Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

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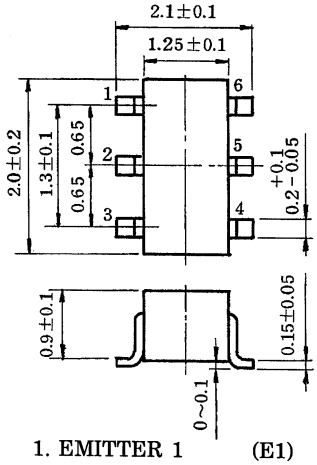
TOSHIBA Transistor Silicon NPN Epitaxial Type (PCT Process)

HN2C01FU

Audio Frequency General Purpose Amplifier Applications

Unit: mm

- Small package (dual type)
- High voltage and high current : V_{CEO} = 50V, I_C = 150mA (max)
- High h_{FE} : h_{FE} = 120 to 400
- Excellent h_{FE} linearity : h_{FE} (I_C = 0.1mA) / (I_C = 2mA) = 0.95 (typ.)



JEDEC	—
JEITA	—
TOSHIBA	2-2J1B

Weight: 6.8 mg (typ.)

Absolute Maximum Ratings (Ta = 25°C) (Q1, Q2 Common)

Characteristics	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	°C
Storage temperature range	T_{stg}	−55 to 125	°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).

* Total rating

Electrical Characteristics (Ta = 25°C) (Q1, Q2 Common)

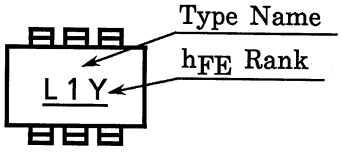
Characteristics	Symbol	Test Circuit	Test Condition	Min	Typ.	Max	Unit
Collector cut-off current	I_{CBO}	—	V_{CB} = 60V, I_E = 0	—	—	0.1	μA
Emitter cut-off current	I_{EBO}	—	V_{EB} = 5V, I_C = 0	—	—	0.1	μA
DC current gain	$h_{FE\ (Note)}$	—	V_{CE} = 6V, I_C = 2mA	120	—	400	—
Collector-emitter saturation 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	—	—	MH_Z
Collector output capacitance	C_{ob}	—	V_{CB} = 10V, I_E = 0, f = 1MH_Z	—	2	3.5	pF

Note: h_{FE} classification

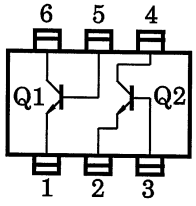
Y(Y): 120 to 240, GR(G): 200 to 400

( ) marking symbol

Marking



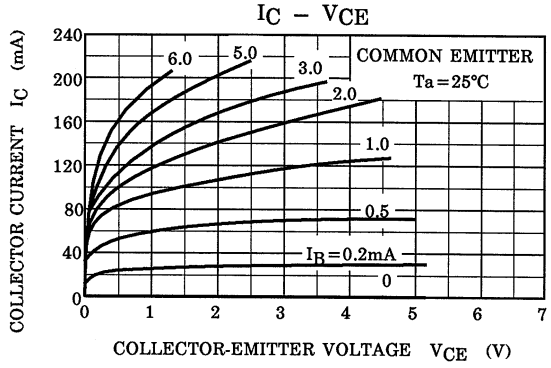
Equivalent Circuit (top view)



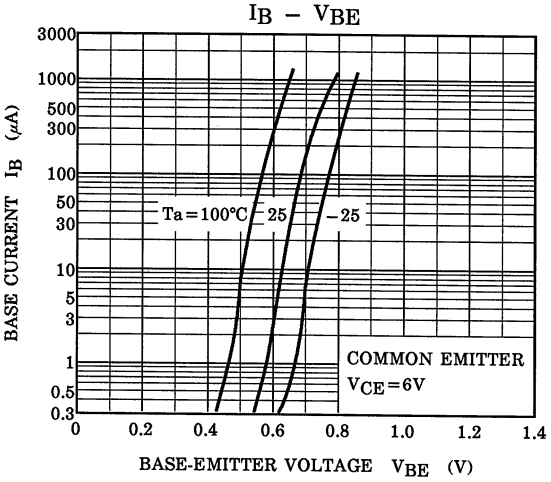
Start of commercial production
1992-01

(Q1, Q2 Common)

