

TOSHIBA Transistor Silicon NPN Epitaxial Type (PCT Process)

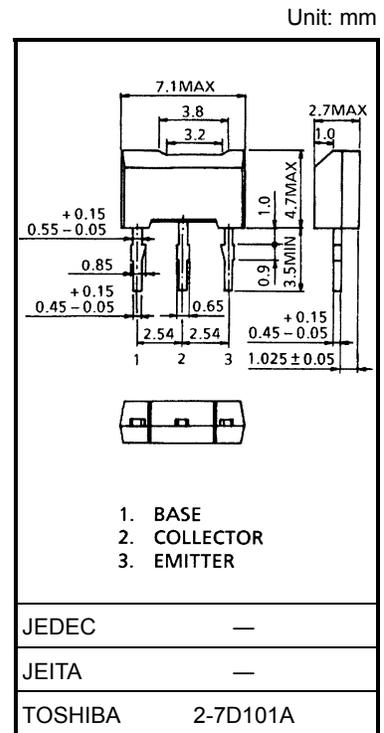
2SC3666

Audio Power Amplifier Applications

- High DC current gain: $h_{FE(1)} = 100$ to 320
- High power dissipation: $P_C = 1000$ mW

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

Characteristics	Symbol	Rating	Unit
Collector-base voltage	V_{CB0}	30	V
Collector-emitter voltage	V_{CEO}	30	V
Emitter-base voltage	V_{EBO}	5	V
Collector current	I_C	1	A
Base current	I_B	0.1	A
Collector power dissipation	P_C	1000	mW
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature range	T_{stg}	-55 to 150	$^\circ\text{C}$



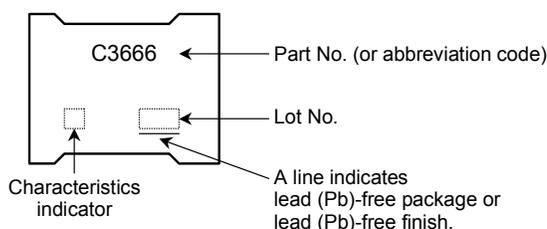
Electrical Characteristics ($T_a = 25^\circ\text{C}$)

