

TOSHIBA Transistor Silicon NPN Triple Diffused Type

2SC5949

Power Amplifier Applications

- Complementary to 2SA2121
- Recommended for audio frequency amplifier output stage.

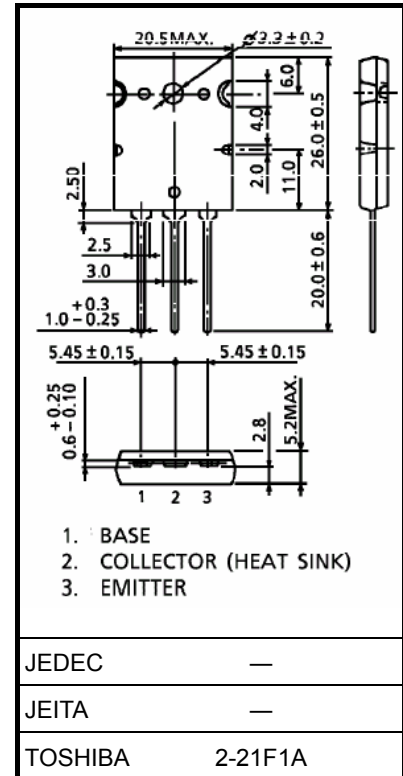
Absolute Maximum Ratings (T_c = 25°C)

Characteristic	Symbol	Rating	Unit
Collector-base voltage	V _{CBO}	200	V
Collector-emitter voltage	V _{CEO}	200	V
Emitter-base voltage	V _{EBO}	5	V
Collector current	I _C	15	A
Base current	I _B	1.5	A
Collector power dissipation	P _C	220	W
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



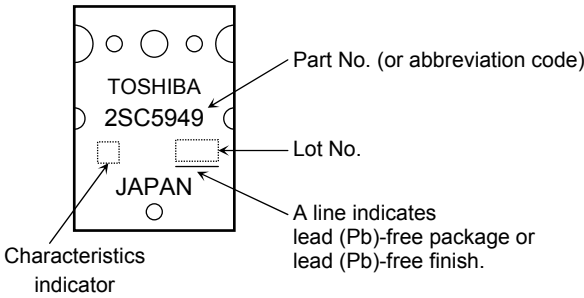
Weight: 9.75 g (typ.)

