

TOSHIBA TRANSISTOR SILICON PNP TRIPLE DIFFUSED TYPE (PCT PROCESS)

2SB906

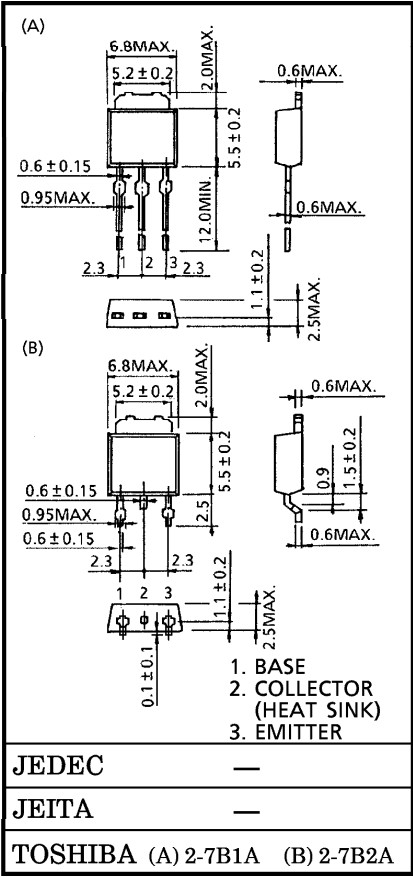
AUDIO FREQUENCY POWER AMPLIFIER APPLICATION

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

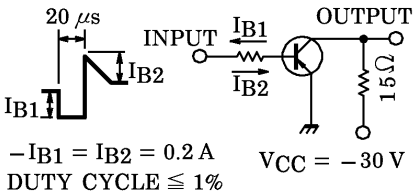
MAXIMUM RATINGS ($T_c = 25^\circ\text{C}$)

CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage		V_{CBO}	-60	V
Collector-Emitter Voltage		V_{CEO}	-60	V
Emitter-Base Voltage		V_{EBO}	-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	$^\circ\text{C}$

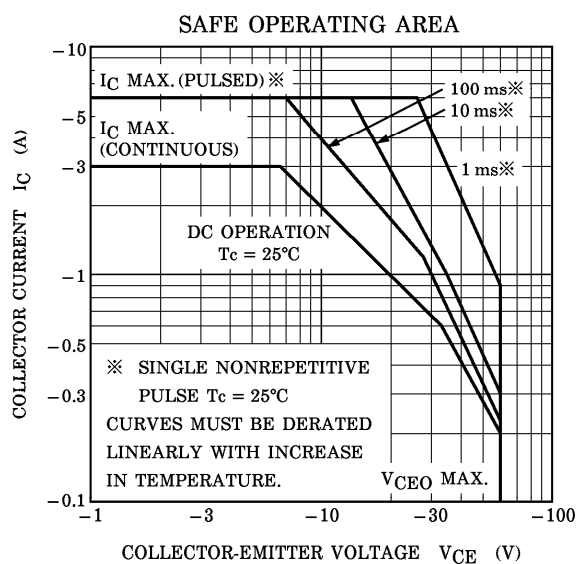
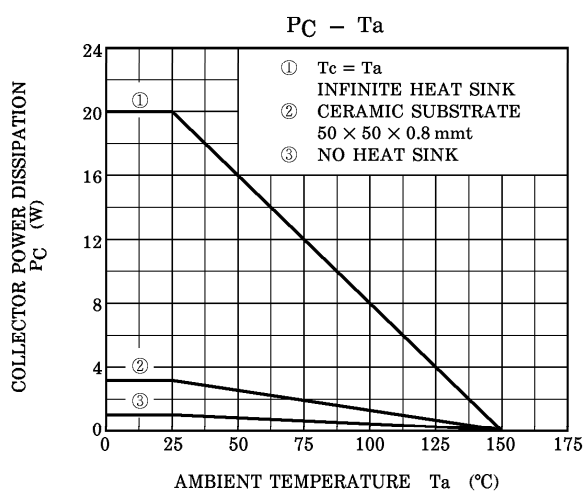
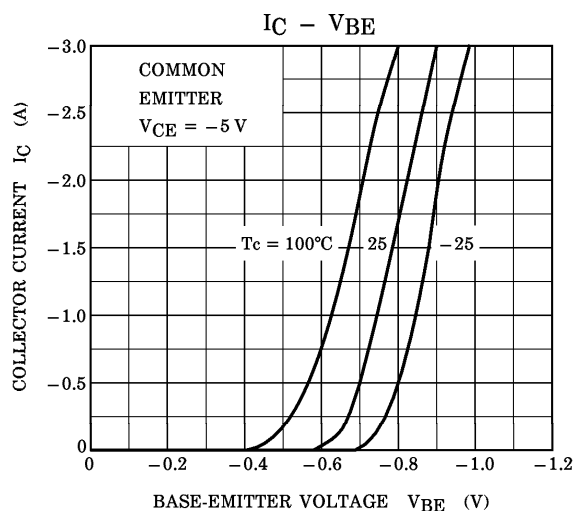
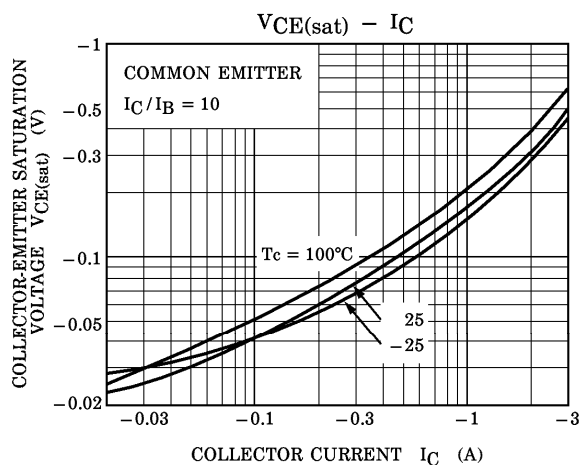
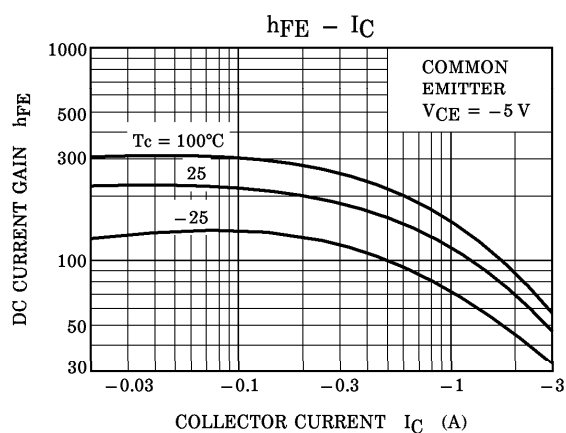
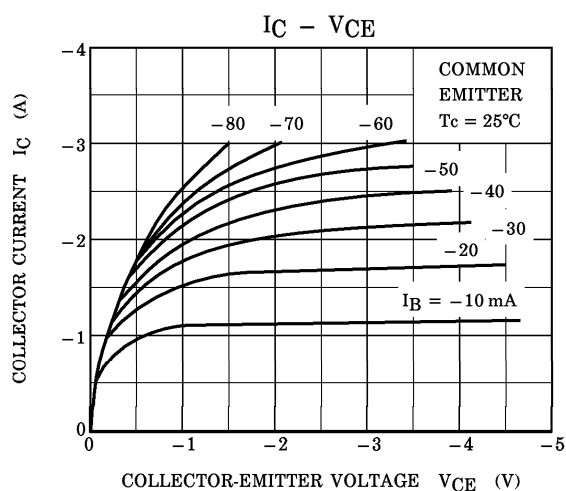


