

TOSHIBA Transistor Silicon NPN Epitaxial Type (PCT process)

# 2SC2881

Voltage Amplifier Applications

Power Amplifier Applications

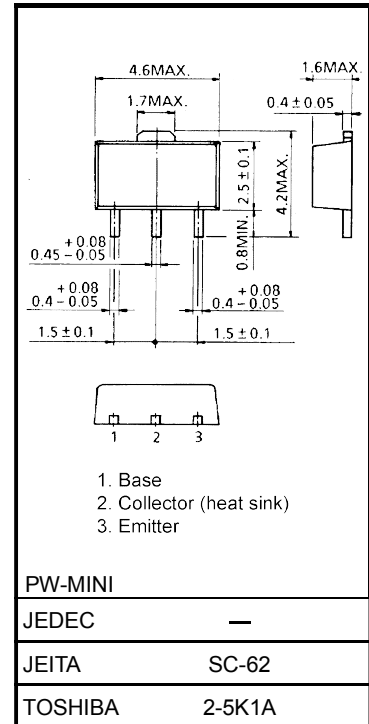
- High voltage:  $V_{CEO} = 120\text{ V}$
- High transition frequency:  $f_T = 120\text{ MHz (typ.)}$
- Small flat package
- $P_C = 1.0\text{ to }2.0\text{ W}$  (mounted on ceramic substrate)
- Complementary to 2SA1201

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

Characteristics	Symbol	Rating	Unit
Collector-base voltage	$V_{CBO}$	120	V
Collector-emitter voltage	$V_{CEO}$	120	V
Emitter-base voltage	$V_{EBO}$	5	V
Collector current	$I_C$	800	mA
Base current	$I_B$	160	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 a ceramic substrate ( $250\text{ mm}^2 \times 0.8\text{ t}$ )

Unit: mm



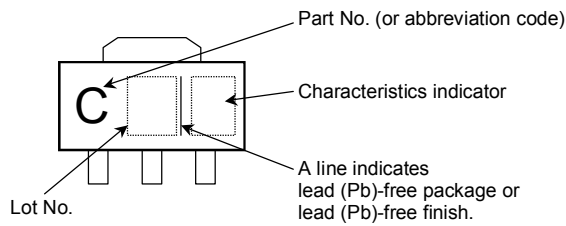
Weight: 0.05 g (typ.)

