

TOSHIBA Transistor Silicon PNP Epitaxial Type (PCT process)

# 2SA1202

Power Amplifier Applications  
Voltage Amplifier Applications

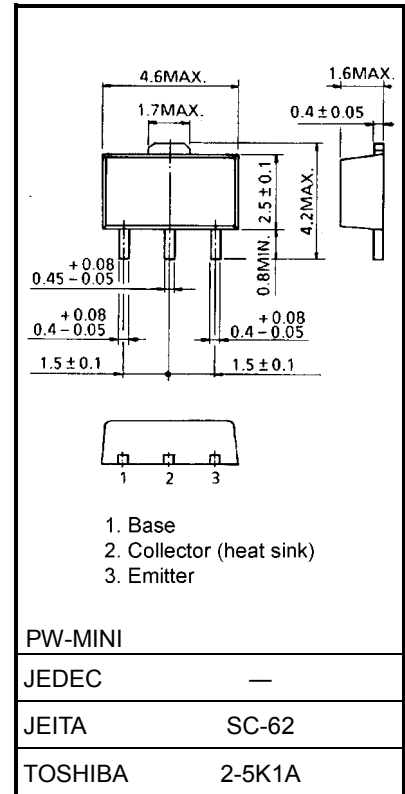
- Suitable for driver of 30 to 35 watts audio amplifier
- Small flat package
- $P_C = 1.0$  to  $2.0$  W (mounted on ceramic substrate)
- Complementary to 2SC2882

### 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	$^\circ\text{C}$

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

Unit: mm



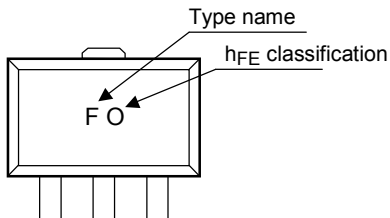
Weight: 0.05 g (typ.)