Weight : 0.36 g (Typ.)

ELECTRICAL CHARACTERISTICS ($T_c = 25^\circ\text{C}$)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		I_{CBO}	$V_{CB} = -60\text{ V}, I_E = 0$	—	—	-100	μA
Emitter Cut-off Current		I_{EBO}	$V_{EB} = -7\text{ V}, I_C = 0$	—	—	-100	μA
Collector-Emitter Breakdown Voltage		$V_{(BR) CEO}$	$I_C = -50\text{ mA}, I_B = 0$	-60	—	—	V
DC Current Gain	$h_{FE} (1)$ (Note)		$V_{CE} = -5\text{ V}, I_C = -0.5\text{ A}$	60	—	200	
	$h_{FE} (2)$		$V_{CE} = -5\text{ V}, I_C = -3\text{ A}$	20	—	—	
Collector-Emitter Saturation Voltage		$V_{CE (sat)}$	$I_C = -3\text{ A}, I_B = -0.3\text{ A}$	—	-1.0	-1.7	V
Base-Emitter Voltage		V_{BE}	$V_{CE} = -5\text{ V}, I_C = -0.5\text{ A}$	—	-1.0	-1.5	V
Transition Frequency		f_T	$V_{CE} = -5\text{ V}, I_C = -0.5\text{ A}$	—	9	—	MHz
Collector Output Capacitance		C_{ob}	$V_{CB} = -10\text{ V}, I_E = 0,$ $f = 1\text{ MHz}$	—	150	—	pF
Switching Time	Turn-on Time	t_{on}	 <p> $20\ \mu\text{s}$ I_{B1} I_{B2} $-I_{B1} = I_{B2} = 0.2\text{ A}$ $DUTY\ CYCLE \leq 1\%$ $V_{CC} = -30\text{ V}$ </p>	—	0.4	—	μs
	Storage Time	t_{stg}		—	1.7	—	
	Fall Time	t_f		—	0.5	—	

(Note) : h_{FE} Classification O : 60~120, Y : 100~200



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