

TOSHIBA Transistor Silicon PNP Diffused Type (PCT process)

# 2SB906

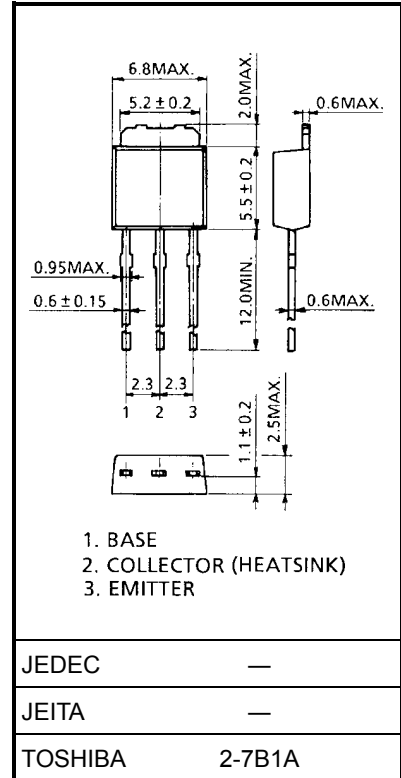
## Audio Frequency Power Amplifier Application

- 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
- ハイブリッド対応外形の (B) 2SB906 (LB) もあります。

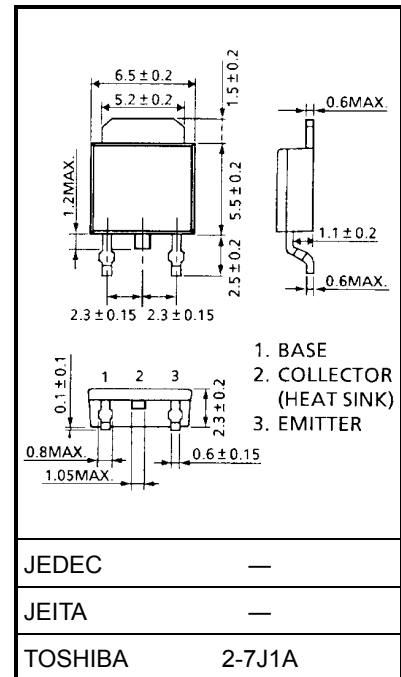
### Maximum Ratings ( $T_a = 25^\circ\text{C}$ )

Characteristics		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 to 150	$^\circ\text{C}$

Unit: mm



Weight: 0.36 g (typ.)



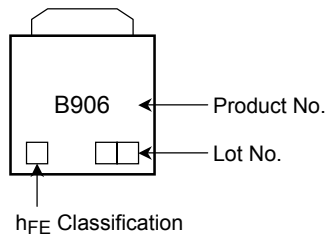
Weight: 0.36 g (typ.)

## Electrical Characteristics (Ta = 25°C)

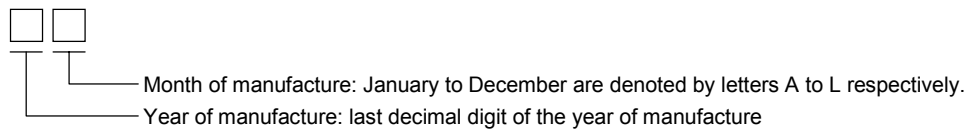
Characteristics		Symbol	Test Condition	Min	Typ.	Max	Unit
Collector cut-off current		$I_{CBO}$	$V_{CB} = -60\text{ V}, I_E = 0$	—	—	-100	$\mu\text{A}$
Emitter cut-off current		$I_{EBO}$	$V_{EB} = -7\text{ V}, I_C = 0$	—	—	-100	$\mu\text{A}$
Collector-emitter breakdown voltage		$V_{(BR)CEO}$	$I_C = -50\text{ mA}, I_B = 0$	-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		$C_{ob}$	$V_{CB} = -10\text{ V}, I_E = 0, f = 1\text{ MHz}$	—	90	—	pF
Switching time	Turn-on time	$t_{on}$		—	0.4	—	$\mu\text{s}$
	Storage time	$t_{stg}$		—	1.7	—	
	Fall time	$t_f$		—	0.5	—	