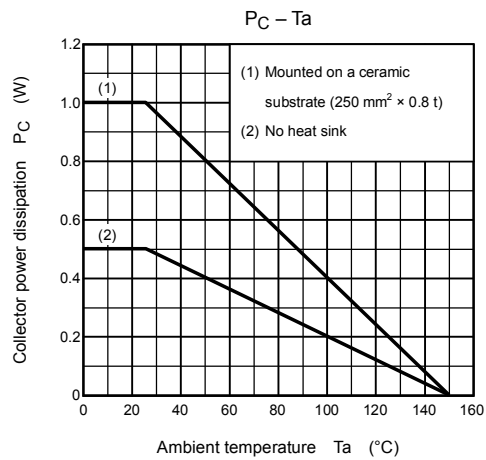
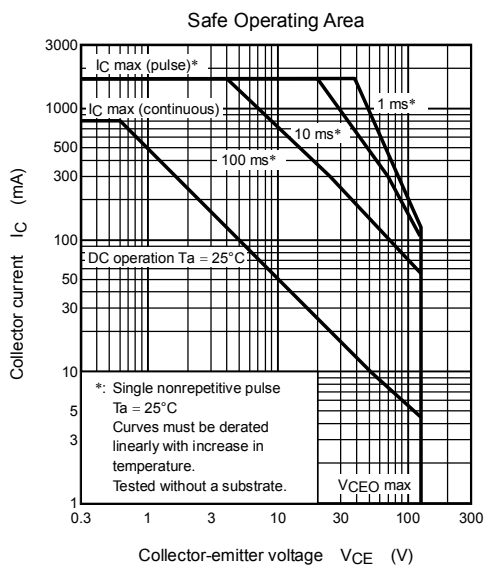
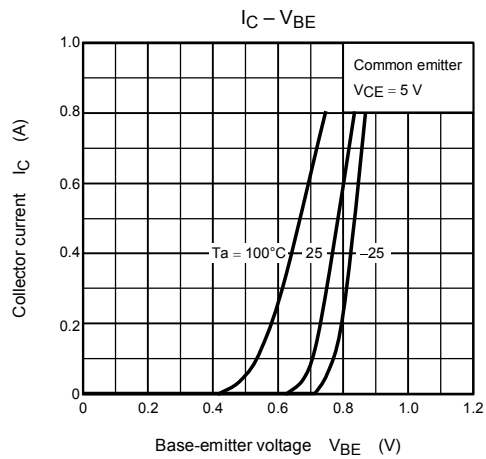
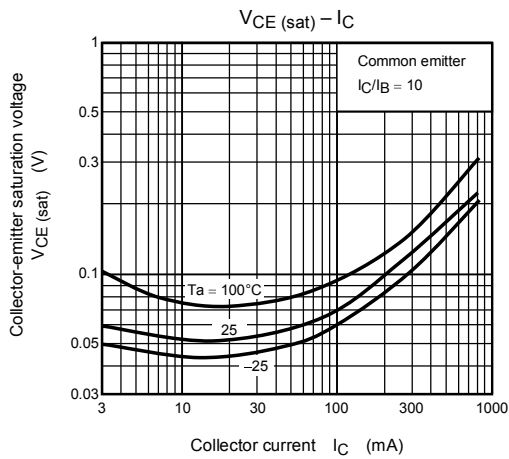
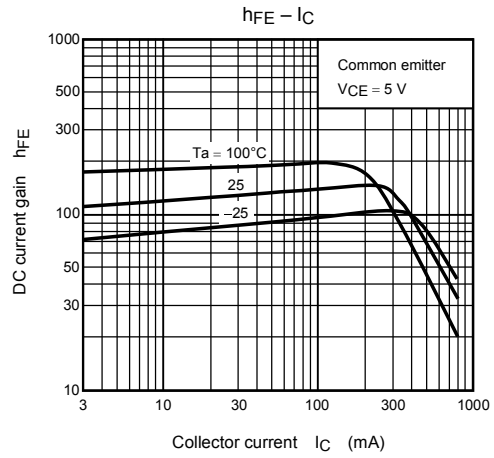
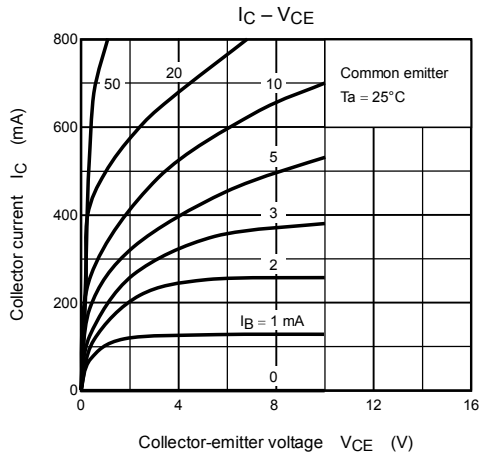
**Electrical Characteristics (Ta = 25°C)**

Characteristics	Symbol	Test Condition	Min	Typ.	Max	Unit
Collector cut-off current	$I_{CBO}$	$V_{CB} = 120\text{ V}, I_E = 0$	—	—	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	$V_{(BR)CEO}$	$I_C = 10\text{ mA}, I_B = 0$	120	—	—	V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = 1\text{ mA}, I_C = 0$	5	—	—	V
DC current gain	$h_{FE}$ (Note 2)	$V_{CE} = 5\text{ V}, I_C = 100\text{ mA}$	80	—	240	—
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 500\text{ mA}, I_B = 50\text{ mA}$	—	—	1.0	V
Base-emitter voltage	$V_{BE}$	$V_{CE} = 5\text{ V}, I_C = 500\text{ mA}$	—	—	1.0	V
Transition frequency	$f_T$	$V_{CE} = 5\text{ V}, I_C = 100\text{ mA}$	—	120	—	MHz
Collector output capacitance	$C_{ob}$	$V_{CB} = 10\text{ V}, I_E = 0, f = 1\text{ MHz}$	—	—	30	pF

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

**Marking**





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