

2SB907

Switching Applications
Hammer Drive, Pulse Motor Drive Applications
Power Amplifier Applications

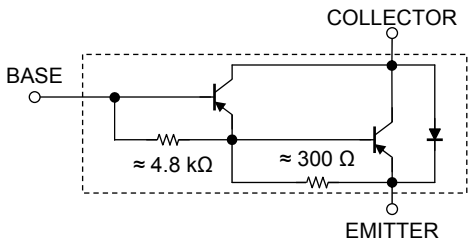
- High DC current gain: $h_{FE} (1) = 2000 \text{ (min)}$ ($V_{CE} = -2 \text{ V}$, $I_C = -1 \text{ A}$)
- Low saturation voltage: $V_{CE} \text{ (sat)} = -1.5 \text{ V (max)}$ ($I_C = -2 \text{ A}$)
- Complementary to 2SD1222.

Absolute Maximum Ratings (Ta = 25°C)

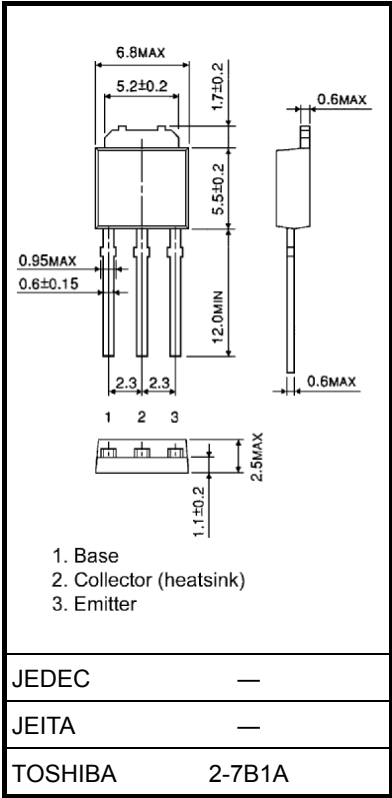
Characteristics		Symbol	Rating	Unit
Collector-base voltage		V_{CBO}	-60	V
Collector-emitter voltage		V_{CEO}	-40	V
Emitter-base voltage		V_{EBO}	-5	V
Collector current		I_C	-3	A
Base current		I_B	-0.3	A
Collector power dissipation	Ta = 25°C	P_C	1.0	W
	Tc = 25°C		15	
Junction temperature		T_j	150	°C
Storage temperature range		T_{stg}	-55 to 150	°C

Note: Using continuously under heavy loads (e.g. the application of high temperature/current/voltage and the significant change in temperature, etc.) may cause this product to decrease in the reliability significantly even if the operating conditions (i.e. operating temperature/current/voltage, etc.) are within the absolute maximum ratings.
Please design the appropriate reliability upon reviewing the Toshiba Semiconductor Reliability Handbook ("Handling Precautions"/Derating Concept and Methods) and individual reliability data (i.e. reliability test report and estimated failure rate, etc).

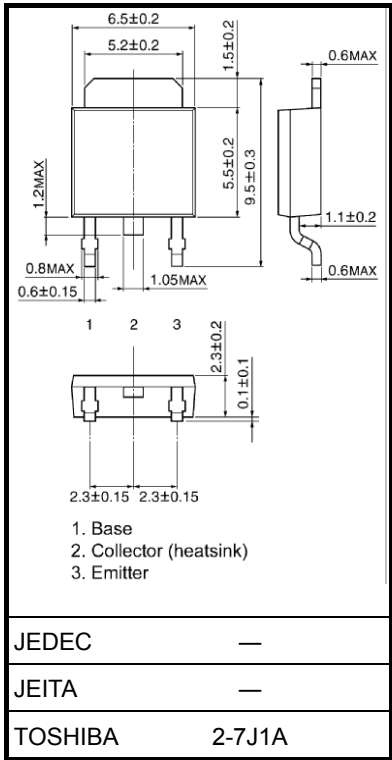
Equivalent Circuit



Unit: mm

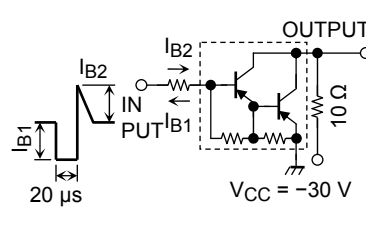


Weight: 0.36 g (typ.)

