

TOSHIBA Transistor Silicon PNP Triple Diffused Type

2SA1943

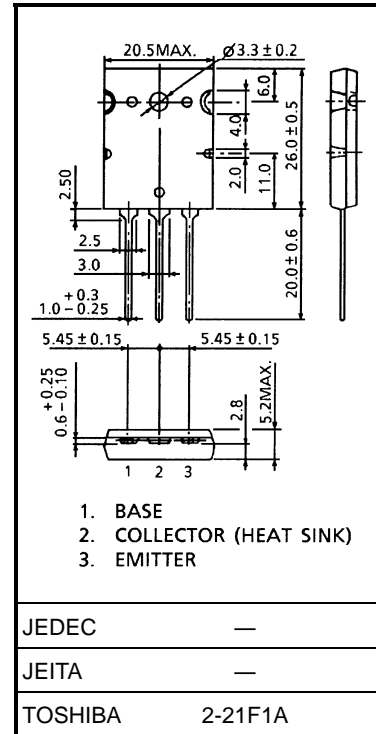
Power Amplifier Applications

Unit: mm

- High collector voltage: $V_{CEO} = -230$ V (min)
- Complementary to 2SC5200
- Recommended for 100-W high-fidelity audio frequency amplifier output stage.

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

Characteristics	Symbol	Rating	Unit
Collector-base voltage	V_{CBO}	-230	V
Collector-emitter voltage	V_{CEO}	-230	V
Emitter-base voltage	V_{EBO}	-5	V
Collector current	I_C	-15	A
Base current	I_B	-1.5	A
Collector power dissipation ($T_c = 25^\circ\text{C}$)	P_C	150	W
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature range	T_{stg}	-55 to 150	$^\circ\text{C}$

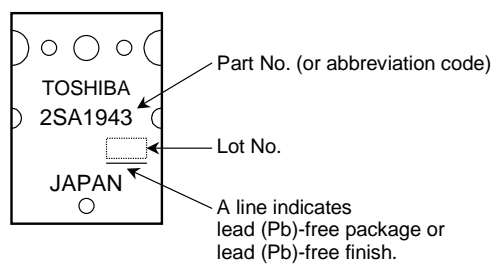


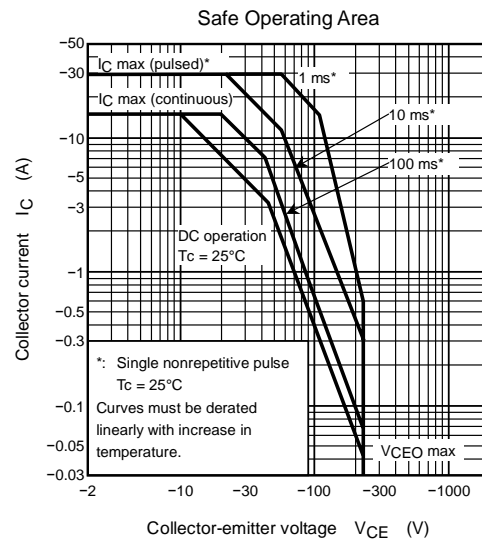
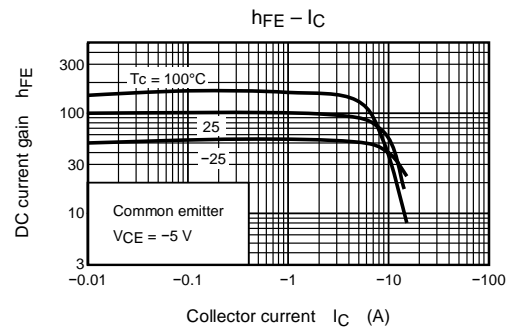
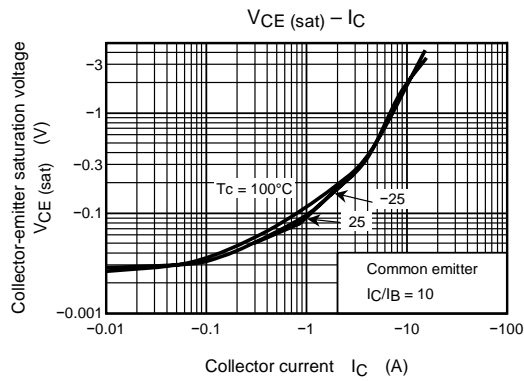
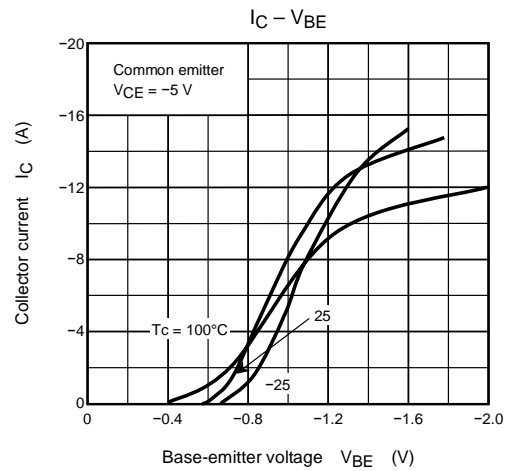
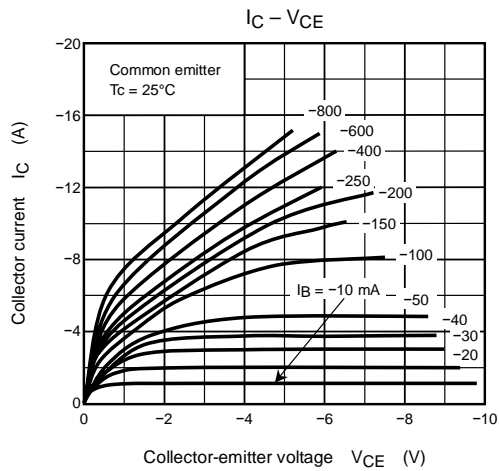
Weight: 9.75 g (typ.)

