

TOSHIBA

HN2C01FU

TOSHIBA TRANSISTOR SILICON NPN EPITAXIAL TYPE (PCT PROCESS)

HN2C01FU

AUDIO FREQUENCY GENERAL PURPOSE AMPLIFIER APPLICATIONS.

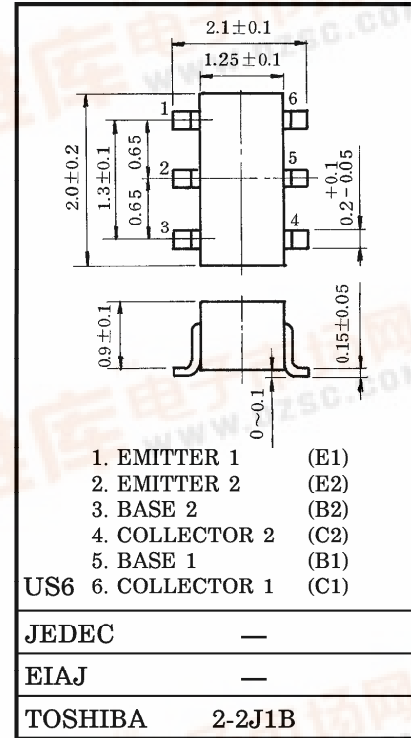
Unit in mm

- Small Package (Dual Type)
- High Voltage and High Current
: $V_{CEO} = 50V$, $I_C = 150mA$ (MAX.)
- High h_{FE} : $h_{FE} = 120 \sim 400$
- Excellent h_{FE} Linearity
: $h_{FE} (I_C = 0.1mA) / h_{FE} (I_C = 2mA) = 0.95$ (Typ.)

MAXIMUM RATINGS ($T_a = 25^\circ C$) (Q1, Q2 COMMON)

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	150	mA
Base Current	I_B	30	mA
Collector Power Dissipation	P_C^*	200	mW
Junction Temperature	T_j	125	$^\circ C$
Storage Temperature Range	T_{stg}	-55~125	$^\circ C$

* Total Rating



Weight : 6.8mg

ELECTRICAL CHARACTERISTICS ($T_a = 25^\circ C$) (Q1, Q2 COMMON)

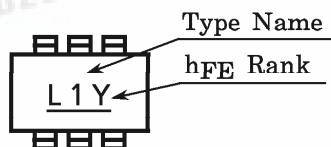
CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I_{CBO}	$V_{CB} = 60V$, $I_E = 0$	—	—	0.1	μA
Emitter Cut-off Current	I_{EBO}	$V_{EB} = 5V$, $I_C = 0$	—	—	0.1	μA
DC Current Gain	h_{FE} (Note)	$V_{CE} = 6V$, $I_C = 2mA$	120	—	400	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 100mA$, $I_B = 10mA$	—	0.1	0.25	V
Transition Frequency	f_T	$V_{CE} = 10V$, $I_C = 1mA$	80	—	—	MHz
Collector Output Capacitance	C_{ob}	$V_{CB} = 10V$, $I_E = 0$, $f = 1MHz$	—	2	3.5	pF

