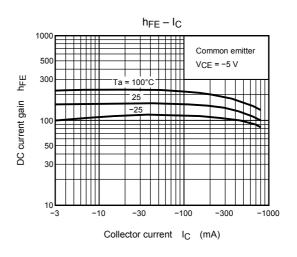
Characteristics	Symbol	Test Condition	Min	Тур.	Max	Unit
Collector cut-off current	I <sub>CBO</sub>	V <sub>CB</sub> = -120 V, I <sub>E</sub> = 0	_	_	-0.1	μΑ
Emitter cut-off current	I <sub>EBO</sub>	V <sub>EB</sub> = -5 V, I <sub>C</sub> = 0	_	_	-0.1	μΑ
Collector-emitter breakdown voltage	V (BR) CEO	$I_C = -10 \text{ mA}, I_B = 0$	-120	_	_	V
Emitter-base breakdown voltage	V (BR) EBO	$I_E = -1 \text{ mA}, I_C = 0$	-5	_	_	V
DC current gain	h <sub>FE</sub> (Note 2)	V <sub>CE</sub> = -5 V, I <sub>C</sub> = -100 mA	80	_	240	
Collector-emitter saturation voltage	V <sub>CE (sat)</sub>	I <sub>C</sub> = -500 mA, I <sub>B</sub> = -50 mA	_	_	-1.0	V
Base-emitter voltage	V <sub>BE</sub>	V <sub>CE</sub> = -5 V, I <sub>C</sub> = -500 mA	_	_	-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	_	_	30	pF

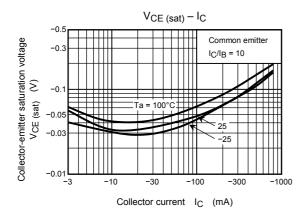
Note 2:  $h_{\mbox{\scriptsize FE}}$  classification O: 80 to 160, Y: 120 to 240

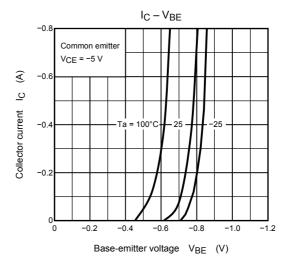
#### Marking

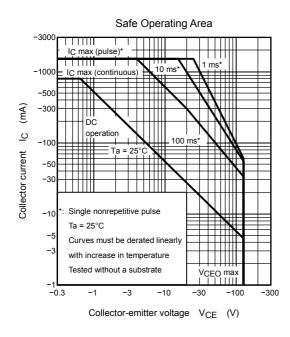


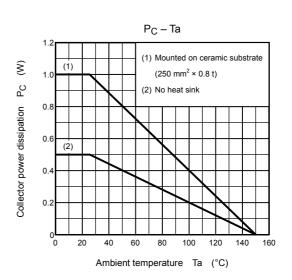












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