

TOSHIBA Transistor Silicon NPN Triple Diffused Type (Darlington power transistor)

2SD2449

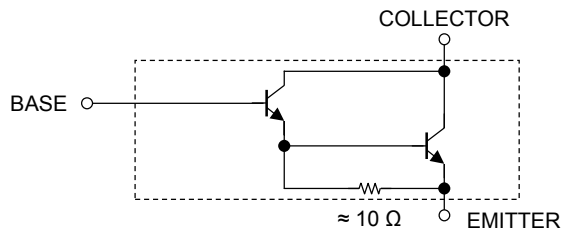
Power Amplifier Applications

- High breakdown voltage: $V_{CEO} = 160 \text{ V (min)}$
- Complementary to 2SB1594

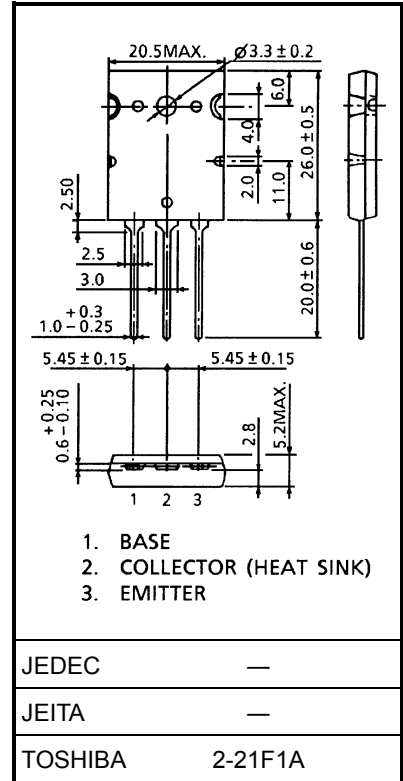
Maximum Ratings ($T_a = 25^\circ\text{C}$)

Characteristics	Symbol	Rating	Unit
Collector-base voltage	V_{CBO}	160	V
Collector-emitter voltage	V_{CEO}	160	V
Emitter-base voltage	V_{EBO}	5	V
Collector current	I_C	10	A
Base current	I_B	1	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	$^\circ\text{C}$

Equivalent Circuit



Unit: mm



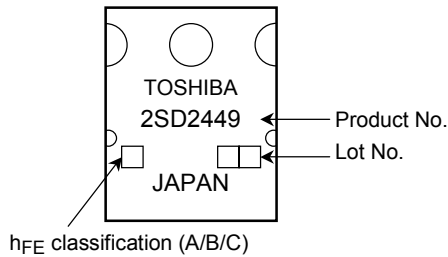
Weight: 9.75 g (typ.)

Electrical Characteristics (Ta = 25°C)

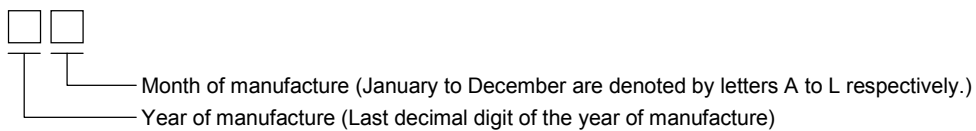
Characteristics	Symbol	Test Condition	Min	Typ.	Max	Unit
Collector cut-off current	I_{CBO}	$V_{CB} = 160\text{ V}, I_E = 0$	—	—	5	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = 5\text{ V}, I_C = 0$	—	—	5	μA
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = 50\text{ mA}, I_B = 0$	160	—	—	V
DC current gain	$h_{FE(1)}$ (Note)	$V_{CE} = 5\text{ V}, I_C = 8\text{ A}$	3000	—	20000	
	$h_{FE(2)}$	$V_{CE} = 5\text{ V}, I_C = 12\text{ A}$	2000	—	—	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 8\text{ A}, I_B = 8\text{ mA}$	—	—	3.0	V
Base-emitter voltage	V_{BE}	$V_{CE} = 5\text{ V}, I_C = 8\text{ A}$	—	—	3.0	V
Transition frequency	f_T	$V_{CE} = 5\text{ V}, I_C = 1\text{ A}$	—	30	—	MHz
Collector output capacitance	C_{ob}	$V_{CB} = 10\text{ V}, I_E = 0, f = 1\text{ MHz}$	—	150	—	pF