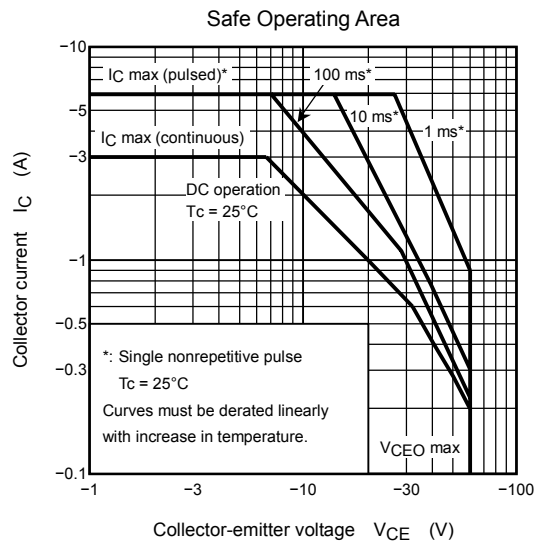
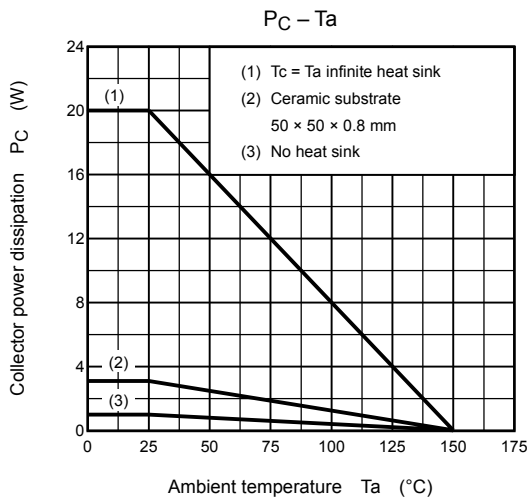
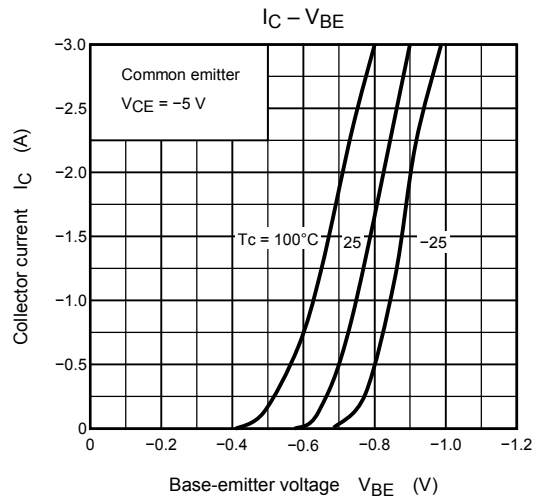
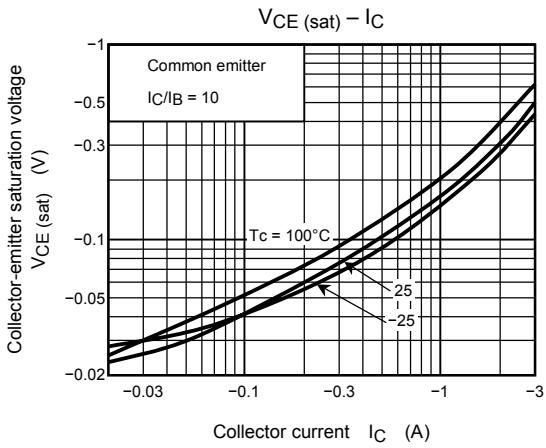
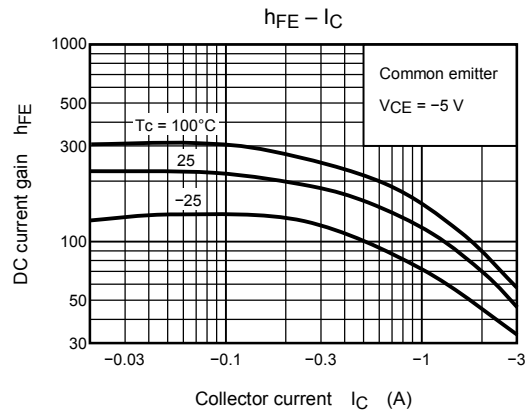
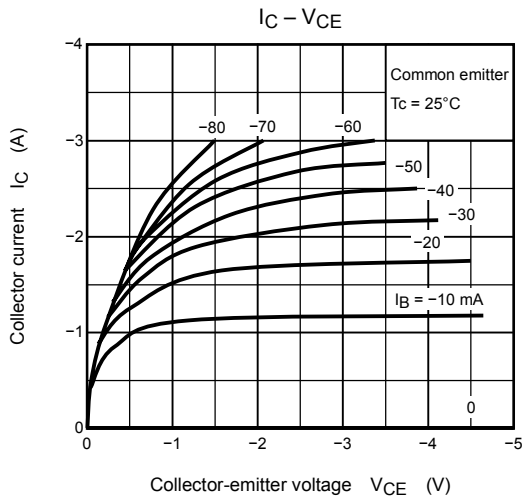
Note:  $h_{FE(1)}$  classification O: 60 to 120, Y: 100 to 200

## Marking



## Explanation of Lot No.





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