TOSHIBA Transistor Silicon NPN Epitaxial Type (PCT process)

2SC2120

Audio Power Amplifier Applications

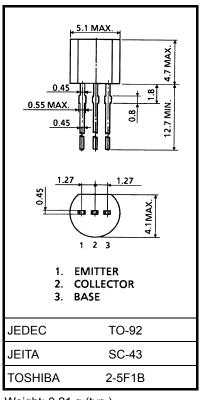
Unit: mm

- High hfe: hfe (1) = $100 \sim 320$
- 1 watts amplifier applications.
- Complementary to 2SA950

Absolute Maximum Ratings (Ta = 25°C)

Characteristics	Symbol	Rating	Unit	
Collector-base voltage	V _{CBO}	35	V	
Collector-emitter voltage	V _{CEO}	30	V	
Emitter-base voltage	V _{EBO}	5	V	
Collector current	IC	800	mA	
Base current	ΙB	160	mA	
Collector power dissipation	PC	600	mW	
Junction temperature	Tj	150	°C	
Storage temperature range	T _{stg}	-55~150	°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.



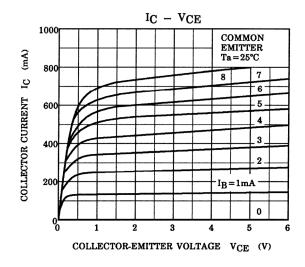
Weight: 0.21 g (typ.)

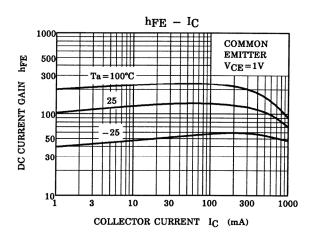
Please design the appropriate reliability upon reviewing the Toshiba Semiconductor Reliability Handbook ("Handling Precautions"/"Derating Concept and Methods") and individual reliability data (i.e. reliability test report and estimated failure rate, etc).

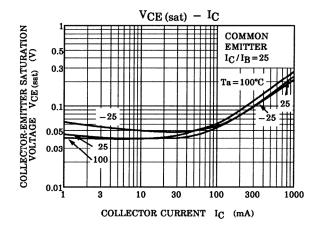
Electrical Characteristics (Ta = 25°C)

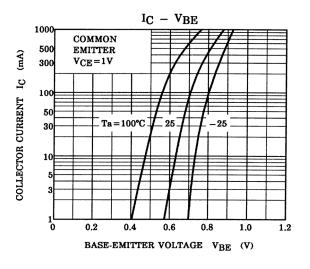
Characteristics	Symbol	Test Condition	Min	Тур.	Max	Unit
Collector cut-off current	I _{CBO}	$V_{CB} = 35 \text{ V}, I_{E} = 0$	_	_	0.1	μА
Emitter cut-off current	I _{EBO}	V _{EB} = 5 V, I _C = 0	_	_	0.1	μА
Collector-emitter breakdown voltage	V (BR) CEO	$I_C = 10 \text{ mA}, I_B = 0$	30	_	_	V
DC current gain	h _{FE (1)} (Note)	V _{CE} = 1 V, I _C = 100 mA	100	_	320	
	h _{FE (2)}	V _{CE} = 1 V, I _C = 700 mA	35	_	_	
Collector-emitter saturation voltage	V _{CE} (sat)	$I_C = 500 \text{ mA}, I_B = 20 \text{ mA}$	_	_	0.5	V
Base-emitter voltage	V _{BE}	V _{CE} = 1 V, I _C = 10 mA	0.5	_	0.8	V
Transition frequency	f _T	V _{CE} = 5 V, I _C = 10 mA	_	120	_	MHz
Collector output capacitance	C _{ob}	V _{CB} = 10 V, I _E = 0, f = 1 MHz	_	13	_	pF

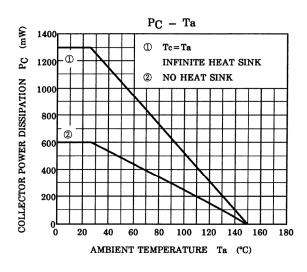
Note: hFE (1) classification O: 100~200, Y: 160~320











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20070701-EN GENERAL

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