TOSHIBA TRANSISTOR SILICON NPN EPITAXIALTYPE (PCT PROCESS)

# 2 S C 3 2 9 5

AUDIO FREQUENCY AMPLIFIER APPLICATIONS. SWITCHING APPLICATIONS.

• High  $h_{FE} = 600 \sim 3600$ 

• High Voltage :  $V_{CEO} = 50V$ 

• High Collector Current : I<sub>C</sub>=150mA (Max.)

• Small Packge

## MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	$v_{\mathrm{CBO}}$	50	V
Collector-Emitter Voltage	$v_{CEO}$	50	V
Emitter-Base Voltage	$v_{ m EBO}$	5	V
Collector Current	$I_{\mathbf{C}}$	150	mA
Base Current	$I_{\mathbf{B}}$	30	mA
Collector Power Dissipation	$P_{\mathbf{C}}$	150	mW
Junction Temperature	$T_{j}$	125	°C
Storage Temperature Range	$T_{ m stg}$	-55~125	°C

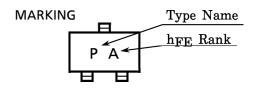
# 1. BASE 2. EMITTER S-MINI 3. COLLECTOR JEDEC TO-236MOD EIAJ SC-59 TOSHIBA 2-3F1A

Weight: 0.012g

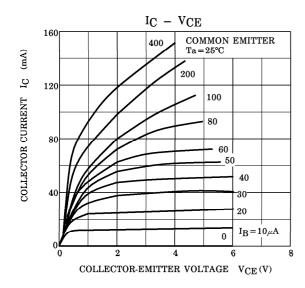
## ELECTRICAL CHARACTERISTICS (Ta = 25°C)

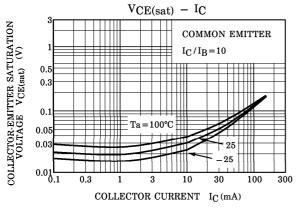
CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	$I_{CBO}$	$V_{CB} = 50V, I_{E} = 0$		_	0.1	$\mu$ <b>A</b>
Emitter Cut-off Current	$I_{EBO}$	$V_{EB}=5V, I_C=0$	1	_	0.1	$\mu$ <b>A</b>
DC Current Gain	hFE (Note)	$V_{CE}=6V, I_{C}=2mA$	600	_	3600	
Collector-Emitter Saturation Voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> =100mA, I <sub>B</sub> =10mA	_	0.12	0.25	V
Transition Frequency	$ m f_{T}$	$V_{\text{CE}} = 10V, I_{\text{C}} = 10\text{mA}$	100	250	_	MHz
Collector Output Capacitance	$C_{ob}$	$V_{CB} = 10V, I_E = 0, f = 1MHz$		3.5	_	pF
Noise Figure	NF (1)	$V_{CE} = 6V, I_{C} = 0.1 \text{mA} $ f=100Hz, R <sub>g</sub> =10k $\Omega$		0.5	_	dB
	NF (2)	$V_{\text{CE}}$ =6V, $I_{\text{C}}$ =0.1mA f=1kHz, $R_{\text{g}}$ =10k $\Omega$	_	0.3	_	dB

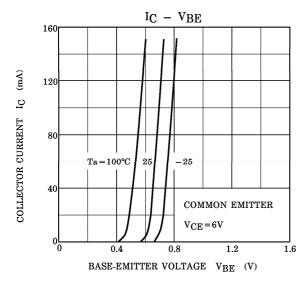
Note: hFE Classification A: 600~1800, B: 1200~3600

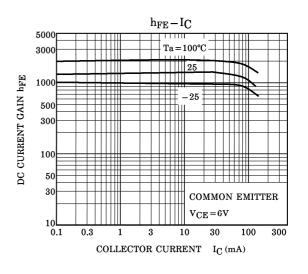


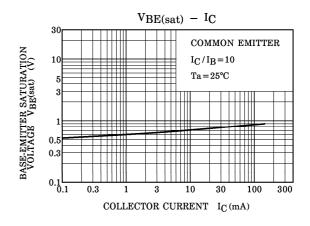
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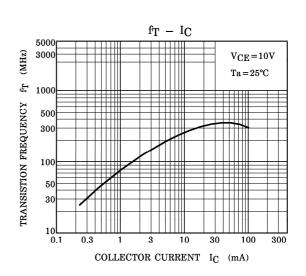




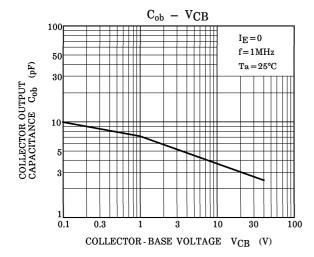


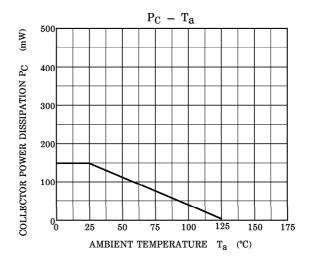






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