

TOSHIBA Transistor Silicon PNP Epitaxial Type (PCT process)

2SA2154CT

General Purpose Amplifier Applications

- High voltage and high current : $V_{CE0} = -50V$, $I_C = -100mA$ (max)
- Excellent hFE linearity
: $hFE (I_C = -0.1 mA) / hFE (I_C = -2 mA) = 0.95$ (typ.)
- High hFE : $hFE = 120$ to 400
- Complementary to 2SC6026CT

Absolute Maximum Ratings (Ta = 25°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	-100	mA
Base current	I_B	-30	mA
Collector power dissipation	P_C	100*	mW
Junction temperature	T_j	150	°C
Storage temperature range	T_{stg}	-55 to 150	°C

* : Mounted on FR4 board (10 mm × 10 mm × 1 mm)

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

JEDEC	—
JEITA	—
TOSHIBA	2-1J1A

Weight: 0.75 mg (typ.)

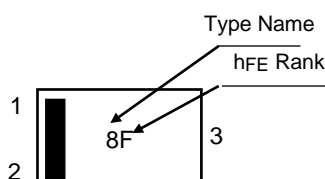
Electrical Characteristics (Ta = 25°C)

Characteristics	Symbol	Test Condition	Min	Typ.	Max	Unit
Collector cut-off current	I_{CBO}	$V_{CB} = -50 V$, $I_E = 0 A$	—	—	-0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = -5 V$, $I_C = 0 A$	—	—	-0.1	μA
DC current gain	hFE (Note)	$V_{CE} = -6 V$, $I_C = -2 mA$	120	—	400	—
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -100 mA$, $I_B = -10 mA$	—	-0.18	-0.3	V
Transition frequency	f_T	$V_{CE} = -10 V$, $I_C = -1 mA$	80	—	—	MHz
Collector output capacitance	C_{ob}	$V_{CB} = -10 V$, $I_E = 0 A$, $f = 1 MHz$	—	1.6	—	pF

