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### TOSHIBA TRANSISTOR SILICON NPN EPITAXIAL TYPE (PCT PROCESS)

# 2 S C 5 0 5 2

AUDIO POWER AMPLIFIER APPLICATIONS.

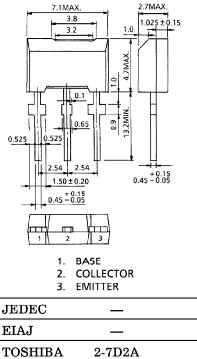
DRIVER STAGE AMPLIFIER APPLICATIONS.

Complementary to 2SA1899

## MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V <sub>CBO</sub>	120	V
Collector-Emitter Voltage	$v_{CEO}$	120	V
Emitter-Base Voltage	$V_{ m EBO}$	5	v
Collector Current	$I_{\mathbf{C}}$	800	mA
Base Current	$I_{\mathbf{B}}$	160	mA
Collector Power Dissipation	PC	1000	mW
Junction Temperature	$T_{j}$	150	$^{\circ}\mathrm{C}$
Storage Temperature Range	$T_{ m stg}$	-55~150	°C

Unit in mm



Weight: 0.2g

#### ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	$I_{CBO}$	$V_{CB} = 120V, I_{E} = 0$			100	nA
Emitter Cut-off Current	${ m I}_{ m EBO}$	$V_{EB}=5V, I_{C}=0$		_	100	nA
Collector-Emitter Breakdown Voltage	V (BR) CEO	$I_{C}=10$ mA, $I_{B}=0$	120		_	V
Emitter-Base Breakdown Voltage	V <sub>(BR)</sub> EBO	$I_E=1$ mA, $I_C=0$	5	1	_	V
DC Current Gain	hFE (Note)	$V_{\rm CE}$ =5V, $I_{\rm C}$ =100mA	80	_	240	
Collector-Emitter Saturation Voltage	V <sub>CE</sub> (sat)	I <sub>C</sub> =500mA, I <sub>B</sub> =50mA	_	_	1.0	V
Base-Emitter Voltage	$ m V_{BE}$	$V_{\rm CE}$ =5V, $I_{\rm C}$ =500mA	_	_	1.0	V
Transition Frequency	$ m f_{T}$	$V_{\rm CE}$ =5V, $I_{\rm C}$ =100mA		120	_	MHz
Collector Output Capacitance	$C_{ob}$	$V_{CB} = 10V, I_{E} = 0, f = 1MHz$	_	_	30	рF

Note: hff Classification  $O: 80\sim 160, Y: 120\sim 240$ 

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