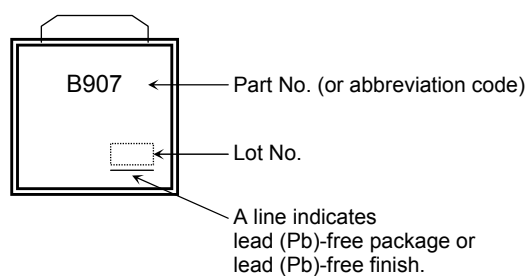


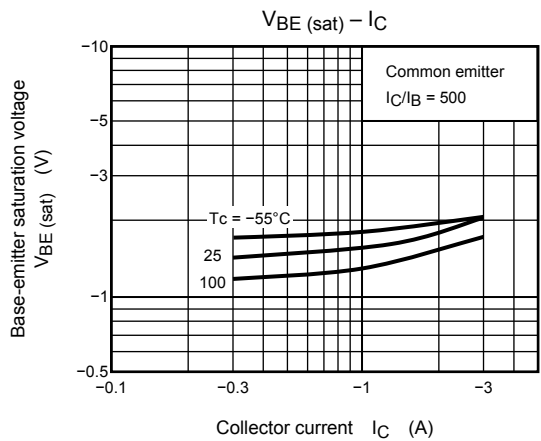
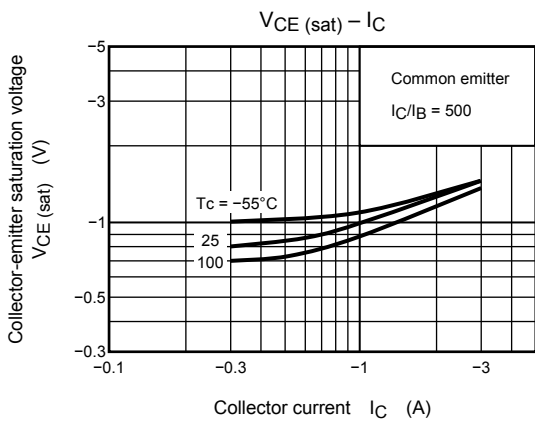
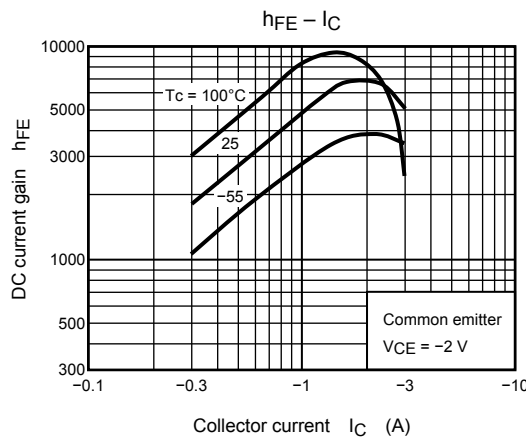
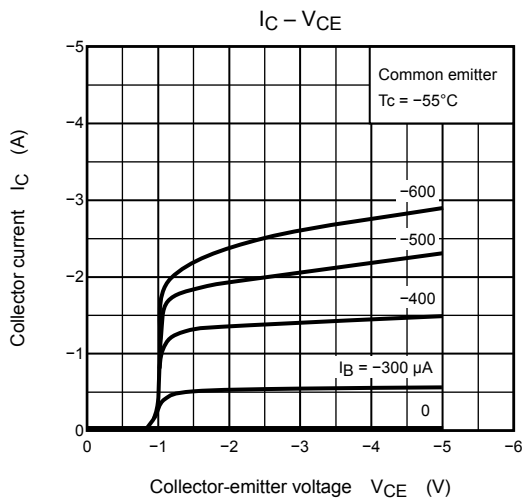
