TOSHIBA Transistor Silicon NPN Epitaxial Type (PCT process)

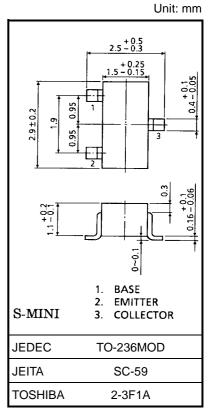
# 2SC3295

Audio Frequency Amplifier Applications Switching Applications

- High hFE: hFE = 600~3600
- High voltage: V<sub>CEO</sub> = 50 V
- High collector current: IC = 150 mA (max)
- Small package

#### 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	Ι <sub>C</sub>	150	mA
Base current	Ι <sub>Β</sub>	30	mA
Collector power dissipation	P <sub>C</sub>	150	mW
Junction temperature	Tj	125	°C
Storage temperature range	T <sub>stg</sub>	-55~125	°C



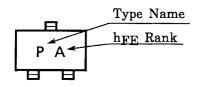
Weight: 0.012 g (typ.)

#### **Electrical Characteristics (Ta = 25°C)**

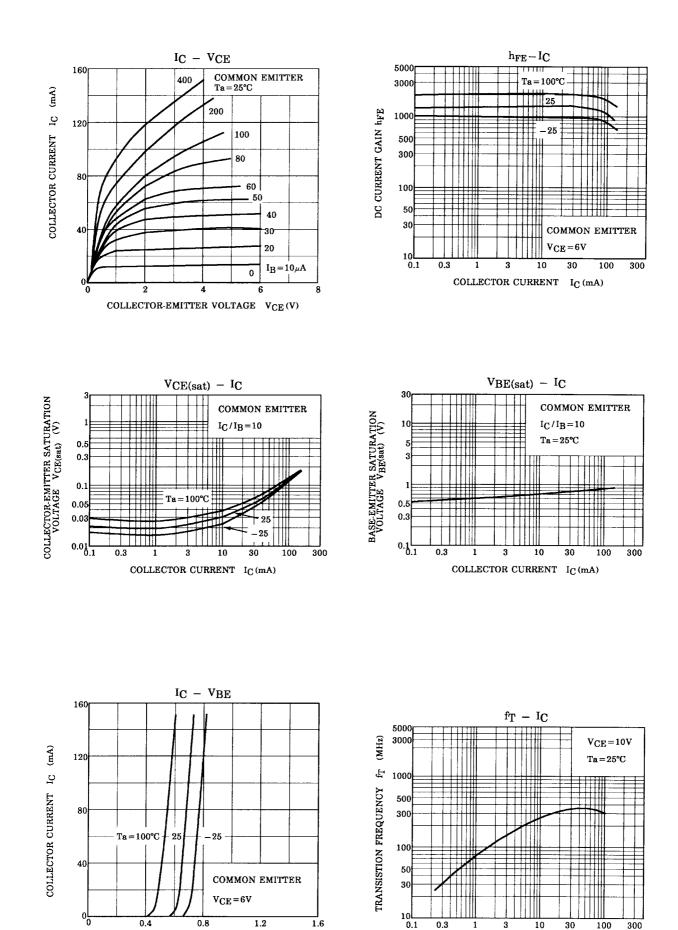
Characteristics	Symbol	Test Condition	Min	Тур.	Max	Unit
Collector cut-off current	I <sub>CBO</sub>	$V_{CB} = 50 \text{ V}, \text{ I}_{E} = 0$			0.1	μA
Emitter cut-off current	I <sub>EBO</sub>	$V_{EB} = 5 \text{ V}, \text{ I}_{C} = 0$	_	—	0.1	μA
DC current gain	h <sub>FE</sub> (Note)	$V_{CE} = 6 \text{ V}, \text{ I}_{C} = 2 \text{ mA}$	600	_	3600	
Collector-emitter saturation voltage	V <sub>CE (sat)</sub>	$I_{C} = 100 \text{ mA}, I_{B} = 10 \text{ mA}$		0.12	0.25	V
Transition frequency	f <sub>T</sub>	$V_{CE} = 10 \text{ V}, I_{C} = 10 \text{ mA}$	100	250	_	MHz
Collector output capacitance	C <sub>ob</sub>	$V_{CB} = 10 \text{ V}, \text{ I}_{E} = 0, \text{ f} = 1 \text{ MHz}$		3.5		pF
Noise figure	NF (1)	$V_{CE}$ = 6 V, I <sub>C</sub> = 0.1 mA, f = 100 Hz, $R_g$ = 10 k $\Omega$	_	0.5	_	dB
	NF (2)	$\label{eq:Vce} \begin{array}{l} V_{CE}=6 \ V, \ I_C=0.1 \ mA, \ f=1 \ kHz, \\ R_g=10 \ k\Omega \end{array}$	_	0.3	—	

Note: hFE classification A: 600~1800, B: 1200~3600

#### Marking



### TOSHIBA



100

300

30

10

COLLECTOR CURRENT  $I_{C}$  (mA)

0.3

3

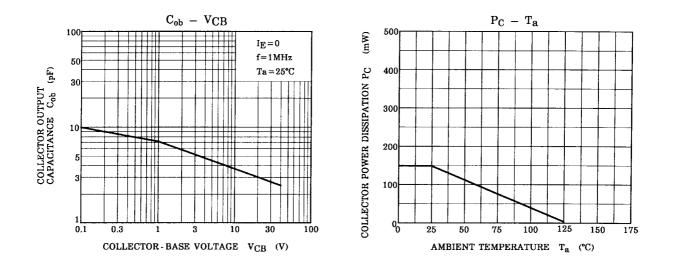
1.6

0.8

BASE-EMITTER VOLTAGE VBE (V)

0.4

## **TOSHIBA**



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Handbook" etc.,

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