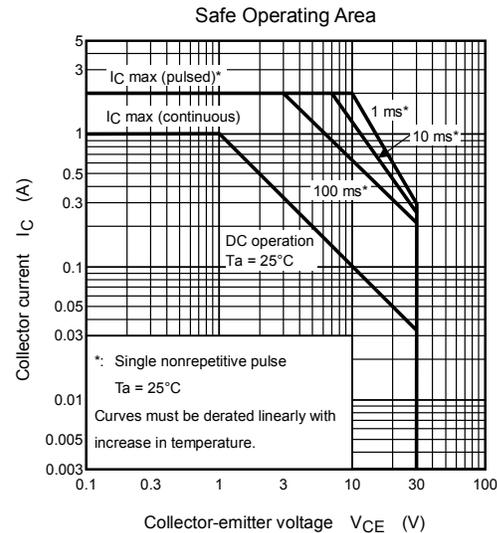
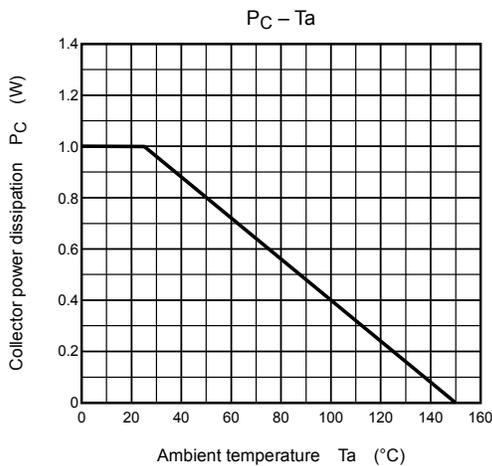
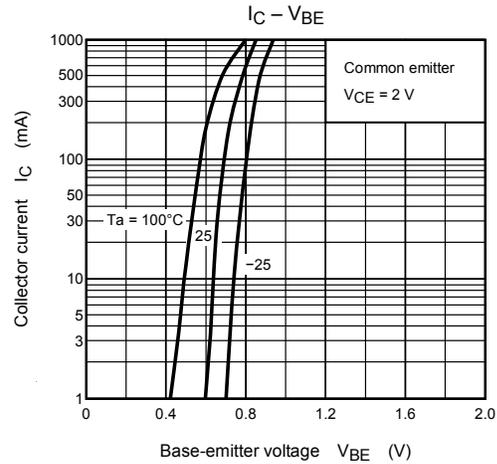
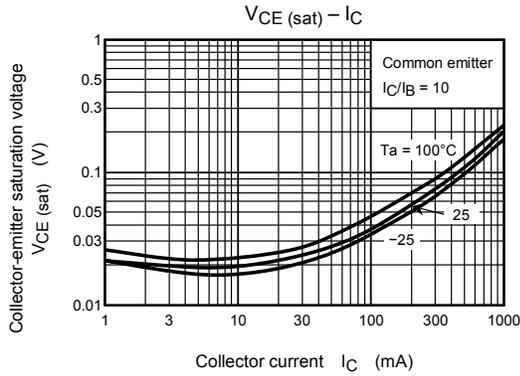
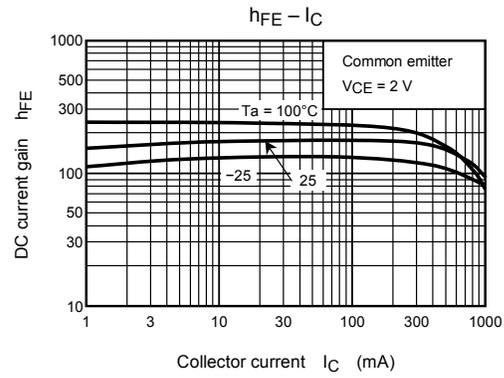
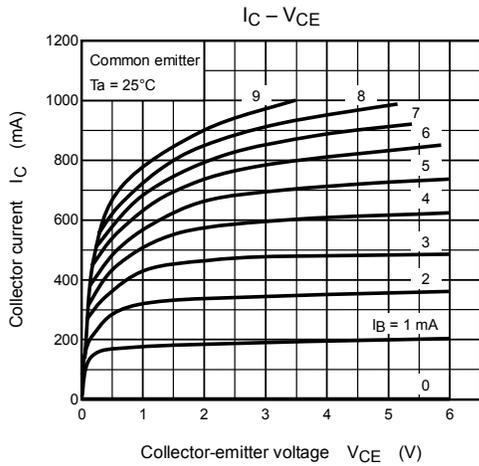
Weight: 0.2 g (typ.)

Characteristics	Symbol	Test Condition	Min	Typ.	Max	Unit
Collector cut-off current	I_{CB0}	$V_{CB} = 30\text{ V}, I_E = 0$	—	—	100	nA
Emitter cut-off current	I_{EBO}	$V_{EB} = 5\text{ V}, I_C = 0$	—	—	100	nA
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = 10\text{ mA}, I_B = 0$	30	—	—	V
DC current gain	$h_{FE(1)}$ (Note)	$V_{CE} = 2\text{ V}, I_C = 100\text{ mA}$	100	—	320	
	$h_{FE(2)}$	$V_{CE} = 2\text{ V}, I_C = 800\text{ mA}$	40	—	—	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 800\text{ mA}, I_B = 80\text{ mA}$	—	—	0.5	V
Base-emitter voltage	V_{BE}	$V_{CE} = 2\text{ V}, I_C = 800\text{ mA}$	—	0.9	1.5	V
Transition frequency	f_T	$V_{CE} = 2\text{ V}, I_C = 100\text{ mA}$	—	150	—	MHz
Collector output capacitance	C_{ob}	$V_{CB} = 10\text{ V}, f = 1\text{ MHz}$	—	13	—	pF

Note: $h_{FE(1)}$ classification O: 100 to 200, Y: 160 to 320

Marking





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