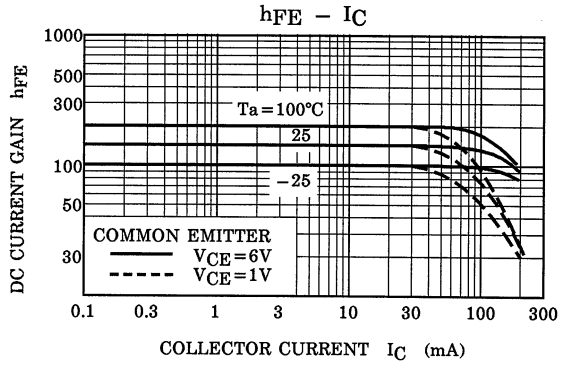
I_C – V_{CE}



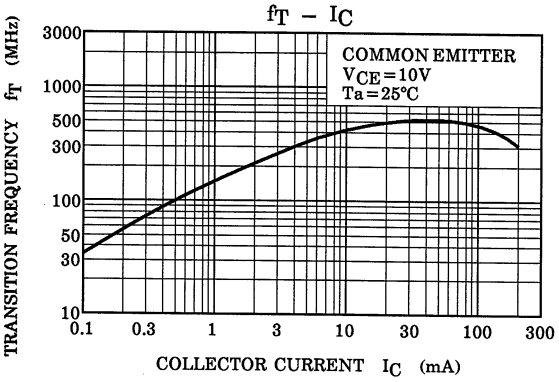
I_B – V_{BE}



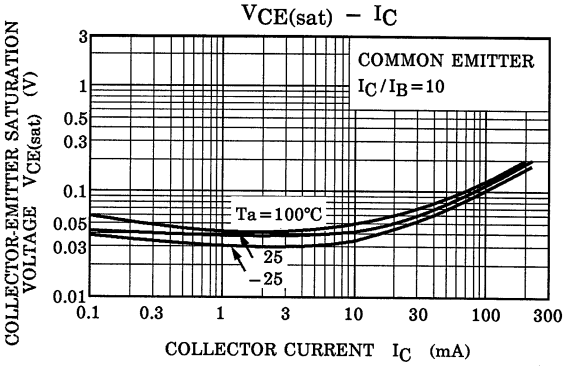
h_{FE} – I_C



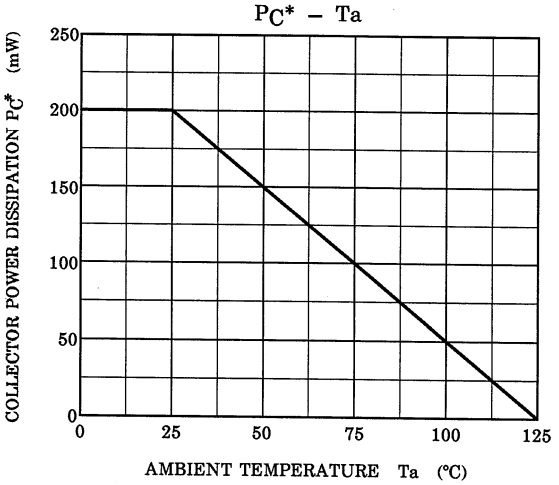
f_T – I_C



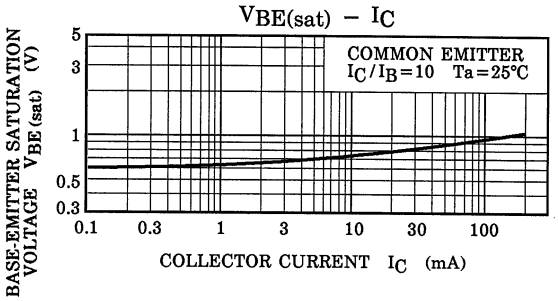
$V_{CE(sat)}$ – I_C



P_C* – Ta



$V_{BE(sat)}$ – I_C



*: Total Rating

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