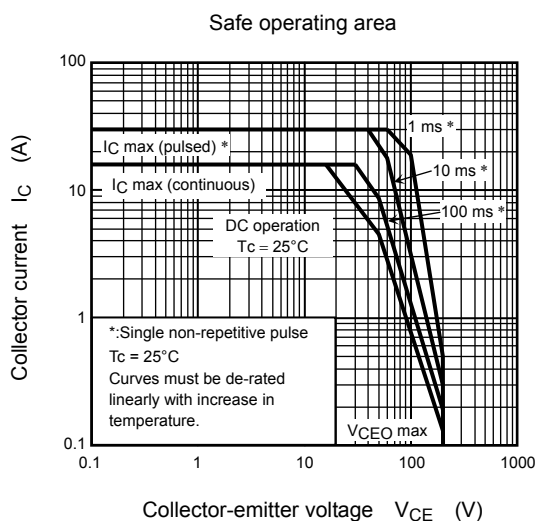
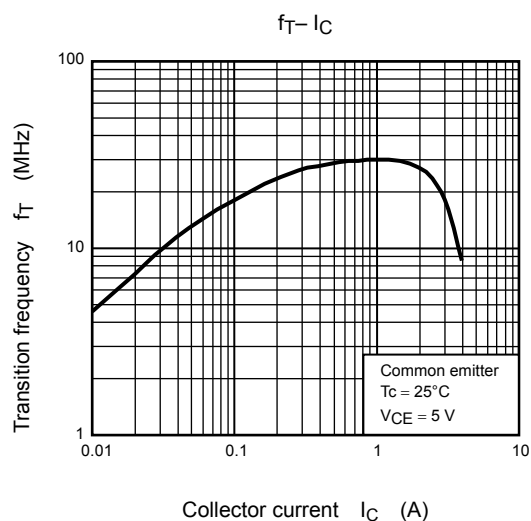
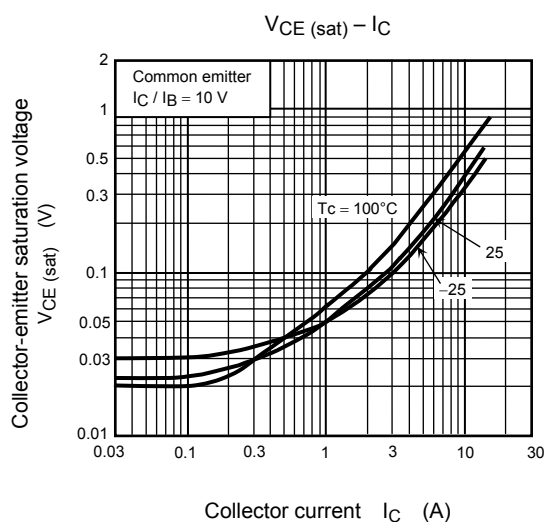
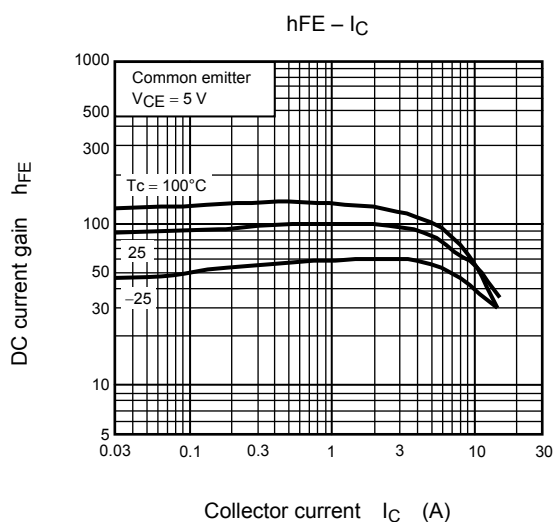
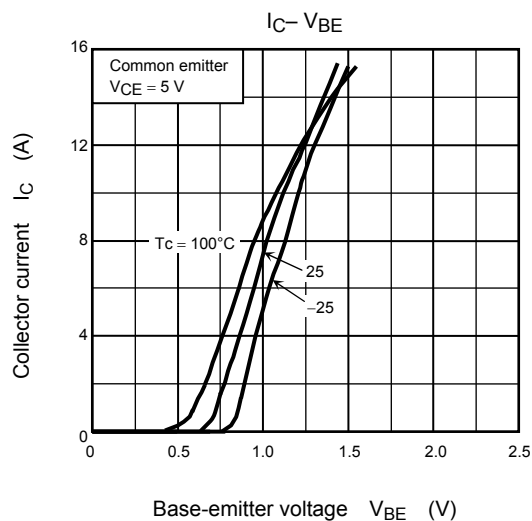
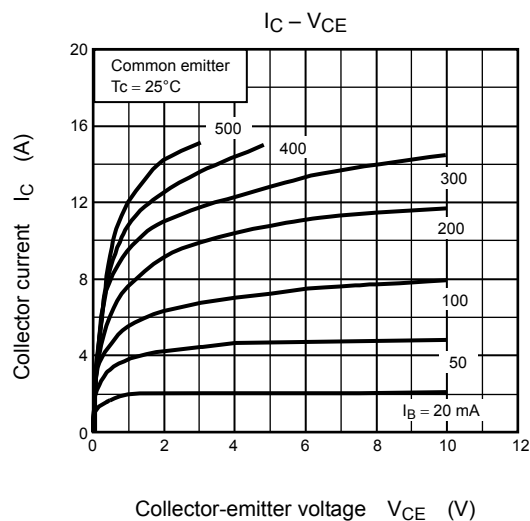
Electrical Characteristics (Tc = 25°C)

Characteristic	Symbol	Test Conditions	Min	Typ.	Max	Unit
Collector cut-off current	ICBO	V _{CB} = 200 V, I _E = 0	—	—	5.0	μA
Emitter cut-off current	IEBO	V _{EB} = 5 V, I _C = 0	—	—	5.0	μA
Collector-emitter breakdown voltage	V (BR) CEO	I _C = 50 mA, I _B = 0	200	—	—	V
DC current gain	h _{FE} (1) (Note 1)	V _{CE} = 5 V, I _C = 1 A	55	—	160	
	h _{FE} (2)	V _{CE} = 5 V, I _C = 8 A	35	60	—	
Collector-emitter saturation voltage	V _{CE} (sat)	I _C = 10 A, I _B = 1 A	—	0.4	3.0	V
Base-emitter voltage	V _{BE}	V _{CE} = 5 V, I _C = 8 A	—	1.0	1.5	V
Transition frequency	f _T	V _{CE} = 5 V, I _C = 1 A	—	30	—	MHz
Collector output capacitance	C _{ob}	V _{CB} = 10 V, I _E = 0, f = 1 MHz	—	270	—	pF

Note 1: h_{FE}(1) classification R: 55 to 110, O: 80 to 160

Marking





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20070701-EN

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