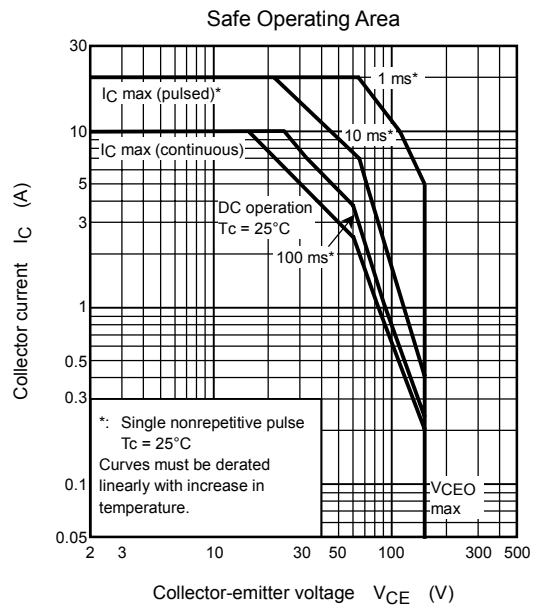
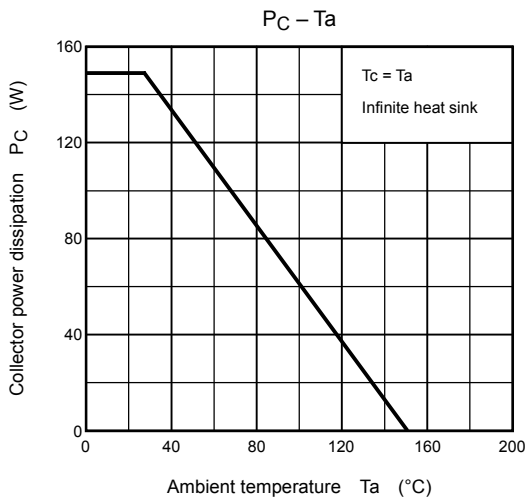
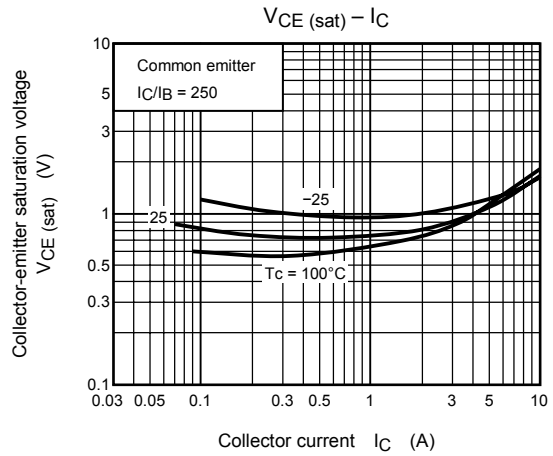
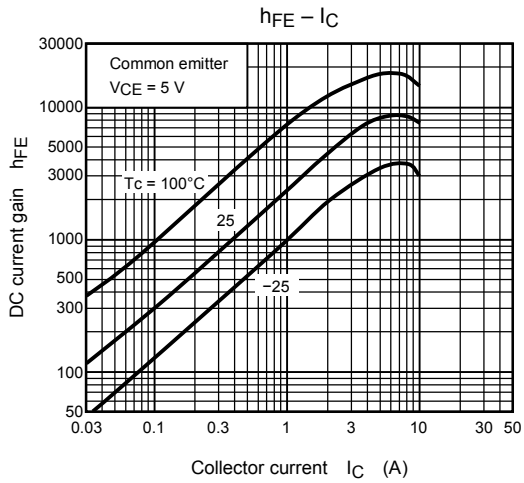
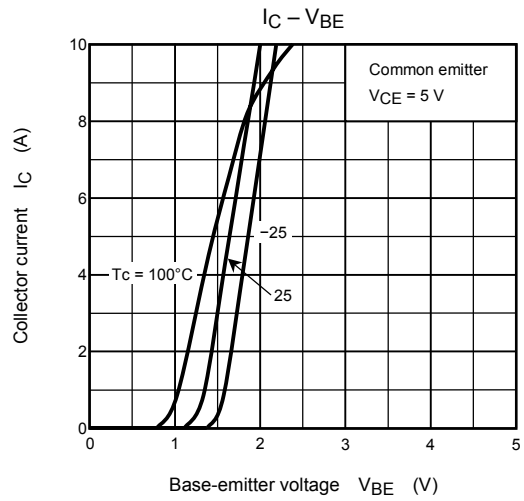
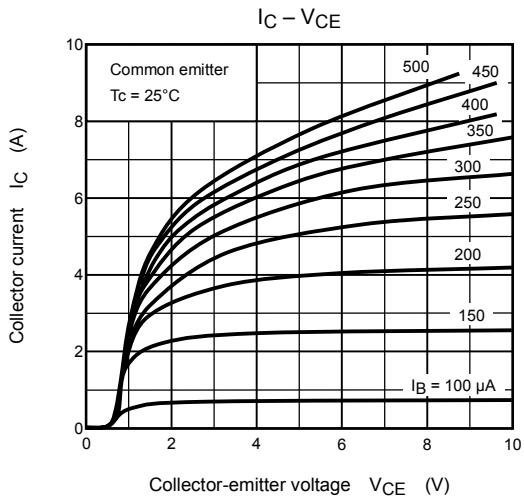
Note: $h_{FE(1)}$ classification A: 3000 to 10000, B: 5000 to 15000, C: 7000 to 20000

Marking



Explanation of Lot No.





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