

TOSHIBA Transistor Silicon PNP Epitaxial Type (PCT process)

2SC1959

Audio Frequency Low Power Amplifier Applications

Driver Stage Amplifier Applications

Switching Applications

- Excellent hFE linearity: hFE (2) = 25 (min): VCE = 6 V, IC = 400 mA
- 1 watt amplifier applications.
- Complementary to 2SA562TM.

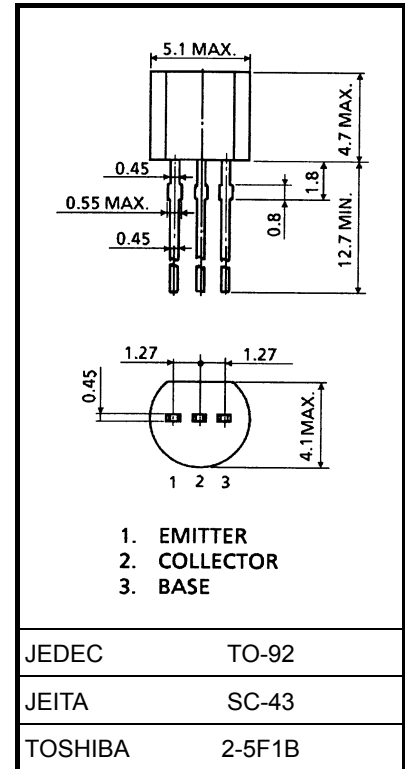
Absolute Maximum Ratings (Ta = 25°C)

Characteristics	Symbol	Rating	Unit
Collector-base voltage	V _{CB0}	35	V
Collector-emitter voltage	V _{CEO}	30	V
Emitter-base voltage	V _{EBO}	5	V
Collector current	I _C	500	mA
Base current	I _B	100	mA
Collector power dissipation	P _C	500	mW
Junction temperature	T _j	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.

