

TOSHIBA Transistor Silicon NPN Epitaxial Type (PCT Process)

HN1C26FS

Frequency General-Purpose Amplifier Applications

- Two devices are incorporated into a fine-pitch, small-mold (6-pin) package.
- High voltage : $V_{CE0} = 50\text{ V}$
- High current : $I_C = 100\text{ mA (max)}$
- High h_{FE} : $h_{FE} = 120\text{ to }400$
- Excellent h_{FE} linearity
: $h_{FE} (I_C = 0.1\text{ mA})/h_{FE} (I_C = 2\text{ mA}) = 0.95\text{ (typ.)}$

Absolute Maximum Ratings (Ta = 25°C)

Characteristic	Symbol	Rating	Unit
Collector-base voltage	V_{CBO}	60	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 (Note 1)	50	mW
Junction temperature	T_j	150	°C
Storage temperature range	T_{stg}	-55 to 150	°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).

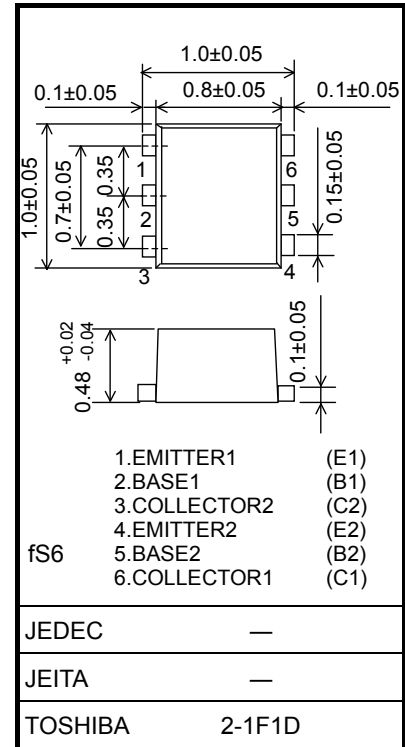
Note 1: Total rating.

Electrical Characteristics (Ta = 25°C)

Characteristic	Symbol	Test Condition	Min	Typ.	Max	Unit
Collector cutoff current	I_{CBO}	$V_{CB} = 60\text{ V}, I_E = 0$	—	—	0.1	μA
Emitter cutoff current	I_{EBO}	$V_{EB} = 5\text{ V}, I_C = 0$	—	—	0.1	μA
DC current gain	h_{FE} (Note)	$V_{CE} = 6\text{ V}, I_C = 2\text{ mA}$	120	—	400	—
Collector-emitter saturation voltage	$V_{CE}(\text{sat})$	$I_C = 100\text{ mA}, I_B = 10\text{ mA}$	—	0.1	0.25	V
Transition frequency	f_T	$V_{CE} = 10\text{ V}, I_C = 1\text{ mA}$	60	—	—	MHz
Collector output capacitance	C_{ob}	$V_{CB} = 10\text{ V}, I_E = 0, f = 1\text{ MHz}$	—	0.95	—	pF

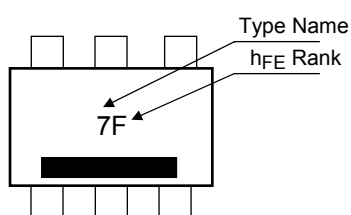
Note: h_{FE} Classification Y (F): 120 to 240, GR (H): 200 to 400
() Marking symbol

Unit: mm

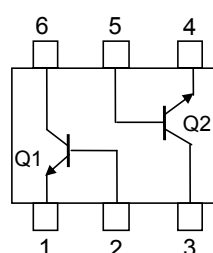


Weight: 0.001 g (typ.)

