TOSHIBA

TOSHIBA TRANSISTOR SILICON NPN EPITAXIAL TYPE (PCT PROCESS)

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POWER AMPLIFIER APPLICATIONS.

VOLTAGE AMPLIFIER APPLICATIONS.

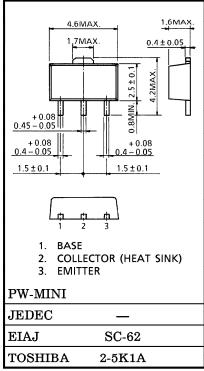
- Suitable for Driver of 30~35 Watts Audio Amplifier
- P_C=1~2W (Mounted Ceramic Substrate)
- Small Flat Package
- Complementary to 2SA1202

MAXIMUM RATINGS ($Ta = 25^{\circ}C$)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V _{CBO}	80	V
Collector-Emitter Voltage	v_{CEO}	80	V
Emitter-Base Voltage	v_{EBO}	5	V
Collector Current	$I_{\mathbf{C}}$	400	mA
Base Current	IB	80	mA
Collector Power Dissipation	PC	500	mW
Collector Power Dissipation	P _C (Note)	1000	mW
Junction Temperature	T_{j}	150	°C
Storage Temperature Range	$T_{ m stg}$	-55~150	°C

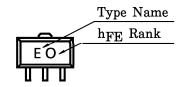
Note: Mounted on ceramic substrate (250mm²×0.8t)

Unit in mm



Weight: 0.05g

Marking



TOSHIBA is continually working to improve the quality and the reliability of its products. Nevertheless, semiconductor devices in general can malfunction or fail due to their inherent electrical sensitivity and vulnerability to physical stress. It is the responsibility of the buyer, when utilizing TOSHIBA products, to observe standards of safety, and to avoid situations in which a malfunction or failure of a TOSHIBA product could cause loss of human life, bodily injury or damage to property. In developing your designs, please ensure that TOSHIBA products are used within specified operating ranges as set forth in the most recent products specifications. Also, please keep in mind the precautions and conditions set forth in the TOSHIBA Semiconductor Reliability Handbook.

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ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	ICBO	$V_{CB} = 80V, I_{E} = 0$	_		0.1	μ A
Emitter Cut-off Current	${ m I}_{ m EBO}$	$V_{EB}=5V, I_{C}=0$	_	_	0.1	μ A
Collector-Emitter Breakdown Voltage	V _(BR) CEO	$I_{C}=10mA, I_{B}=0$	80	_	_	V
DC Current Gain	h _{FE (1)} (Note)	$V_{\rm CE}$ =2V, $I_{\rm C}$ =50mA	70	_	240	
	h _{FE (2)}	$V_{CE}=2V$, $I_{C}=200mA$	40	_	_	
Collector-Emitter Saturation Voltage	V _{CE} (sat)	$I_{C} = 200 \text{mA}, I_{B} = 20 \text{mA}$	_	_	0.4	V
Base-Emitter Voltage	$ m V_{BE}$	$V_{CE}=2V, I_{C}=5mA$		_	0.8	V
Transition Frequency	$ m f_{T}$	$V_{\rm CE} = 10 V$, $I_{\rm C} = 10 { m mA}$	0.55	100	_	MHz
Collector Output Capacitance	C _{ob}	$V_{CB} = 10V, I_{E} = 0, f = 1MHz$		10		pF

Note : hFE Classification $O:70\sim140$, $Y:120\sim240$

