

2SC3324

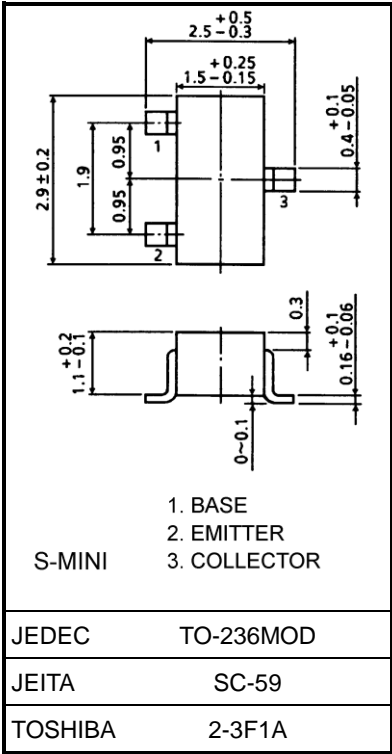
Audio Frequency Low Noise Amplifier Applications

Unit: mm

- High voltage: $V_{CEO} = 120\text{ V}$
- Excellent h_{FE} linearity: $h_{FE}(I_C = 0.1\text{ mA})/h_{FE}(I_C = 2\text{ mA}) = 0.95\text{ (typ.)}$
- High h_{FE} : $h_{FE} = 200\text{ to }700$
- Low noise: $NF(2) = 0.2\text{ dB (typ.)}$, 3 dB (max)
- Complementary to 2SA1312
- Small package

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

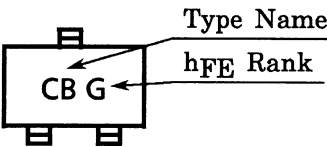
Characteristics	Symbol	Rating	Unit
Collector-base voltage	V_{CBO}	120	V
Collector-emitter voltage	V_{CEO}	120	V
Emitter-base voltage	V_{EBO}	5	V
Collector current	I_C	100	mA
Base current	I_B	20	mA
Collector power dissipation	P_C	150	mW
Junction temperature	T_j	125	$^\circ\text{C}$
Storage temperature range	T_{stg}	-55 to 125	$^\circ\text{C}$



Weight: 0.012 g (typ.)

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).