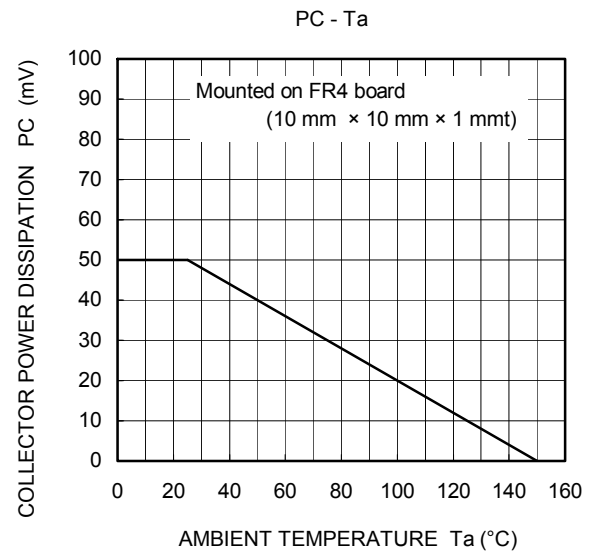
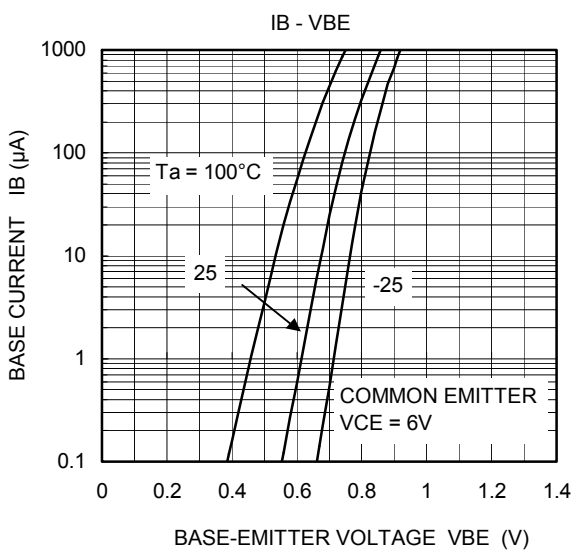
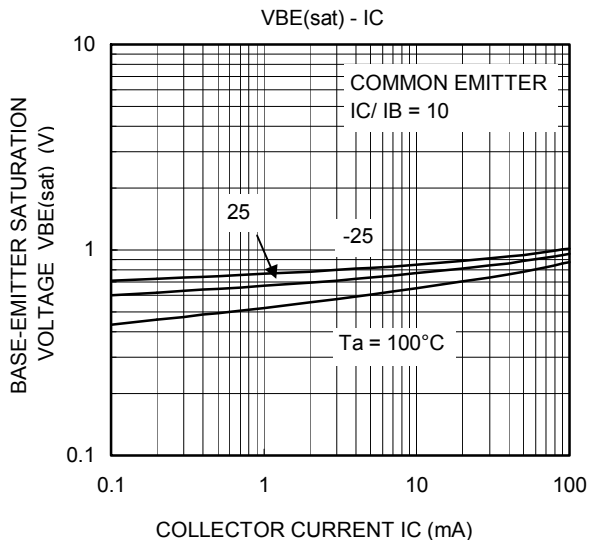
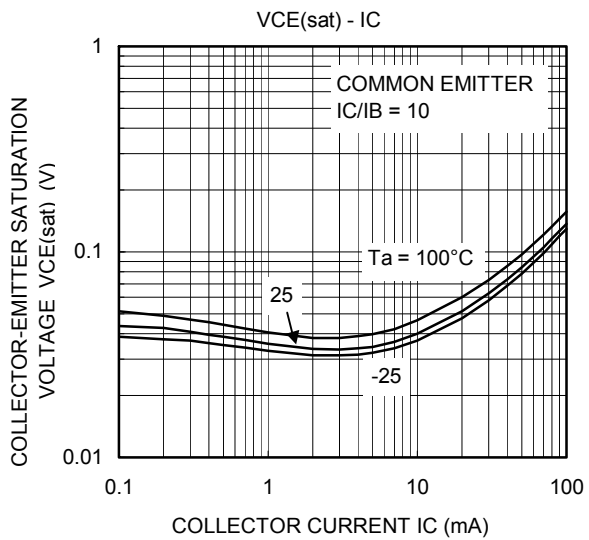
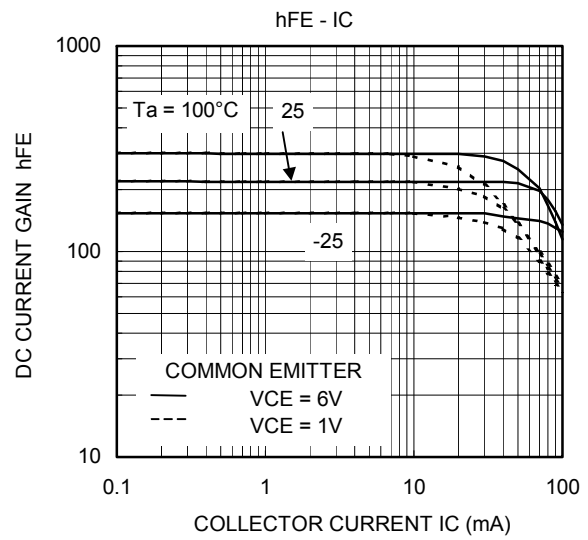
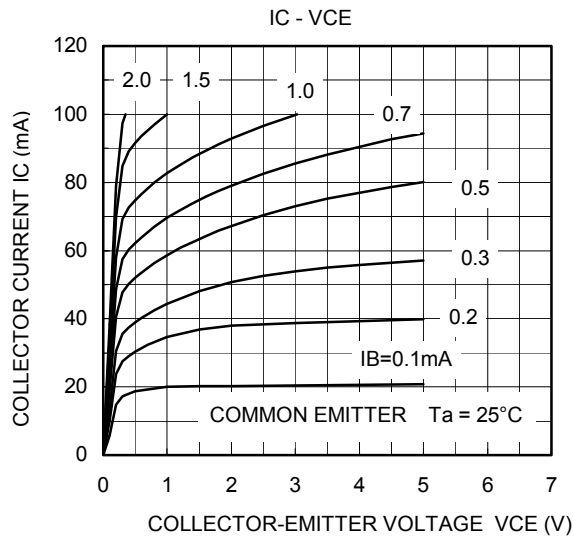
Marking



Equivalent Circuit (top view)



Q1, Q2 Common



*: Total rating.

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