

TOSHIBA Transistor Silicon NPN Epitaxial Type (PCT Process)

2SC4935

Power Amplifier Applications

Unit: mm

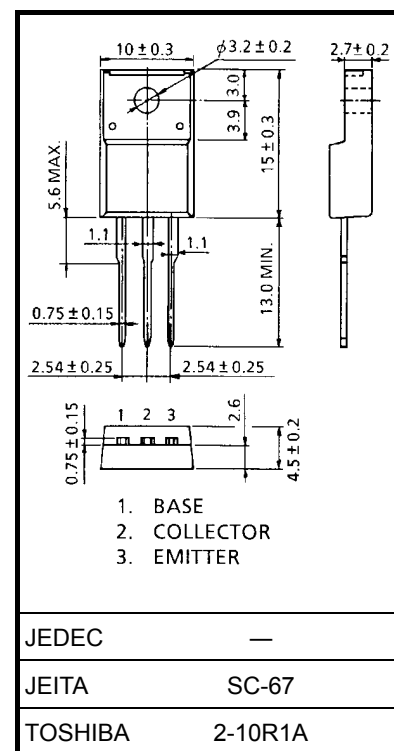
- Good hFE linearity

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

Characteristics	Symbol	Rating	Unit
Collector-base voltage	V_{CBO}	50	V
Collector-emitter voltage	V_{CEO}	50	V
Emitter-base voltage	V_{EBO}	5	V
Collector current	I_C	3	A
Base current	I_B	0.3	A
Collector power dissipation	$T_a = 25^\circ\text{C}$	2	W
	$T_c = 25^\circ\text{C}$	10	
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature range	T_{stg}	-55 to 150	$^\circ\text{C}$

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).



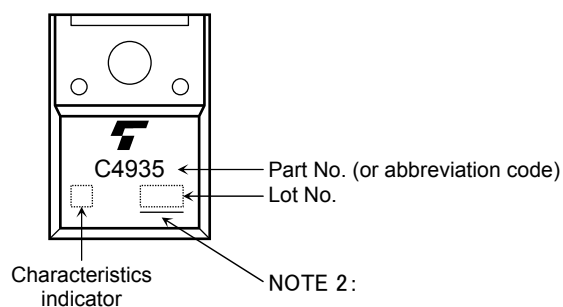
Weight: 1.7 g (typ.)

Electrical Characteristics (T_a = 25°C)

Characteristics	Symbol	Test Condition	Min	Typ.	Max	Unit
Collector cut-off current	I _{CBO}	V _{CB} = 50 V, I _E = 0	—	—	1	μA
Emitter cut-off current	I _{EBO}	V _{EB} = 5 V, I _C = 0	—	—	1	μA
Collector-emitter breakdown voltage	V _(BR) CEO	I _C = 10 mA, I _B = 0	50	—	—	V
DC current gain	h _{FE} (1) (Note)	V _{CE} = 2 V, I _C = 0.5 A	70	—	240	
	h _{FE} (2)	V _{CE} = 2 V, I _C = 2.5 A	30	—	—	
Collector-emitter saturation voltage	V _{CE} (sat)	I _C = 2 A, I _B = 0.2 A	—	0.4	0.6	V
Base-emitter voltage	V _{BE}	V _{CE} = 2 V, I _C = 0.5 A	—	0.75	1	V
Transition frequency	f _T	V _{CE} = 2 V, I _C = 0.5 A	—	80	—	MHz
Collector output capacitance	C _{ob}	V _{CB} = 10 V, I _E = 0, f = 1 MHz	—	30	—	pF