Marking



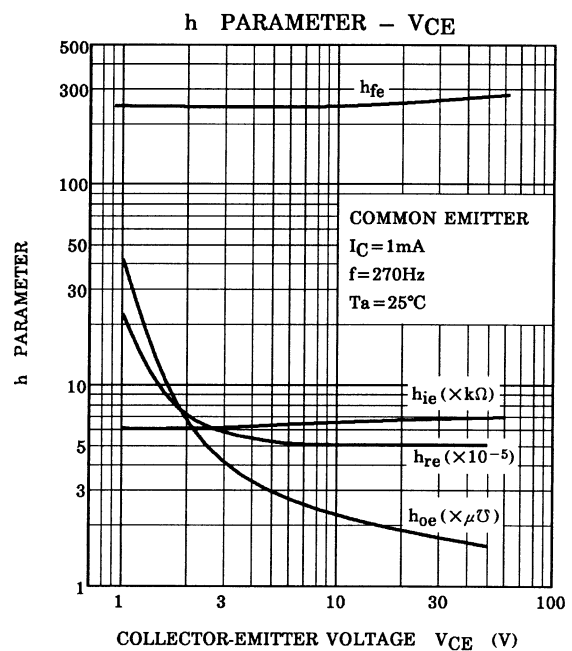
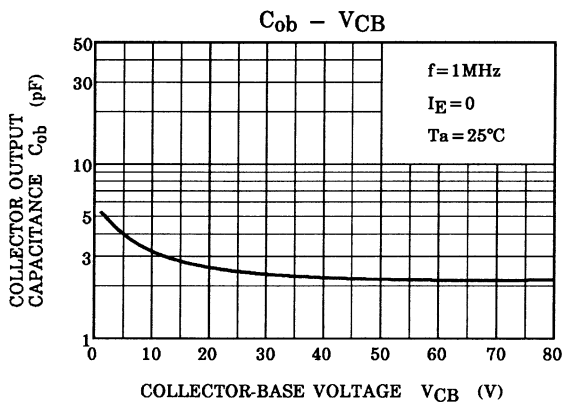
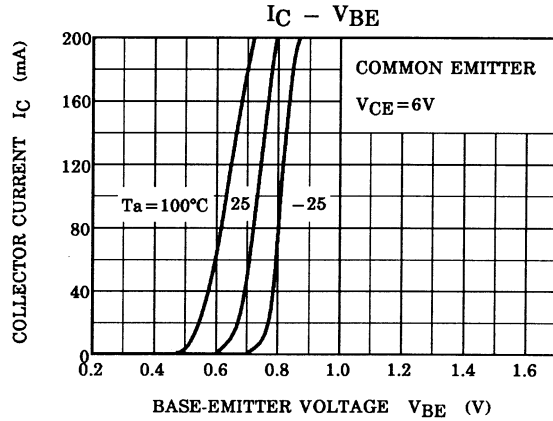
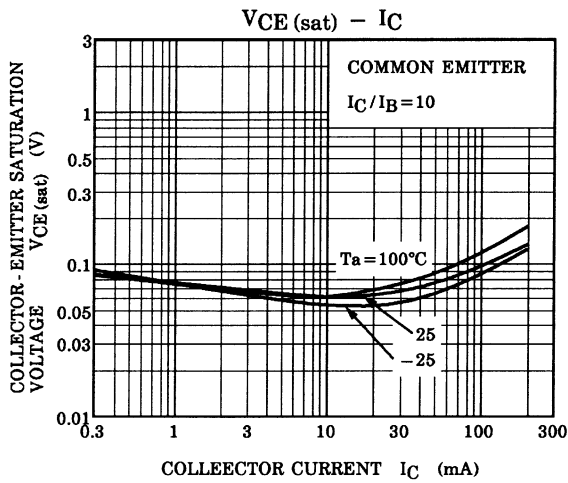
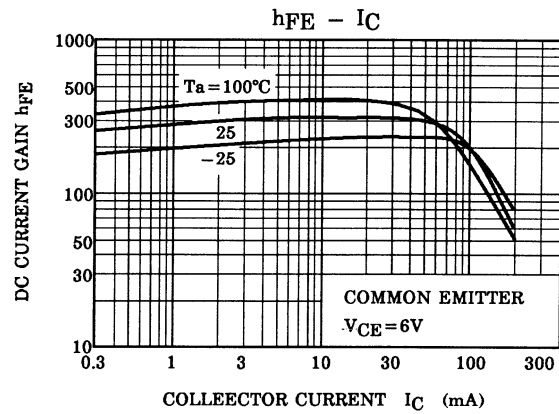
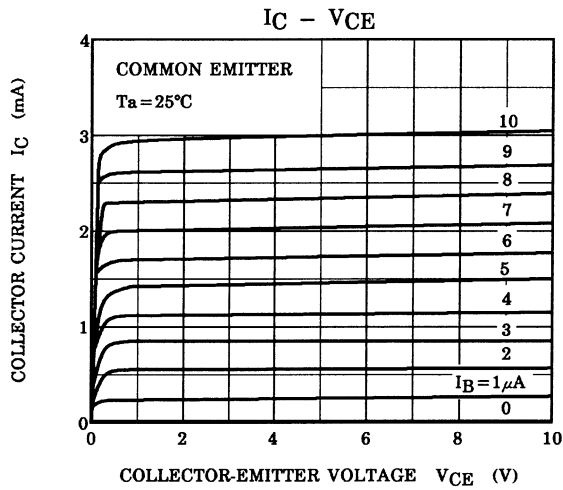
Start of commercial production
1982-12

