

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

2SD2384

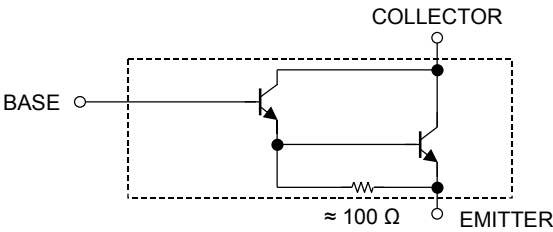
Power Amplifier Applications

- High breakdown voltage: $V_{CEO} = 140\text{ V}$ (min)
- Complementary to 2SB1555

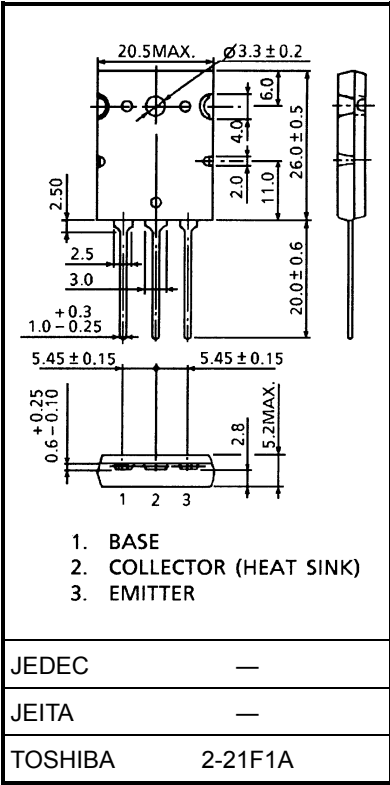
Maximum Ratings ($T_a = 25^{\circ}\text{C}$)

Characteristics	Symbol	Rating	Unit
Collector-base voltage	V_{CBO}	140	V
Collector-emitter voltage	V_{CEO}	140	V
Emitter-base voltage	V_{EBO}	5	V
Collector current	I_C	7	A
Base current	I_B	0.1	A
Collector power dissipation ($T_c = 25^{\circ}\text{C}$)	P_C	100	W
Junction temperature	T_j	150	$^{\circ}\text{C}$
Storage temperature range	T_{stg}	-55 to 150	$^{\circ}\text{C}$

Equivalent Circuit



Unit: mm



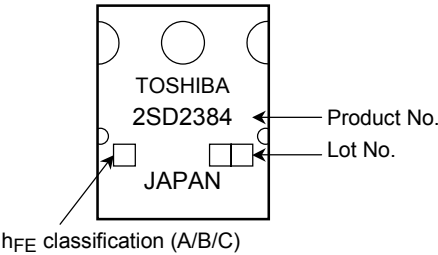
Weight: 9.75 g (typ.)

Electrical Characteristics (Ta = 25°C)

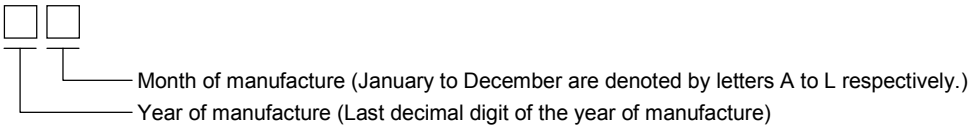
Characteristics	Symbol	Test Condition	Min	Typ.	Max	Unit
Collector cut-off current	ICBO	V _{CB} = 140 V, I _E = 0	—	—	5.0	μA
Emitter cut-off current	IEBO	V _{EB} = 5 V, I _C = 0	—	—	5.0	μA
Collector-emitter breakdown voltage	V _(BR) CEO	I _C = 50 mA, I _B = 0	140	—	—	V
DC current gain	h _{FE} (1) (Note)	V _{CE} = 5 V, I _C = 6 A	5000	—	30000	—
	h _{FE} (2)	V _{CE} = 5 V, I _C = 10 A	2000	—	—	
Collector-emitter saturation voltage	V _{CE} (sat)	I _C = 6 A, I _B = 6 mA	—	—	2.5	V
Base-emitter voltage	V _{BE}	V _{CE} = 5 V, I _C = 6 A	—	—	3.0	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	—	90	—	pF

