Unit: mm

TOSHIBA Transistor Silicon NPN Epitaxial Type (PCT process)

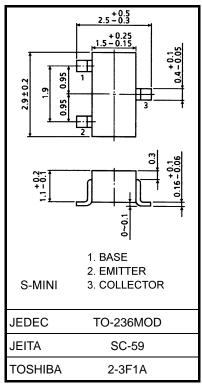
# 2SC3325

Audio Frequency Low Power Amplifier Applications
Driver Stage Amplifier Applications
Switching Applications

- Excellent hFE linearity: hFE (2) = 25 (min) (VCE = 6 V, IC = 400 mA)
- High voltage: VCEO = 50 V (min)
- Complementary to 2SA1313
- Small package

### **Absolute Maximum Ratings (Ta = 25°C)**

Characteristics	Symbol	Rating	Unit
Collector-base voltage	V <sub>CBO</sub>	50	V
Collector-emitter voltage	V <sub>CEO</sub>	50	V
Emitter-base voltage	V <sub>EBO</sub>	5	V
Collector current	IC	500	mA
Base current	ΙΒ	50	mA
Collector power dissipation	PC	200	mW
Junction temperature	Tj	150	°C
Storage temperature range	T <sub>stg</sub>	-55~150	°C



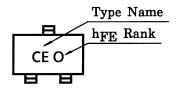
Weight: 0.012 g (typ.)

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

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



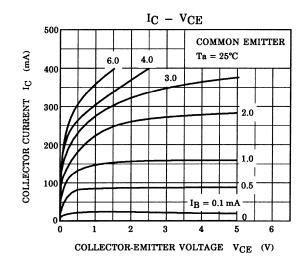


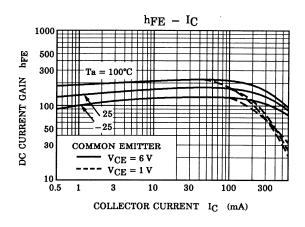
## Electrical Characteristics (Ta = 25°C)

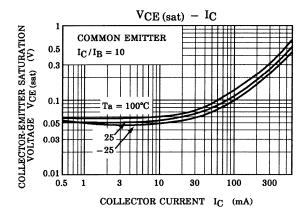
Characteristics	Symbol	Test Condition	Min	Тур.	Max	Unit
Collector cut-off current	I <sub>CBO</sub>	V <sub>CB</sub> = 50 V, I <sub>E</sub> = 0	_	_	0.1	μΑ
Emitter cut-off current	I <sub>EBO</sub>	V <sub>EB</sub> = 5 V, I <sub>C</sub> = 0	_	_	0.1	μА
DC current gain	h <sub>FE (1)</sub> (Note)	V <sub>CE</sub> = 1 V, I <sub>C</sub> = 100 mA	70	_	240	
	h <sub>FE (2)</sub> (Note)	V <sub>CE</sub> = 6 V, I <sub>C</sub> = 400 mA	25	_	_	
Collector-emitter saturation voltage	V <sub>CE</sub> (sat)	I <sub>C</sub> = 100 mA, I <sub>B</sub> = 10 mA	_	0.1	0.25	V
Base-emitter voltage	V <sub>BE</sub>	V <sub>CE</sub> = 1 V, I <sub>C</sub> = 100 mA	_	0.8	1.0	V
Transition frequency	f <sub>T</sub>	V <sub>CE</sub> = 6 V, I <sub>C</sub> = 20 mA	_	300	_	MHz
Collector output capacitance	C <sub>ob</sub>	V <sub>CB</sub> = 6 V, I <sub>E</sub> = 0, f = 1 MHz	_	7	_	pF

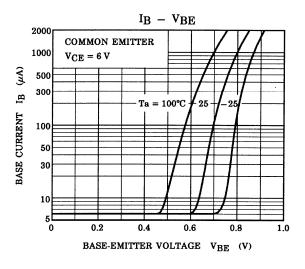
Note: hFE (1) classification O: 70~140, Y: 120~240

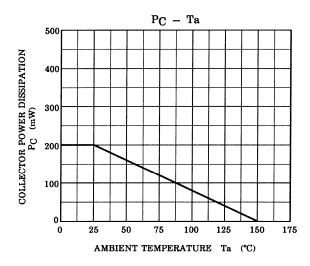
hFE (2) classification O: 25 (min), Y: 40 (min)











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