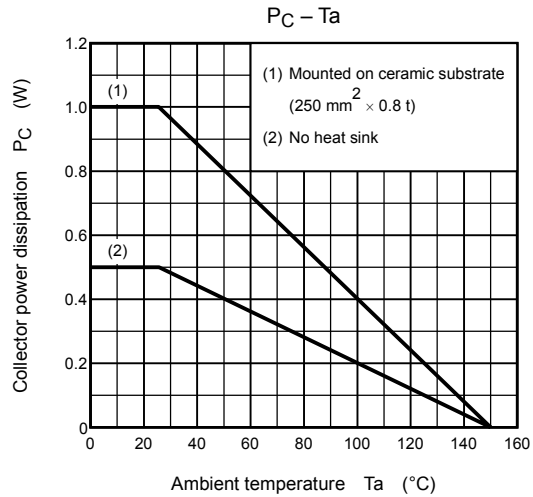
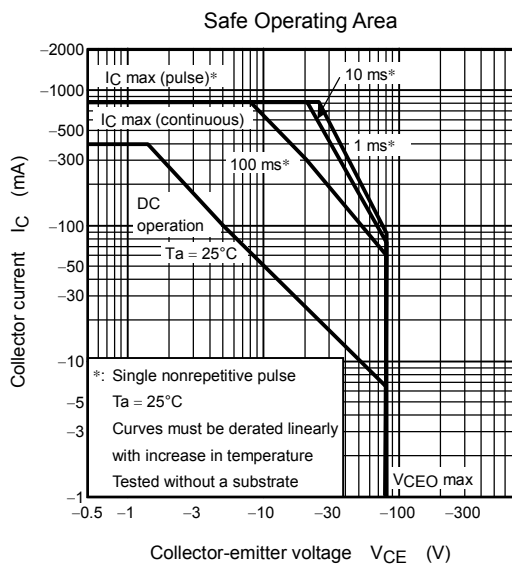
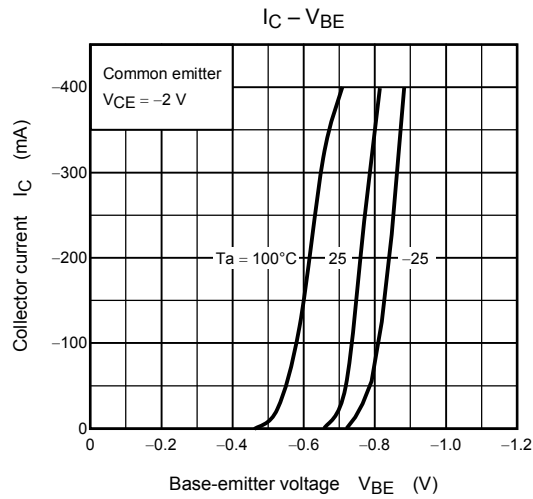
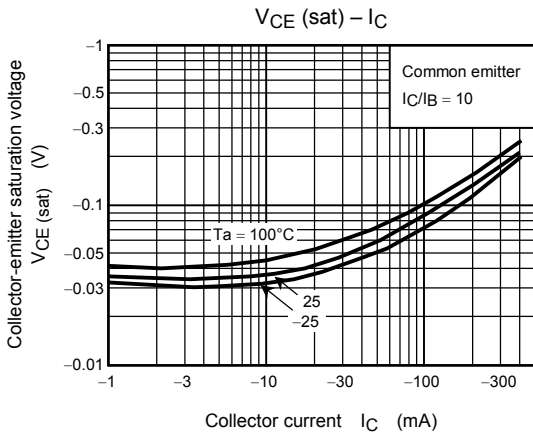
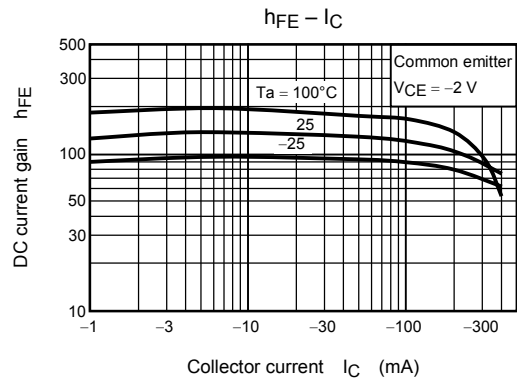
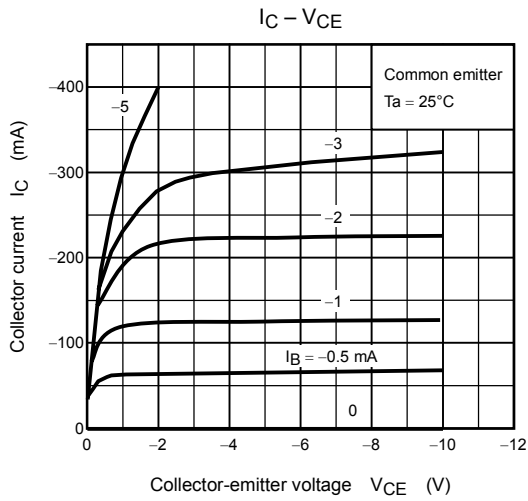
## Electrical Characteristics (Ta = 25°C)

Characteristics	Symbol	Test Condition	Min	Typ.	Max	Unit
Collector cut-off current	$I_{CBO}$	$V_{CB} = -80\text{ V}, I_E = 0$	—	—	-0.1	$\mu\text{A}$
Emitter cut-off current	$I_{EBO}$	$V_{EB} = -5\text{ V}, I_C = 0$	—	—	-0.1	$\mu\text{A}$
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = -10\text{ mA}, I_B = 0$	-80	—	—	V
DC current gain	$h_{FE(1)}$ (Note 2)	$I_E = -2\text{ mA}, I_C = -50\text{ mA}$	70	—	240	
	$h_{FE(2)}$	$V_{CE} = -2\text{ V}, I_C = -200\text{ mA}$	40	—	—	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -200\text{ mA}, I_B = -20\text{ mA}$	—	—	-0.4	V
Base-emitter voltage	$V_{BE}$	$V_{CE} = -2\text{ V}, I_C = -5\text{ mA}$	-0.55	—	-0.8	V
Transition frequency	$f_T$	$V_{CE} = -10\text{ V}, I_C = -10\text{ mA}$	—	120	—	MHz
Collector output capacitance	$C_{ob}$	$V_{CB} = -10\text{ V}, I_E = 0, f = 1\text{ MHz}$	—	14	—	pF

Note 2:  $h_{FE(1)}$  classification O: 70 to 140, Y: 120 to 240

## Marking





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