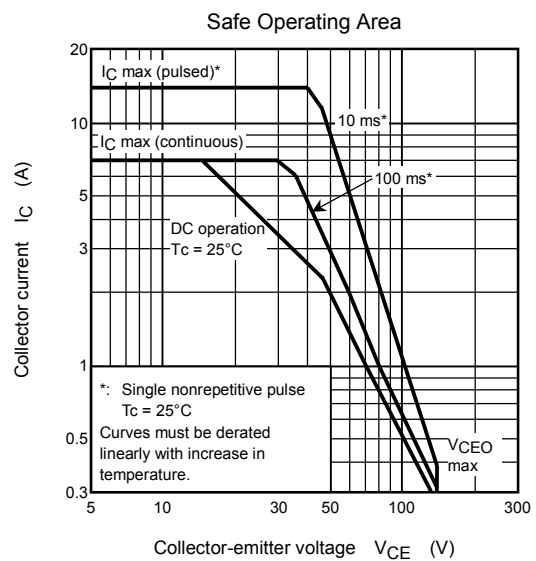
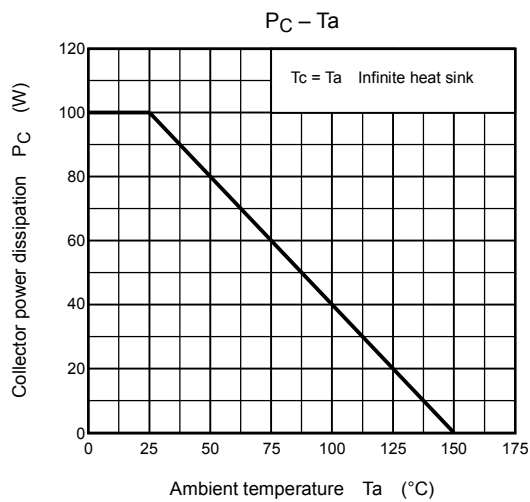
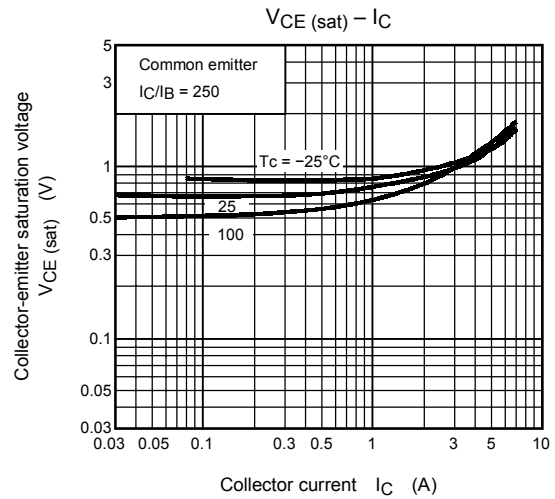
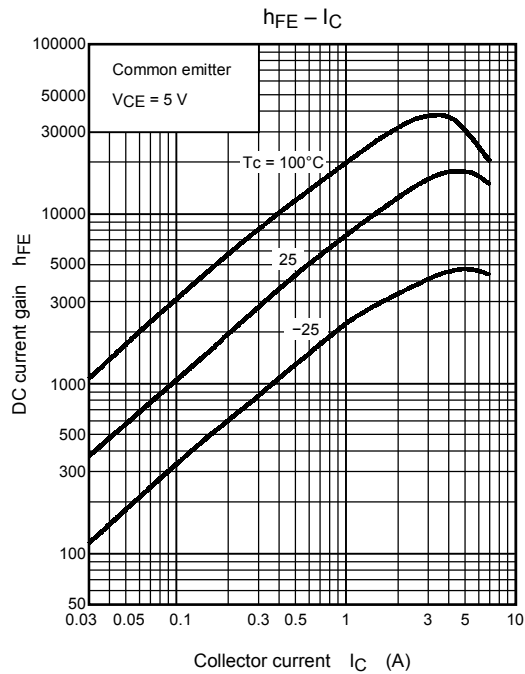
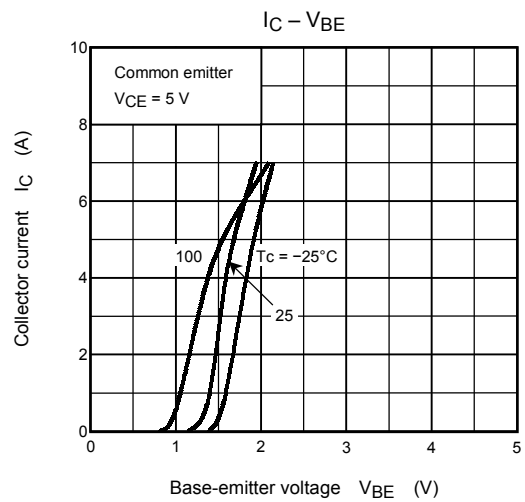
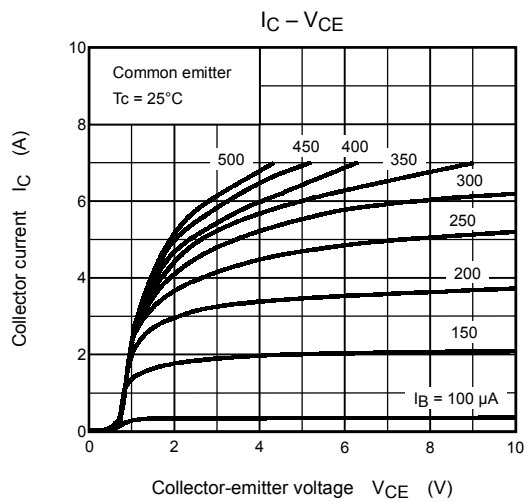
Note: h_{FE} (1) classification A: 5000 to 12000, B: 9000 to 18000, C: 15000 to 30000

Marking



Explanation of Lot No.





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