

TOSHIBA TRANSISTOR SILICON PNP EPITAXIAL TYPE (PCT PROCESS)

# 2SB907

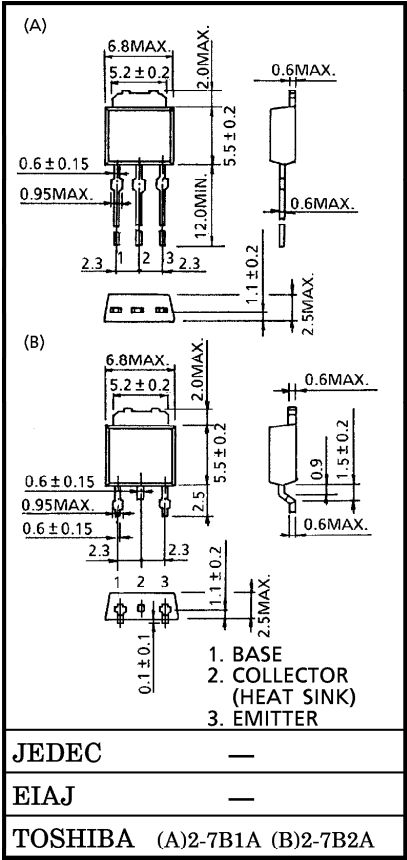
SWITCHING APPLICATIONS  
HAMMER DRIVE, PULSE MOTOR DRIVE APPLICATIONS  
POWER AMPLIFIER APPLICATIONS

- High DC Current Gain  
:  $h_{FE}(1) = 2000$  (Min.) ( $V_{CE} = -2\text{ V}$ ,  $I_C = -1\text{ A}$ )
- Low Saturation Voltage  
:  $V_{CE}(\text{sat}) = -1.5\text{ V}$  (Max.) ( $I_C = -2\text{ A}$ )
- Complementary to 2SD1222.

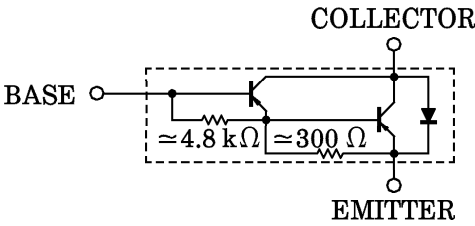
MAXIMUM RATINGS ( $T_a = 25^\circ\text{C}$ )

CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage		$V_{CBO}$	-60	V
Collector-Emitter Voltage		$V_{CEO}$	-40	V
Emitter-Base Voltage		$V_{EBO}$	-5	V
Collector Current		$I_C$	-3	A
Base Current		$I_B$	-0.3	A
Collector Power Dissipation	$T_a = 25^\circ\text{C}$	$P_C$	1.0	W
	$T_c = 25^\circ\text{C}$		15	
Junction Temperature		$T_j$	150	$^\circ\text{C}$
Storage Temperature Range		$T_{\text{stg}}$	-55~150	$^\circ\text{C}$

