

TOSHIBA Transistor Silicon NPN Epitaxial Type (PCT Process)

2SC3421

Audio Frequency Power Amplifier Applications

- Complementary to 2SA1358
- Suitable for driver of 60 to 80 watts audio amplifier
- High breakdown voltage

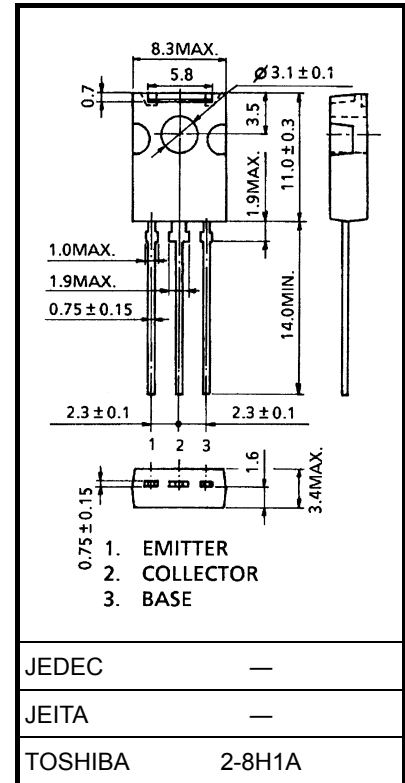
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Absolute Maximum Ratings (Tc = 25°C)

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	1	A
Base current		I _B	100	mA
Collector power dissipation	T _a = 25°C	P _C	1.5	W
	T _c = 25°C		10	
Junction temperature		T _j	150	°C
Storage temperature range		T _{stg}	-55 to 150	°C

Note: 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).

Unit: mm



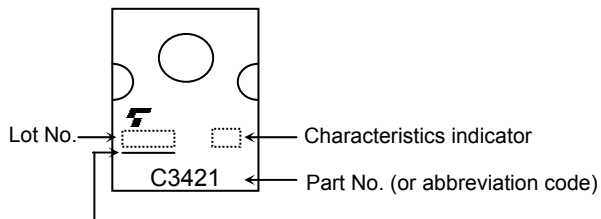
Weight: 0.82 g (typ.)

Electrical Characteristics (Tc = 25°C)