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



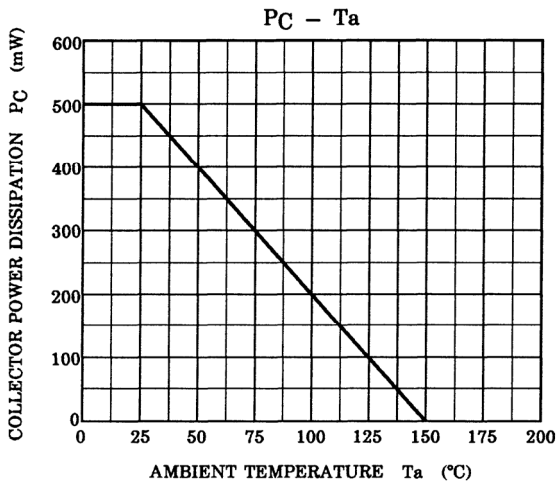
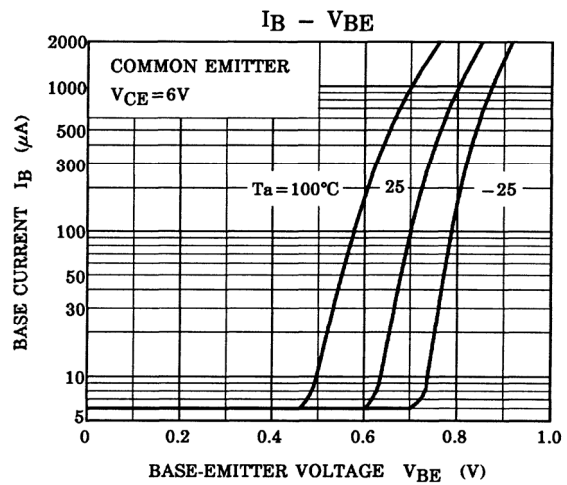
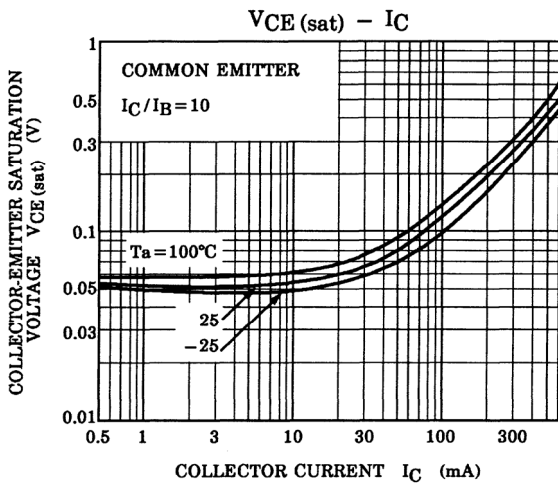
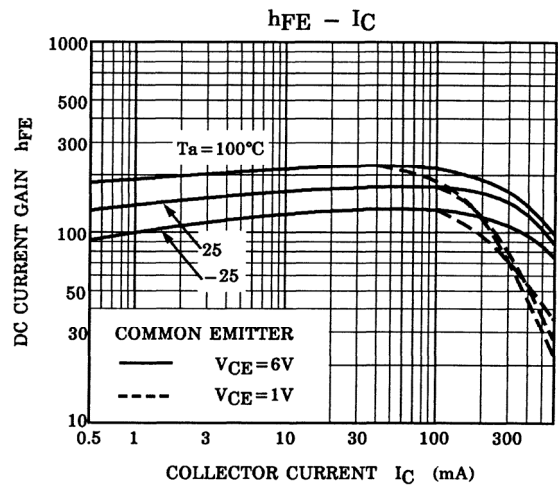
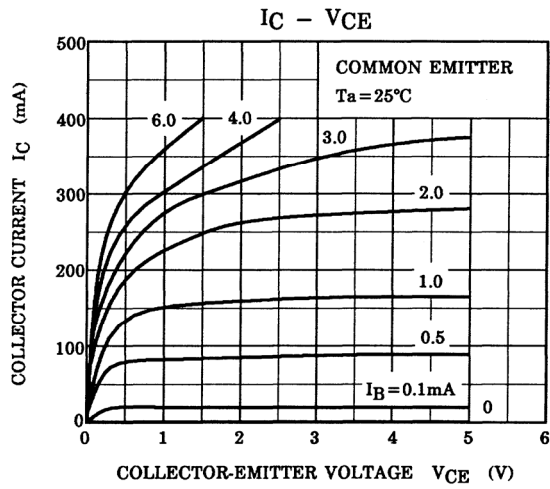
Weight: 0.21 g (typ.)

Electrical Characteristics (Ta = 25°C)

Characteristics	Symbol	Test Condition	Min	Typ.	Max	Unit
Collector cut-off current	I _{CB0}	V _{CB} = 35 V, I _E = 0	—	—	0.1	μA
Emitter cut-off current	I _{EBO}	V _{EB} = 5 V, I _C = 0	—	—	0.1	μA
DC current gain	h _{FE} (1) (Note)	V _{CE} = 1 V, I _C = 100 mA	70	—	400	
	h _{FE} (2) (Note)	V _{CE} = 6 V, I _C = 400 mA	25	—	—	
Collector-emitter saturation voltage	V _{CE(sat)}	I _C = 100 mA, I _B = 10 mA	—	0.1	0.25	V
Base-emitter voltage	V _{BE}	V _{CE} = 1 V, I _C = 100 mA	—	0.8	1.0	V
Transition frequency	f _T	V _{CE} = 6 V, I _C = 20 mA	—	300	—	MHz
Collector output capacitance	C _{ob}	V _{CB} = 6 V, I _E = 0, f = 1 MHz	—	7	—	pF

Note: h_{FE} (1) classification O: 70~140, Y: 120~240, GR: 200~400

h_{FE} (2) classification O: 25 (min), Y: 40 (min)



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20070701-EN GENERAL

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