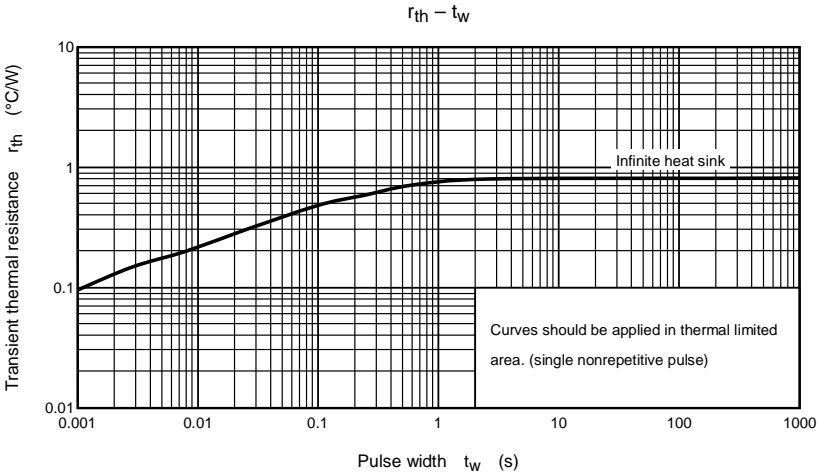
Electrical Characteristics ($T_a = 25^\circ\text{C}$)

Characteristics	Symbol	Test Condition	Min	Typ.	Max	Unit
Collector cut-off current	I_{CBO}	$V_{CB} = -230$ V, $I_E = 0$	—	—	-5.0	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = -5$ V, $I_C = 0$	—	—	-5.0	μA
Collector-emitter breakdown voltage	$V_{(BR) CEO}$	$I_C = -50$ mA, $I_B = 0$	-230	—	—	V
DC current gain	$h_{FE (1)}$ (Note)	$V_{CE} = -5$ V, $I_C = -1$ A	55	—	160	
	$h_{FE (2)}$	$V_{CE} = -5$ V, $I_C = -7$ A	35	60	—	
Collector-emitter saturation voltage	$V_{CE (sat)}$	$I_C = -8$ A, $I_B = -0.8$ A	—	-1.5	-3.0	V
Base-emitter voltage	V_{BE}	$V_{CE} = -5$ V, $I_C = -7$ 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	—	360	—	pF

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

Marking





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