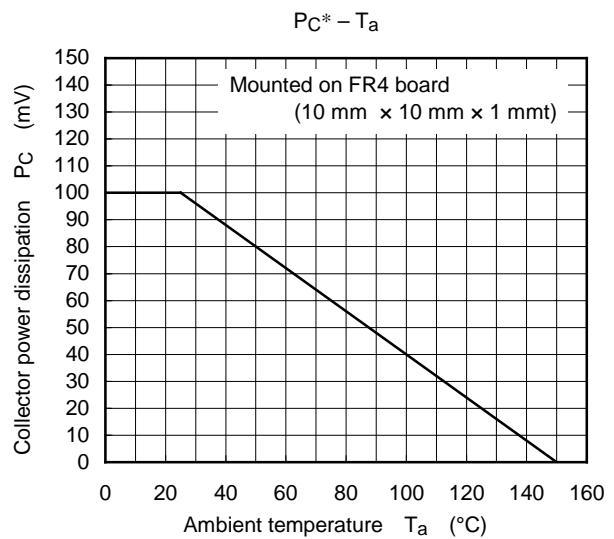
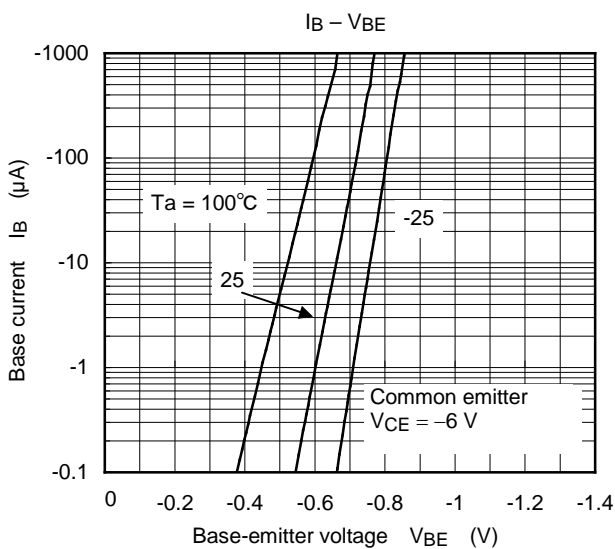
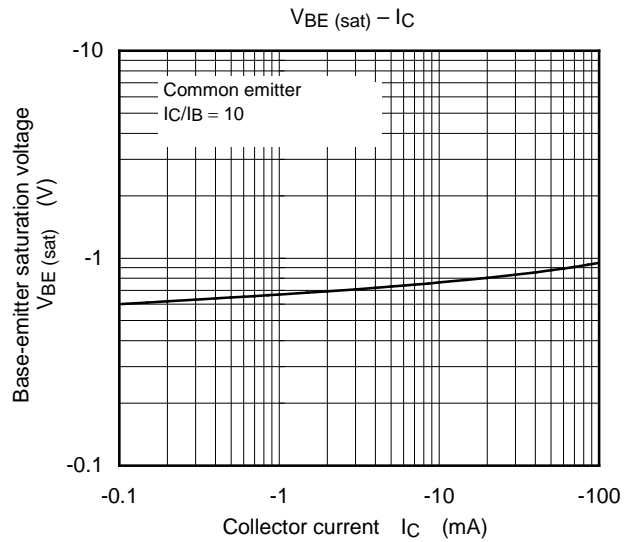
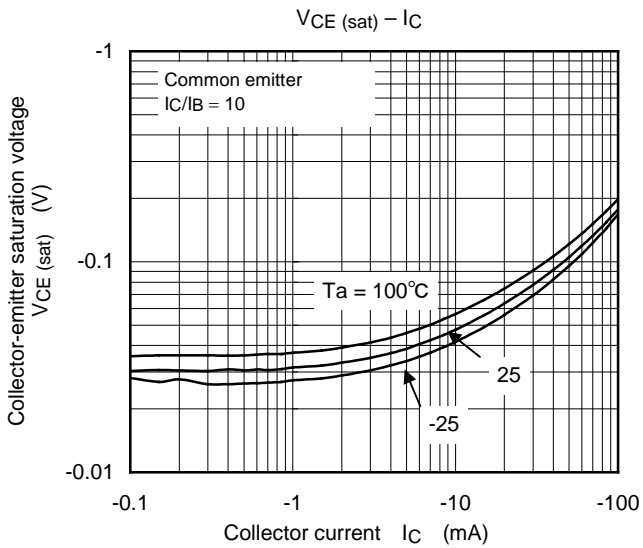
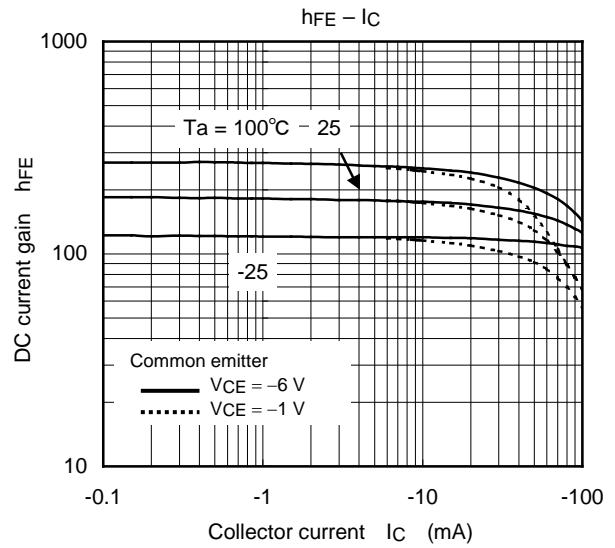
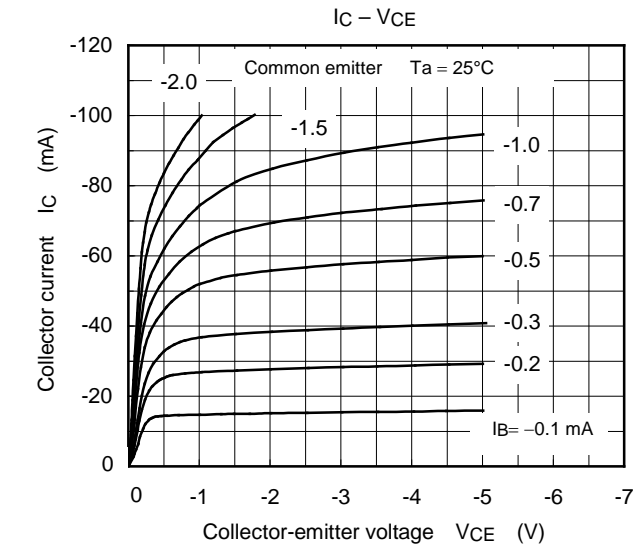
Note: hFE classification Y (F): 120 to 240, GR (H): 200 to 400

() marking symbol

Marking



Start of commercial production
2004-08



* total rating

The above characteristics curves are presented for reference only and not guaranteed by production test, unless otherwise noted.

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