

2SC4944

Audio Frequency General Purpose Amplifier Applications

- Small package (dual type)
- High voltage and high current: $V_{CEO} = 50\text{ V}$, $I_C = 150\text{ mA}$ (max)
- High h_{FE} : $h_{FE} = 120\sim 400$
- Excellent h_{FE} linearity: $h_{FE}(I_C = 0.1\text{ mA})/h_{FE}(I_C = 2\text{ mA}) = 0.95$ (typ.)
- Complementary to 2SA1873

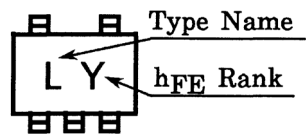
Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$) (Q1, Q2 common)

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 (Note 1)	200	mW
Junction temperature	T_j	125	$^\circ\text{C}$
Storage temperature range	T_{stg}	$-55\sim 125$	$^\circ\text{C}$

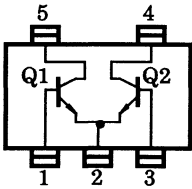
Note: Using continuously under heavy loads (e.g. the application of high temperature/current/voltage and the significant change in temperature, etc.) may cause this product to decrease in the reliability significantly even if the operating conditions (i.e. operating temperature/current/voltage, etc.) 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).

Note 1: Total rating

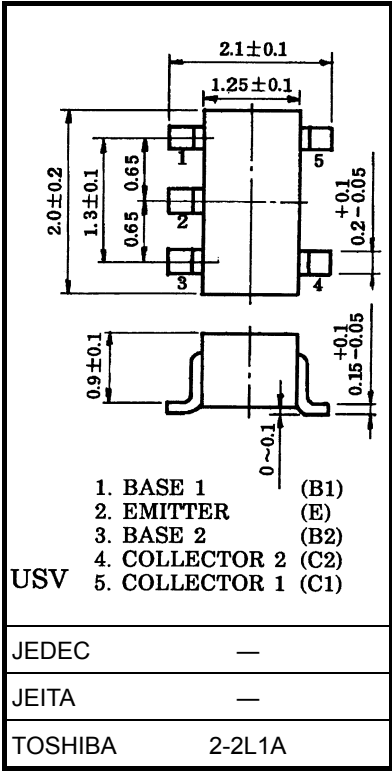
Marking



Equivalent Circuit (top view)