Unit in mm



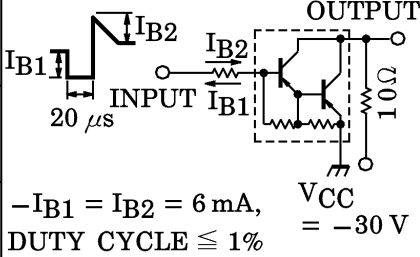
EQUIVALENT CIRCUIT

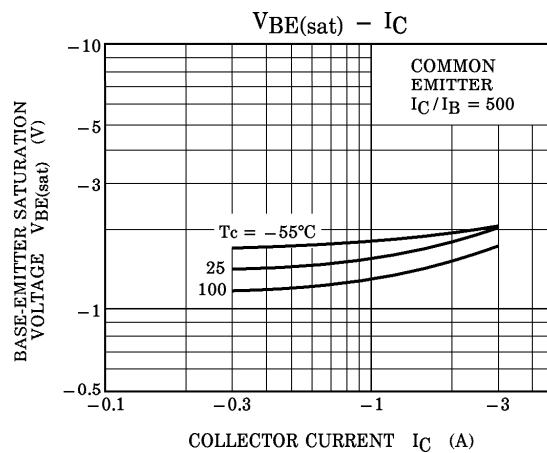
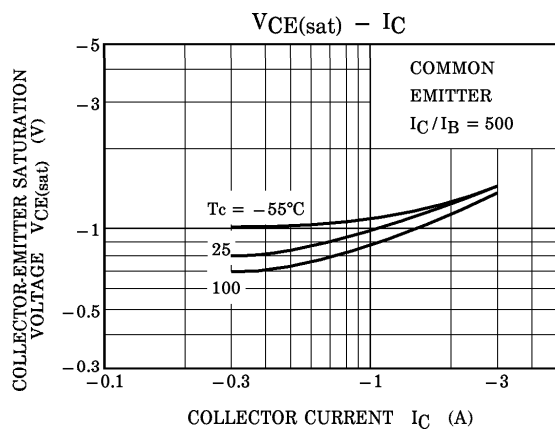
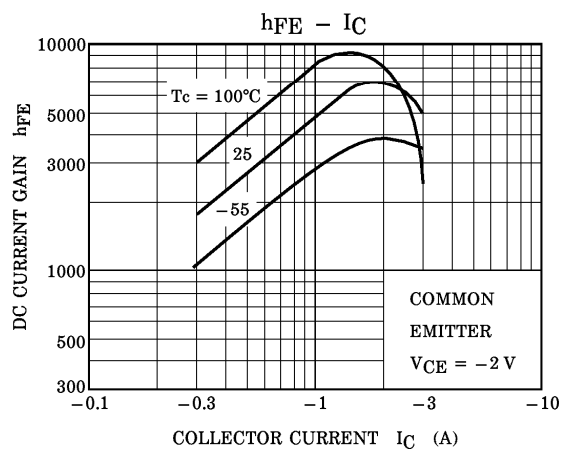
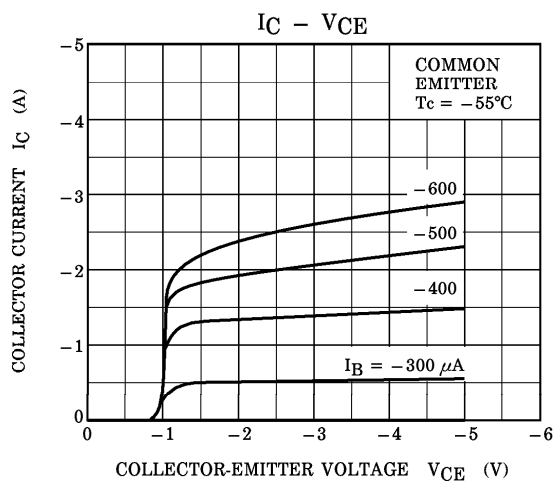
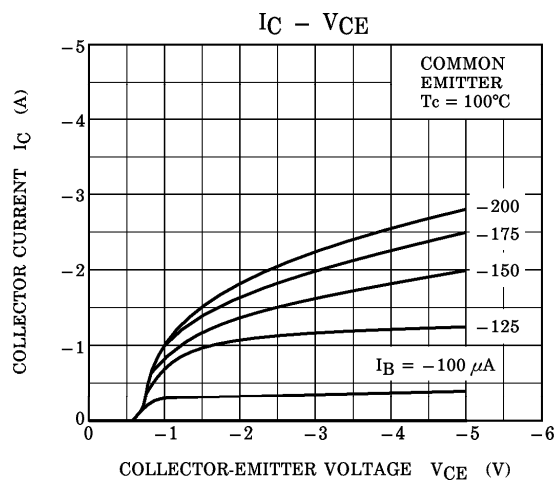
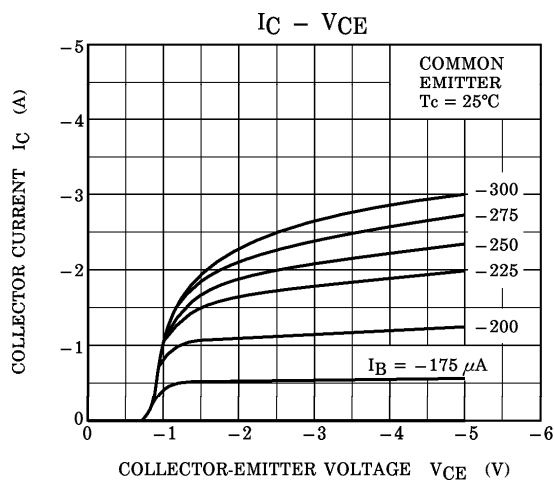


