

TOSHIBA Transistor Silicon PNP Epitaxial Type (PCT process)

2SA1202

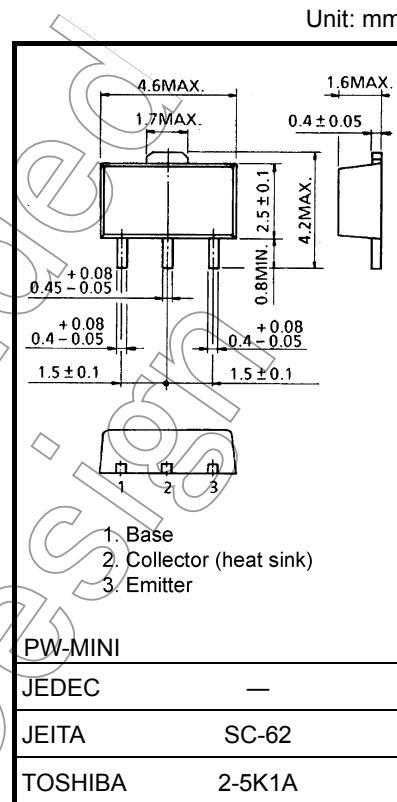
Power Amplifier Applications

Voltage Amplifier Applications

- Suitable for driver of 30 to 35 watts audio amplifier
- Small flat package
- $PC = 1.0$ to 2.0 W (mounted on a ceramic substrate)
- Complementary to 2SC2882

Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

Characteristics	Symbol	Rating	Unit
Collector-base voltage	V_{CBO}	-80	V
Collector-emitter voltage	V_{CEO}	-80	V
Emitter-base voltage	V_{EBO}	-5	V
Collector current	I_C	-400	mA
Base current	I_B	-80	mA
Collector power dissipation	P_C	500	mW
	P_C (Note 1)	1000	
Junction temperature	T_J	150	$^\circ\text{C}$
Storage temperature range	T_{stg}	-55 to 150	$^\circ\text{C}$



Weight: 0.05 g (typ.)

Note 1: Mounted on a ceramic substrate ($250 \text{ mm}^2 \times 0.8 \text{ t}$)

Note 2: 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. operating temperature/current/voltage, etc.) are within the absolute maximum ratings.

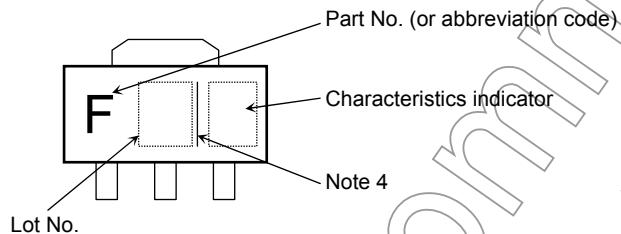
Please design the appropriate reliability upon reviewing the Toshiba Semiconductor Reliability Handbook ("Handling Precautions"/Derating Concept and Methods) and individual reliability data (i.e. reliability test report and estimated failure rate, etc.).

Electrical Characteristics (Ta = 25°C)

Characteristics	Symbol	Test Condition	Min	Typ.	Max	Unit
Collector cut-off current	I _{CBO}	V _{CB} = -80 V, I _E = 0	—	—	-0.1	μA
Emitter cut-off current	I _{EBO}	V _{EB} = -5 V, I _C = 0	—	—	-0.1	μA
Collector-emitter breakdown voltage	V _{(BR) CEO}	I _C = -10 mA, I _B = 0	-80	—	—	V
DC current gain	h _{FE} (1) (Note 3)	I _E = -2 mA, I _C = -50 mA	70	—	240	
	h _{FE} (2)	V _{CE} = -2 V, I _C = -200 mA	40	—	—	
Collector-emitter saturation voltage	V _{CE} (sat)	I _C = -200 mA, I _B = -20 mA	—	—	-0.4	V
Base-emitter voltage	V _{BE}	V _{CE} = -2 V, I _C = -5 mA	-0.55	—	-0.8	V
Transition frequency	f _T	V _{CE} = -10 V, I _C = -10 mA	—	120	—	MHz
Collector output capacitance	C _{ob}	V _{CB} = -10 V, I _E = 0, f = 1 MHz	—	14	—	pF