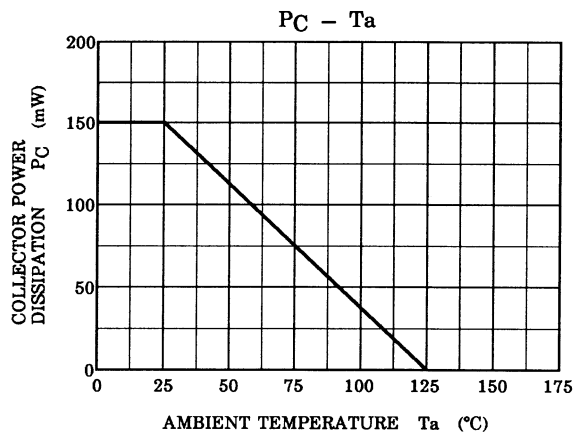
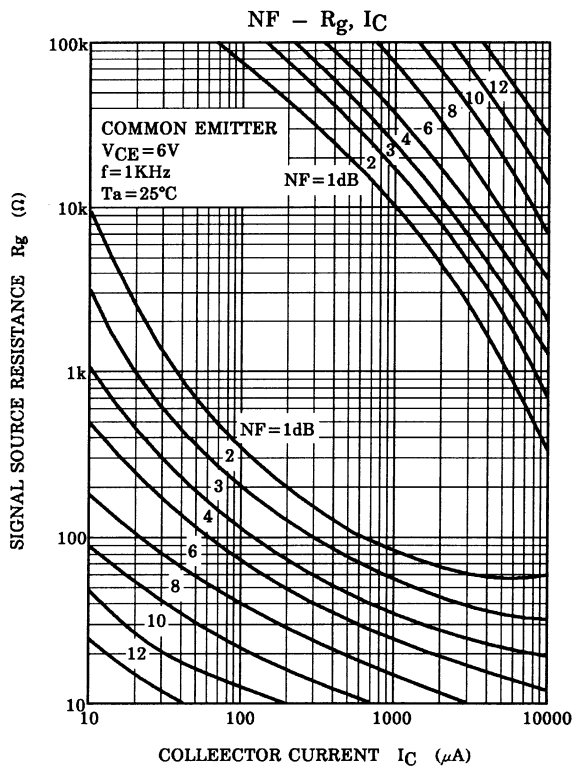
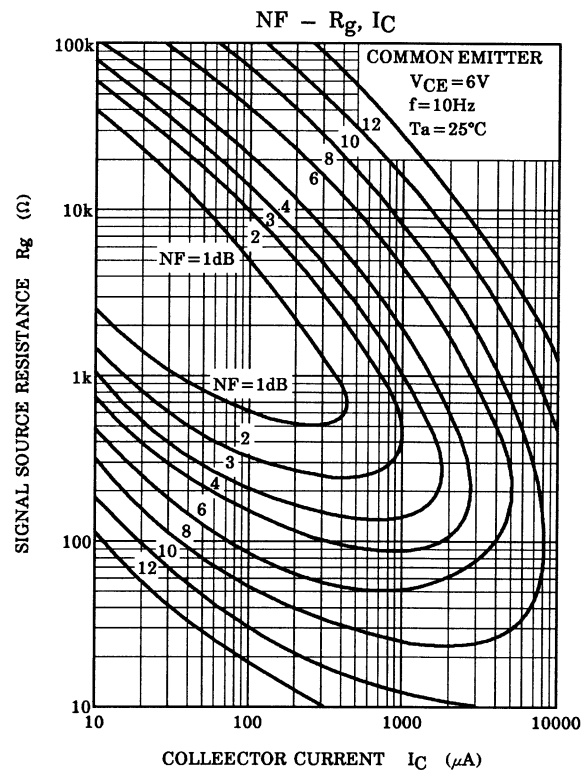
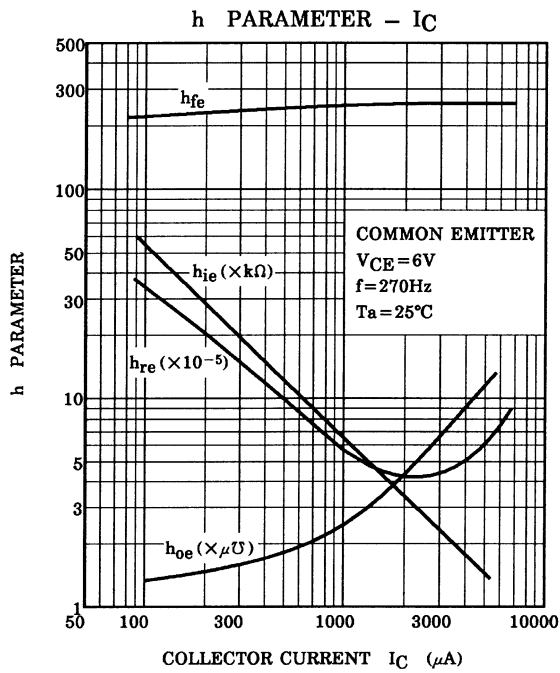
Electrical Characteristics (Ta = 25°C)

Characteristics	Symbol	Test Condition	Min	Typ.	Max	Unit
Collector cut-off current	ICBO	V _{CB} = 120 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)	V _{CE} = 6 V, I _C = 2 mA	200	—	700	
Collector-emitter saturation voltage	V _{CE (sat)}	I _C = 10 mA, I _B = 1 mA	—	—	0.3	V
Transition frequency	f _T	V _{CE} = 6 V, I _C = 1 mA	—	100	—	MHz
Collector output capacitance	C _{ob}	V _{CB} = 10 V, I _E = 0, f = 1 MHz	—	3	—	pF
Noise figure	NF (1)	V _{CB} = 6 V, I _C = 0.1 mA, f = 100 Hz, R _g = 10 kΩ	—	0.5	6	dB
	NF (2)	V _{CB} = 6 V, I _C = 0.1 mA, f = 1 kHz, R _g = 10 kΩ	—	0.2	3	

Note: h_{FE} classification GR (G): 200 to 400, BL (L): 350 to 700

() marking symbol





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