Note: h_{FE} (1) classification O: 70 to 140, Y: 120 to 240

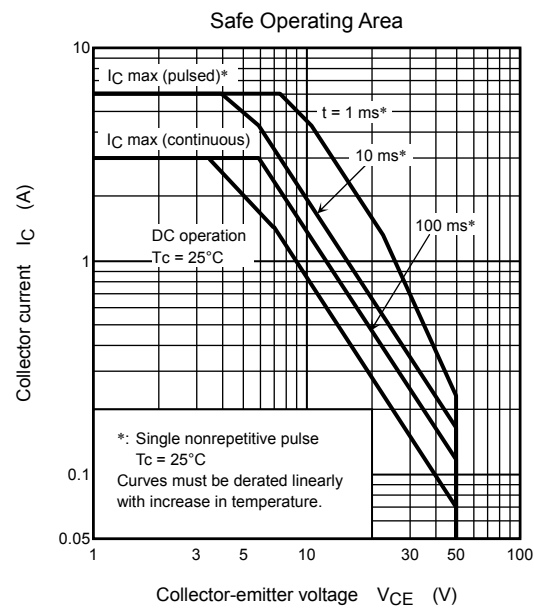
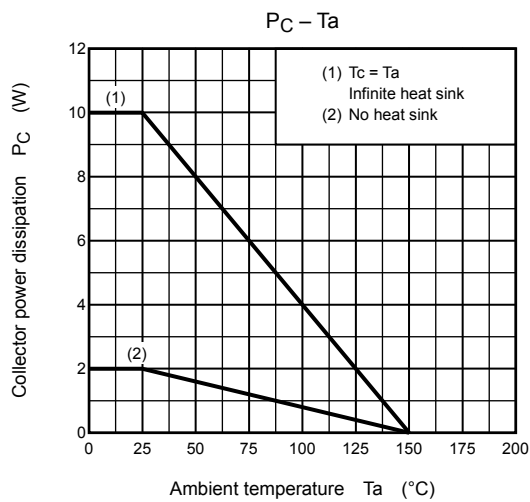
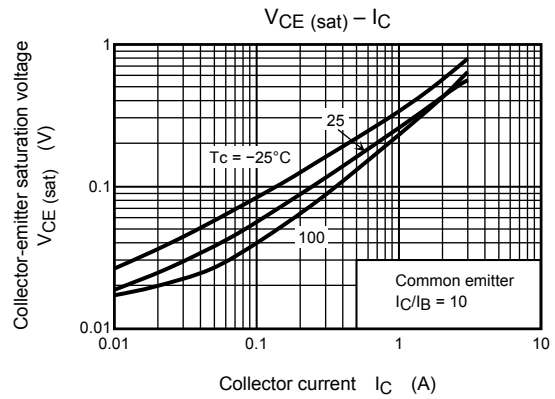
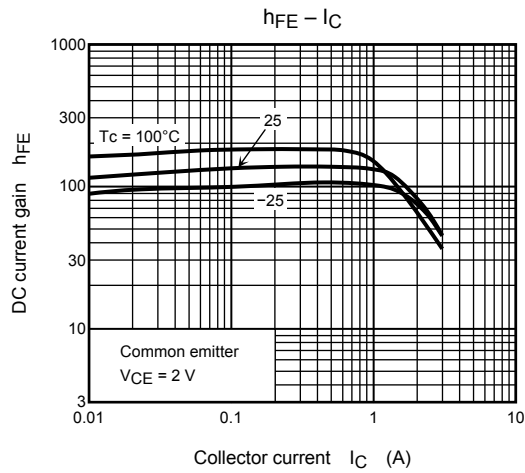
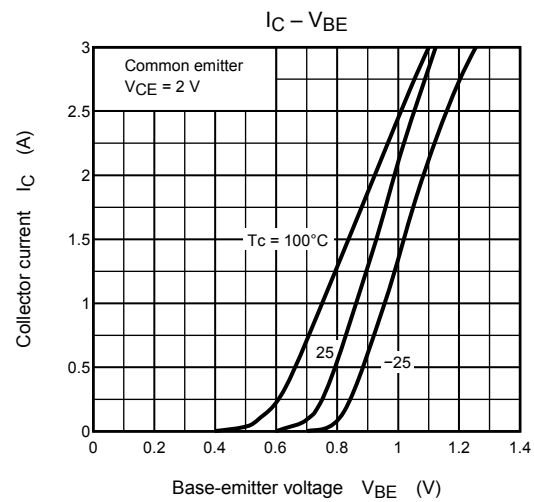
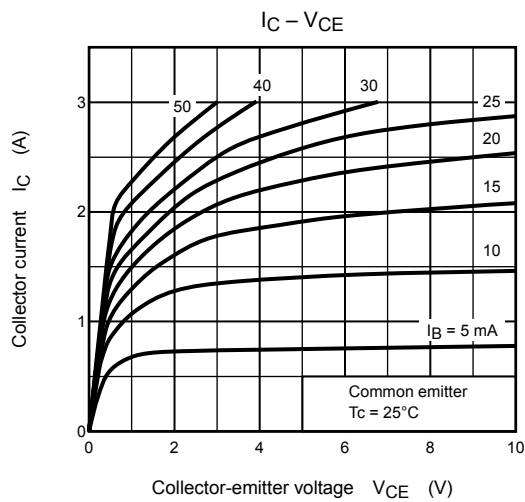
Marking



Note 2 : A line under a Lot No. identifies the indication of product Labels.
[[G]]/RoHS COMPATIBLE or [[G]]/RoHS [[Pb]]

Please contact your TOSHIBA sales representative for details as to environmental matters such as the RoHS compatibility of Product.

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