Note 3: h_{FE}(1) classification O: 70 to 140, Y: 120 to 240

Marking

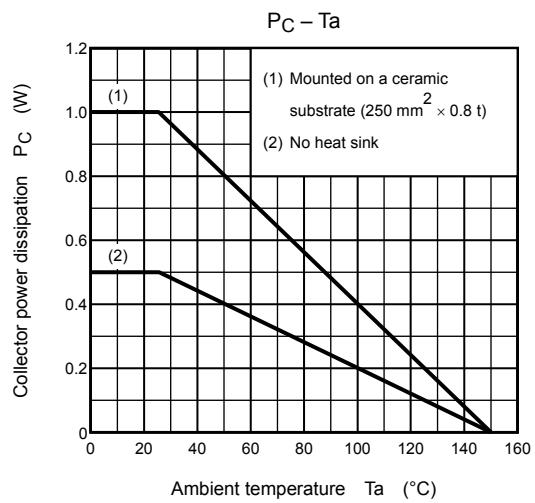
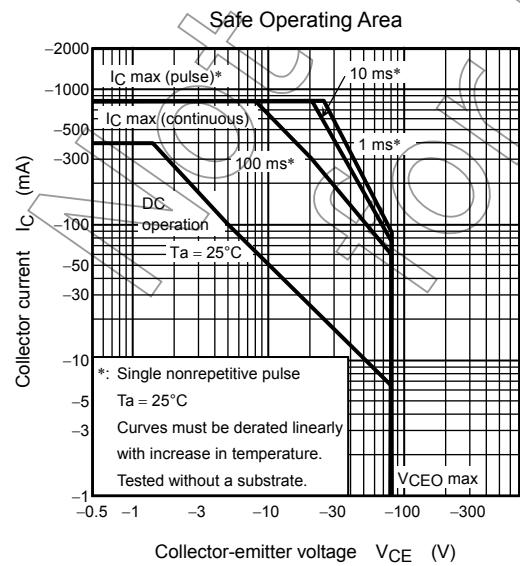
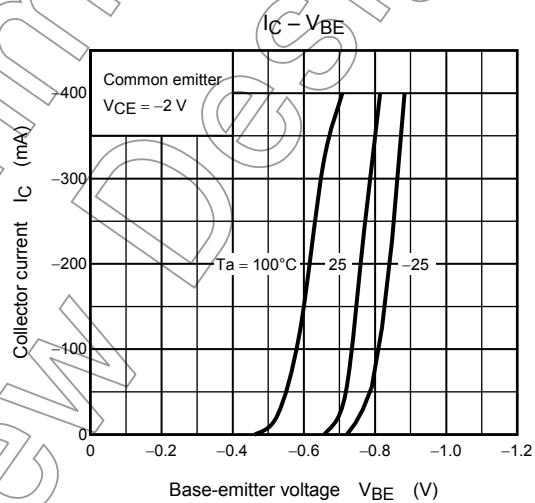
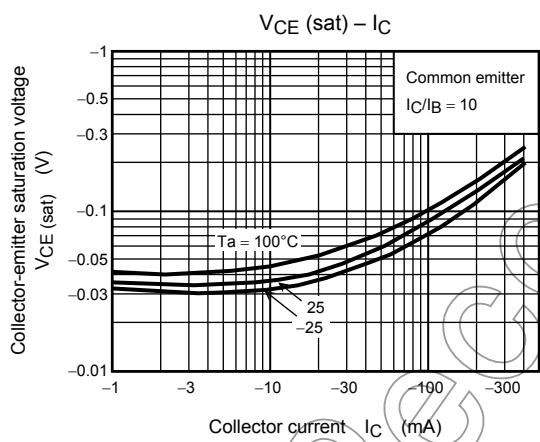
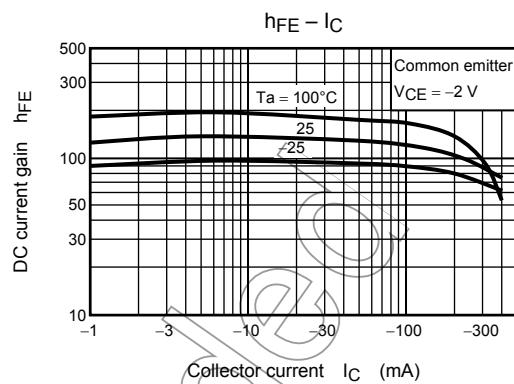
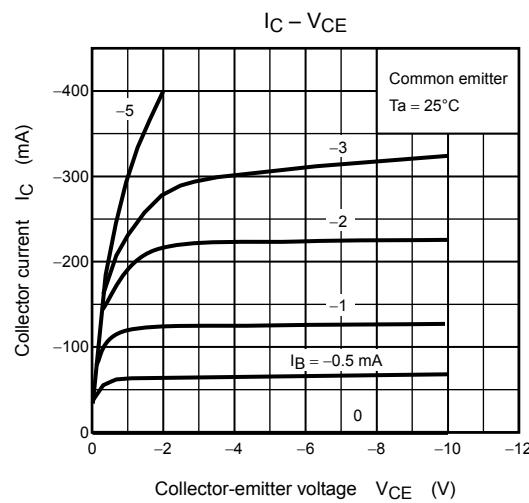


Note 4: A line beside a Lot No. identifies the indication of product Labels.

Without a line: [[Pb]]/INCLUDES > MCV

With a line: [[G]]/RoHS COMPATIBLE or [[G]]/RoHS [[Pb]]

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