Note : h_{FE} Classification

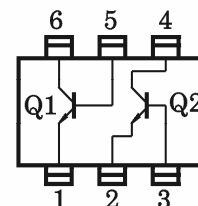
Y (Y) : 120~240, GR (G) : 200~400

() Marking Symbol

MARKING



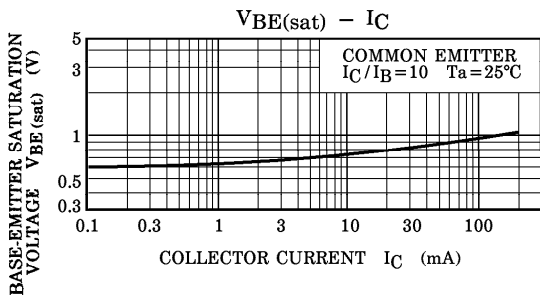
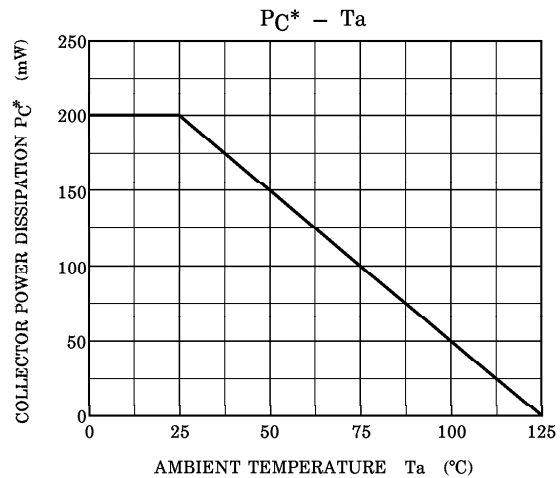
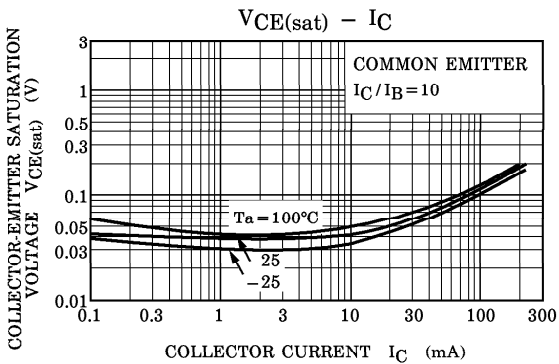
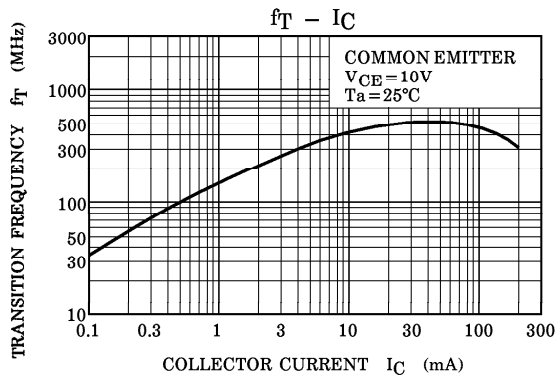
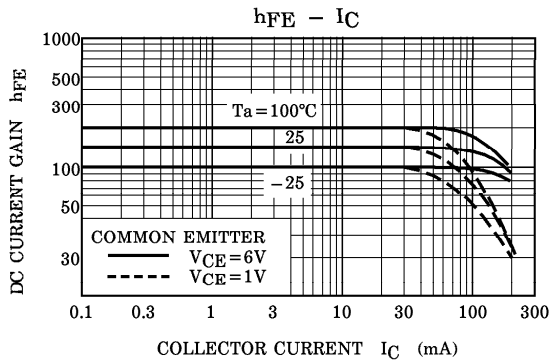
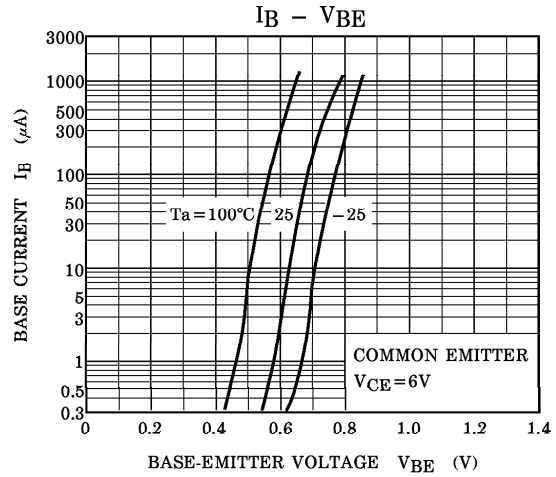
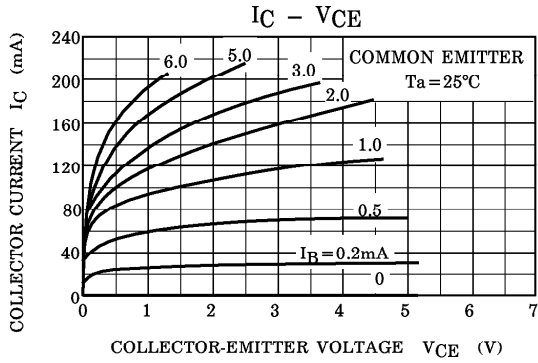
EQUIVALENT CIRCUIT (TOP VIEW)



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TOSHIBA is continually working to improve the quality and the reliability of its products. Nevertheless, semiconductor devices in general can malfunction or fail due to their inherent electrical sensitivity and vulnerability to physical stress. It is the responsibility of the buyer, when utilizing TOSHIBA products, to observe standards of safety, and to avoid situations in which a malfunction or failure of a TOSHIBA product could cause loss of human life, bodily injury or damage to property. In developing your designs, please ensure that TOSHIBA products are used within specified operating ranges as set forth in the most recent products specifications. Also, please keep in mind the precautions and conditions set forth in the TOSHIBA Semiconductor Reliability Handbook.

(Q1, Q2 COMMON)



*: Total Rating