Unit: mm



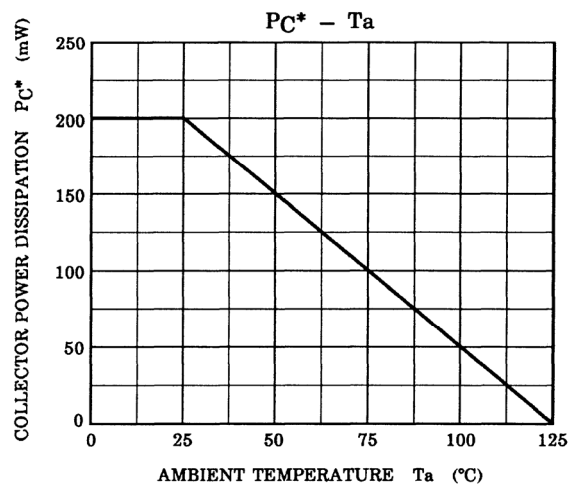
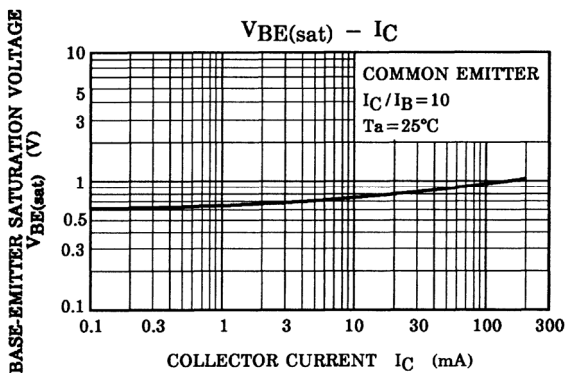
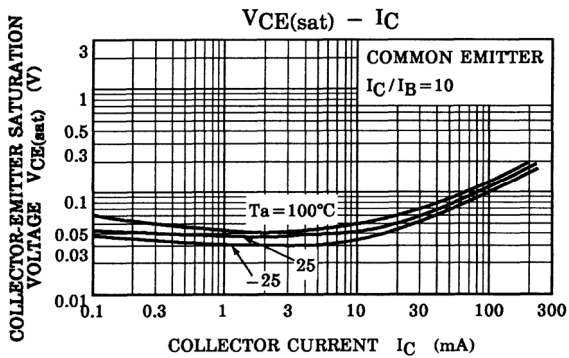
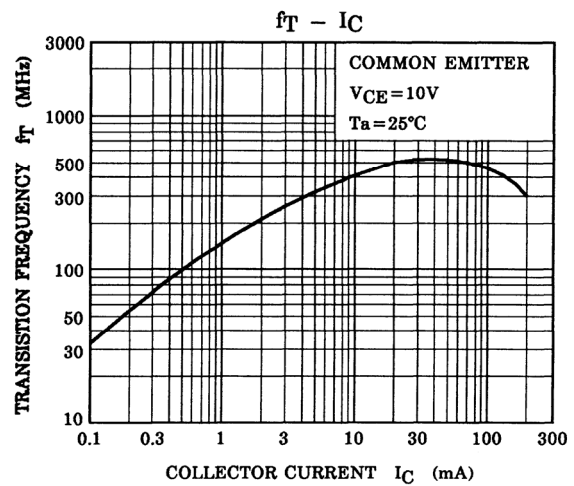
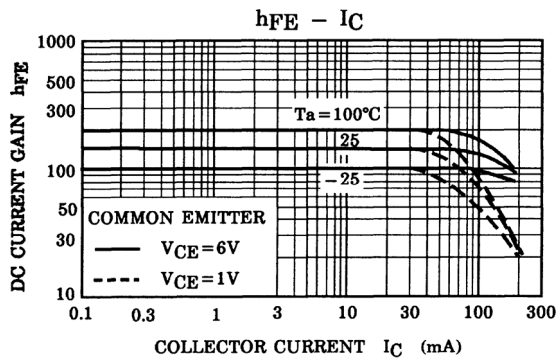
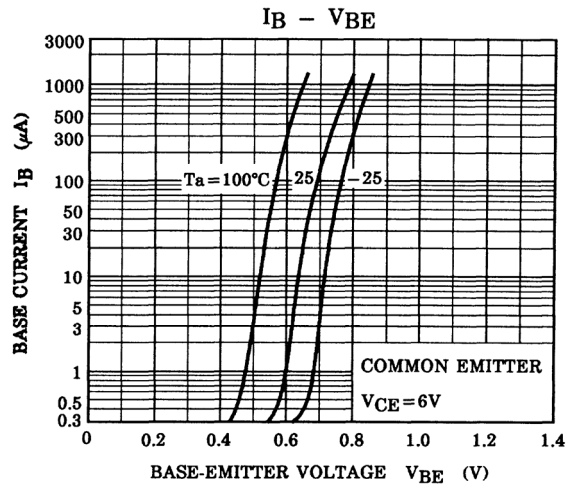
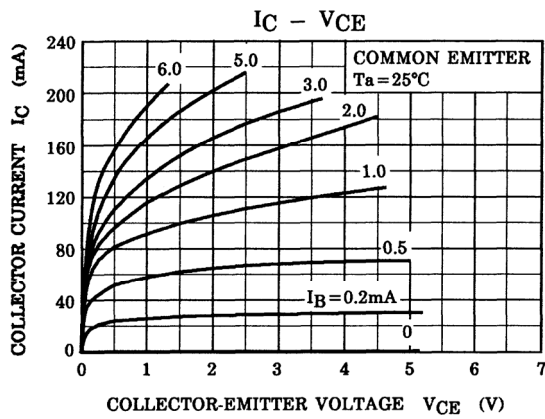
Weight: 6.2 mg (typ.)

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

Characteristics	Symbol	Test Condition	Min	Typ.	Max	Unit
Collector cut-off current	ICBO	V _{CB} = 60 V, I _E = 0	—	—	0.1	μA
Emitter cut-off current	IEBO	V _{EB} = 5 V, I _C = 0	—	—	0.1	μA
DC current gain	h _{FE} (Note 2)	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	—	0.1	0.25	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, f = 1 MHz	—	2	3.5	pF

Note 2: h_{FE} classification
Y (Y): 120~240, GR (G): 200~400
() Marking symbol

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(Q1, Q2, common)



*: Total rating

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20070701-EN GENERAL

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