TOSHIBA Transistor Silicon PNP Triple Diffused Type (PCT process)

# 2SA1200

#### High Voltage Switching Applications

- High voltage:  $V_{CEO} = -150 \text{ V}$
- High transition frequency:  $f_T = 120 \text{ MHz}$  (typ.)
- Small flat package
- $P_C = 1$  to 2 W (mounted on ceramic substrate)
- Complementary to 2SC2880

#### Maximum Ratings (Ta = 25°C)

Characteristics	Symbol	Rating	Unit	
Collector-base voltage	V <sub>CBO</sub>	-150	V	
Collector-emitter voltage	V <sub>CEO</sub>	-150	V	
Emitter-base voltage	V <sub>EBO</sub>	-5	V	
Collector current	Ι <sub>C</sub>	-50	mA	
Base current	Ι <sub>Β</sub>	-10	mA	
Collector power dissipation	P <sub>C</sub>	500	mW	
	P <sub>C</sub>	800		
	(Note 1)	800		
Junction temperature	Tj	150	°C	
Storage temperature range	T <sub>stg</sub>	−55 to 150	°C	

Note 1: 2SA1200 mounted on ceramic substrate (250 mm<sup>2</sup> × 0.8 t)

1.6MAX 4.6MAX 1.7MAX 0.4±0.05 2.5±0.1 4.2MAX 0.8MIN. + 0.08 0.45 - 0.05 + 0.08 + 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.)

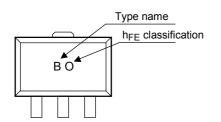
Unit: mm

## Electrical Characteristics (Ta = 25°C)

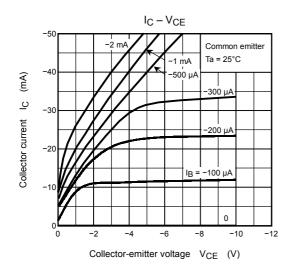
Characteristics	Symbol	Test Condition	Min	Тур.	Max	Unit
Collector cut-off current	I <sub>CBO</sub>	$V_{CB} = -150 \text{ V}, I_E = 0$	—	_	-0.1	μA
Emitter cut-off current	I <sub>EBO</sub>	V <sub>EB</sub> = -5 V, I <sub>C</sub> = 0	_	_	-0.1	μA
DC current gain	h <sub>FE</sub> (Note 2)	V <sub>CE</sub> = -5 V, I <sub>C</sub> = -10 mA	70	_	240	
Collector-emitter saturation voltage	V <sub>CE (sat)</sub>	I <sub>C</sub> = -10 mA, I <sub>B</sub> = -1 mA	-	_	-0.8	V
Base-emitter voltage	V <sub>BE</sub>	$V_{CE} = -5 V, I_C = -30 mA$	_	_	-0.9	V
Transition frequency	f <sub>T</sub>	$V_{CE} = -30 \text{ V}, I_C = -10 \text{ mA}$	—	120	_	MHz
Collector output capacitance	C <sub>ob</sub>	V <sub>CB</sub> = -10 V, I <sub>E</sub> = 0, f = 1 MHz		4.0	5.0	pF

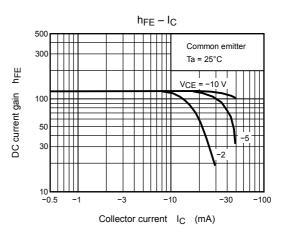
Note 2:  $h_{FE}$  classification O: 70 to 140, Y: 120 to 240

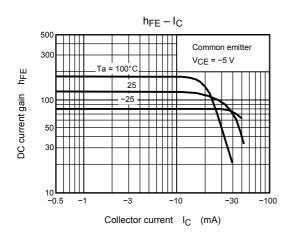
## Marking

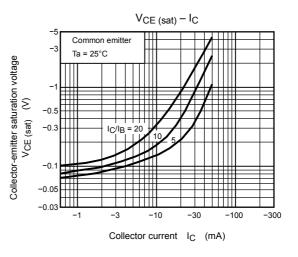


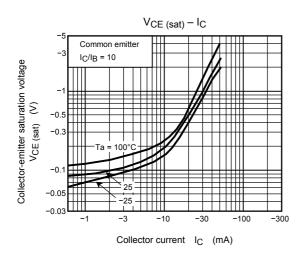
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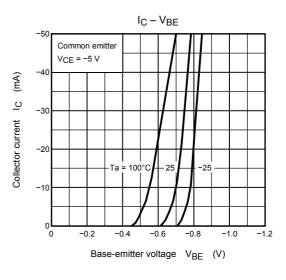




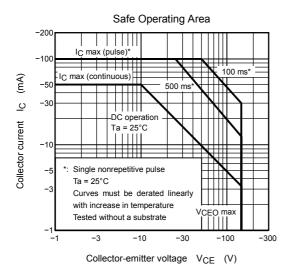


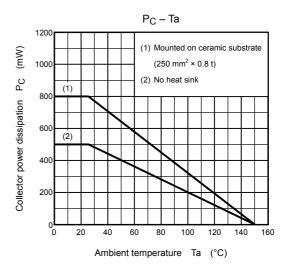






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