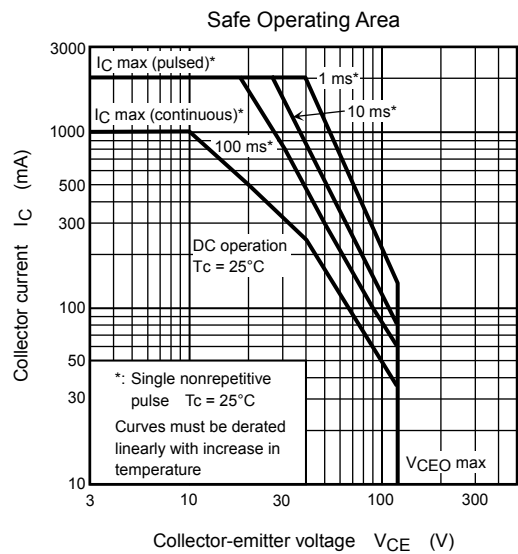
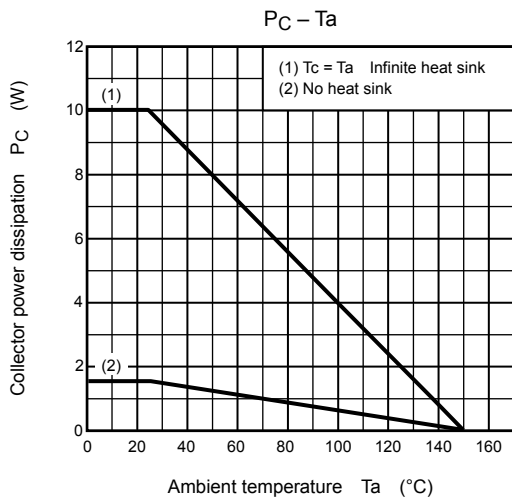
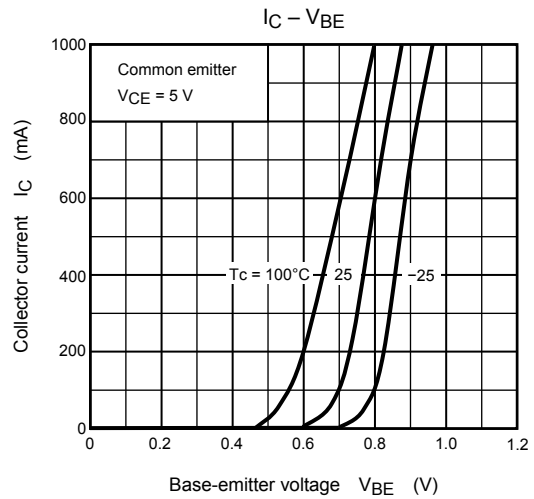
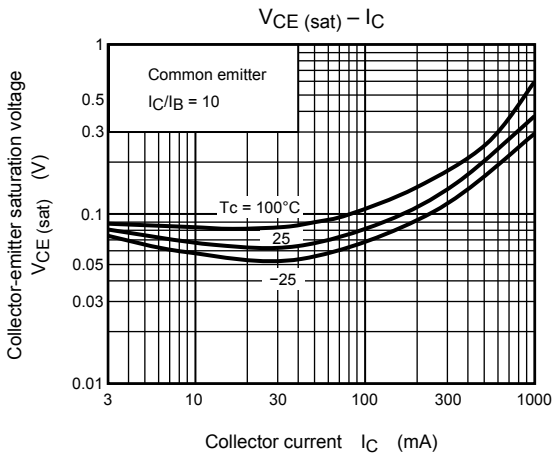
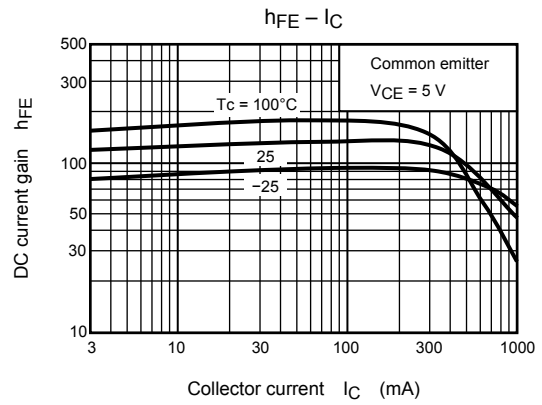
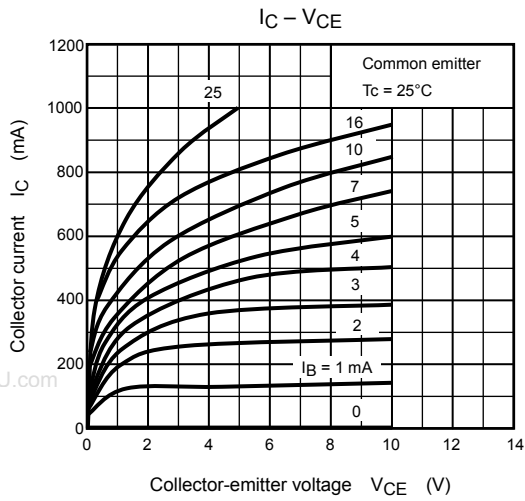
Characteristics	Symbol	Test Condition	Min	Typ.	Max	Unit
Collector cut-off current	I_{CBO}	$V_{CB} = 120\text{ V}, I_E = 0$	—	—	100	nA
Emitter cut-off current	I_{EBO}	$V_{EB} = 5\text{ V}, I_C = 0$	—	—	100	nA
Collector-emitter breakdown voltage	$V_{(BR) CEO}$	$I_C = 10\text{ mA}, I_B = 0$	120	—	—	V
DC current gain	h_{FE} (Note)	$V_{CE} = 5\text{ V}, I_C = 100\text{ mA}$	80	—	240	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 500\text{ mA}, I_B = 50\text{ mA}$	—	0.30	1.0	V
Base-emitter voltage	V_{BE}	$V_{CE} = 5\text{ V}, I_C = 500\text{ mA}$	—	0.78	1.0	V
Transition frequency	f_T	$V_{CE} = 5\text{ V}, I_C = 100\text{ mA}$	—	120	—	MHz
Collector output capacitance	C_{ob}	$V_{CB} = 10\text{ V}, I_E = 0, f = 1\text{ MHz}$	—	15	—	pF

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

Marking



A line indicates lead (Pb)-free package or lead (Pb)-free finish.



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