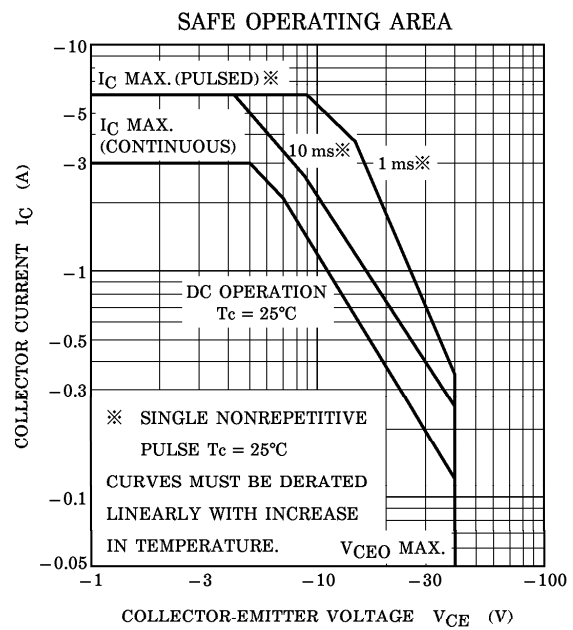
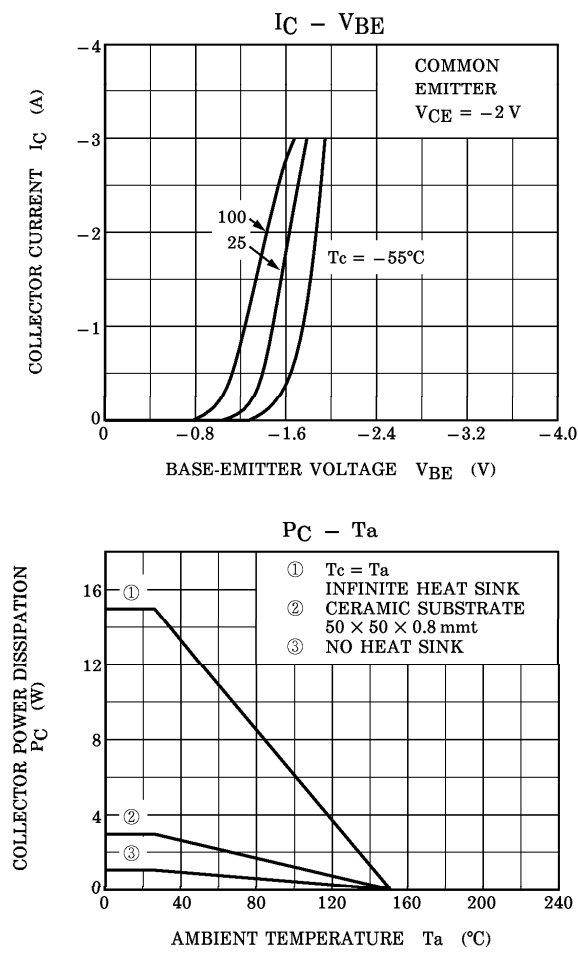
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ELECTRICAL CHARACTERISTICS ( $T_a = 25^\circ\text{C}$ )

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		$I_{CBO}$	$V_{CB} = -60\text{ V}, I_E = 0$	—	—	-20	$\mu\text{A}$
Emitter Cut-off Current		$I_{EBO}$	$V_{EB} = -5\text{ V}, I_C = 0$	—	—	-2.5	mA
Collector-Emitter Breakdown Voltage		$V_{(BR)CEO}$	$I_C = -25\text{ mA}, I_B = 0$	-40	—	—	V
DC Current Gain		$h_{FE(1)}$	$V_{CE} = -2\text{ V}, I_C = -1\text{ A}$	2000	—	—	
		$h_{FE(2)}$	$V_{CE} = -2\text{ V}, I_C = -3\text{ A}$	1000	—	—	
Saturation Voltage	Collector-Emitter	$V_{CE(sat)}$	$I_C = -2\text{ A}, I_B = -4\text{ mA}$	—	—	-1.5	V
	Base-Emitter	$V_{BE(sat)}$	$I_C = -2\text{ A}, I_B = -4\text{ mA}$	—	—	-2.0	
Switching Time	Turn-on Time	$t_{on}$	 <p> <math>-I_{B1} = I_{B2} = 6\text{ mA}</math>,  DUTY CYCLE <math>\leq 1\%</math>  <math>V_{CC} = -30\text{ V}</math> </p>	—	0.30	—	$\mu\text{s}$
	Storage Time	$t_{stg}$		—	0.60	—	
	Fall Time	$t_f$		—	0.25	—	





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