

TOSHIBA TRANSISTOR SILICON PNP TRIPLE DIFFUSED TYPE (PCT PROCESS)

# 2SB906

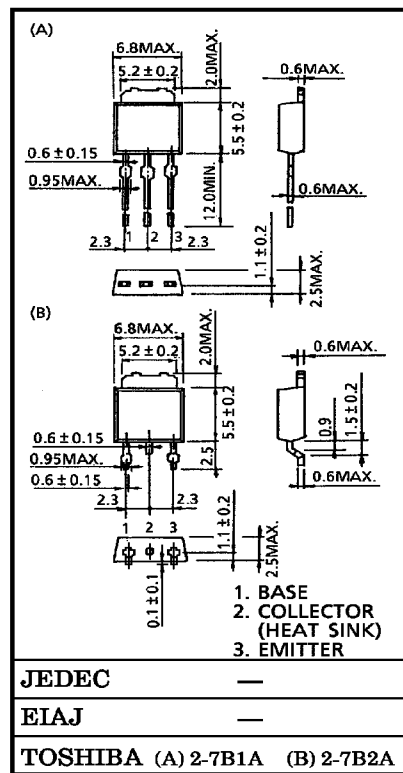
AUDIO FREQUENCY POWER AMPLIFIER APPLICATION

Unit in mm

- Low Collector Saturation Voltage  
:  $V_{CE(sat)} = -1.0\text{ V (Typ.)}$  ( $I_C = -3\text{ A}$ ,  $I_B = -0.3\text{ A}$ )
- High Power Dissipation :  $P_C = 20\text{ W}$  ( $T_c = 25^\circ\text{C}$ )
- Complementary to 2SD1221

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

CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage		$V_{CB0}$	-60	V
Collector-Emitter Voltage		$V_{CE0}$	-60	V
Emitter-Base Voltage		$V_{EB0}$	-7	V
Collector Current		$I_C$	-3	A
Base Current		$I_B$	-0.5	A
Collector Power Dissipation	$T_a = 25^\circ\text{C}$	$P_C$	1.0	W
	$T_c = 25^\circ\text{C}$		20	
Junction Temperature		$T_j$	150	$^\circ\text{C}$
Storage Temperature Range		$T_{stg}$	-55~150	$^\circ\text{C}$



Weight : 0.36 g

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1999-06-16 1/3

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

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		ICBO	V <sub>CB</sub> = -60 V, I <sub>E</sub> = 0	—	—	-100	μA
Emitter Cut-off Current		IEBO	V <sub>EB</sub> = -7 V, I <sub>C</sub> = 0	—	—	-100	μA
Collector-Emitter Breakdown Voltage		V (BR) CEO	I <sub>C</sub> = -50 mA, I <sub>B</sub> = 0	-60	—	—	V
DC Current Gain		h <sub>FE</sub> (1) (Note)	V <sub>CE</sub> = -5 V, I <sub>C</sub> = -0.5 A	60	—	200	
		h <sub>FE</sub> (2)	V <sub>CE</sub> = -5 V, I <sub>C</sub> = -3 A	20	—	—	
Collector-Emitter Saturation Voltage		V <sub>CE</sub> (sat)	I <sub>C</sub> = -3 A, I <sub>B</sub> = -0.3 A	—	-1.0	-1.7	V
Base-Emitter Voltage		V <sub>BE</sub>	V <sub>CE</sub> = -5 V, I <sub>C</sub> = -0.5 A	—	-1.0	-1.5	V
Transition Frequency		f <sub>T</sub>	V <sub>CE</sub> = -5 V, I <sub>C</sub> = -0.5 A	—	9	—	MHz
Collector Output Capacitance		C <sub>ob</sub>	V <sub>CB</sub> = -10 V, I <sub>E</sub> = 0, f = 1 MHz	—	150	—	pF
Switching Time	Turn-on Time	t <sub>on</sub>		—	0.4	—	μs
	Storage Time	t <sub>stg</sub>		—	1.7	—	
	Fall Time	t <sub>f</sub>		—	—	0.5	

Note : h<sub>FE</sub> Classification    O : 60~120,    Y : 100~200