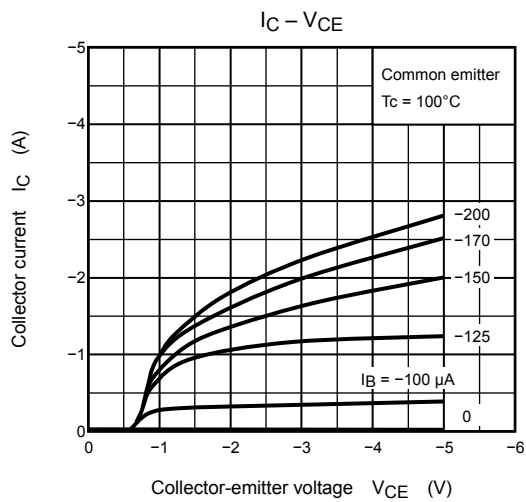
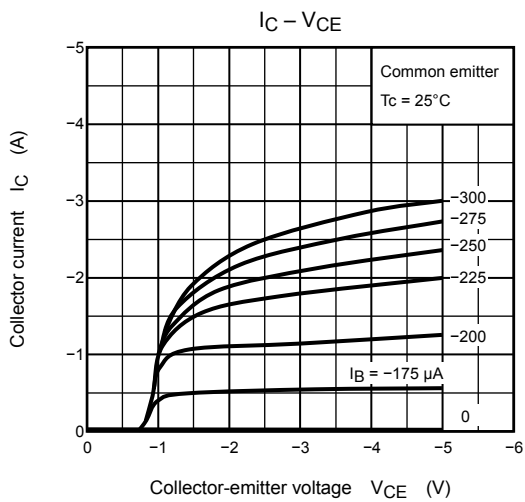
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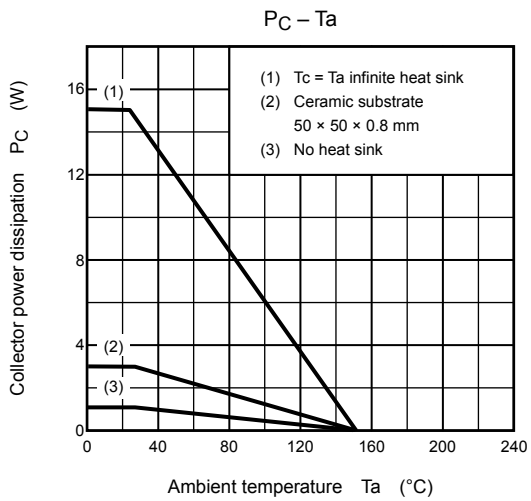
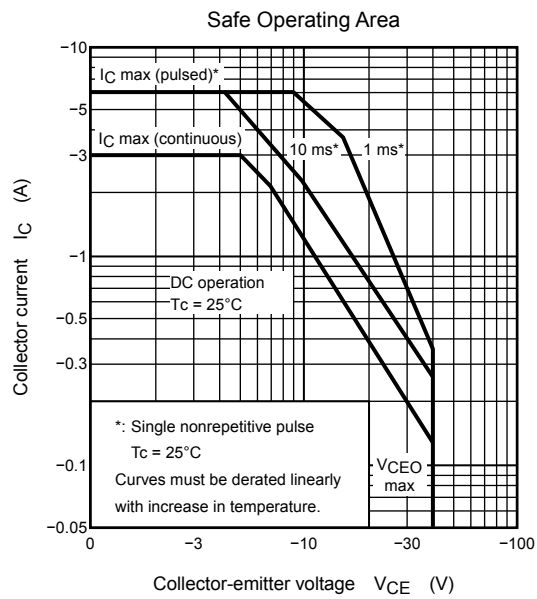
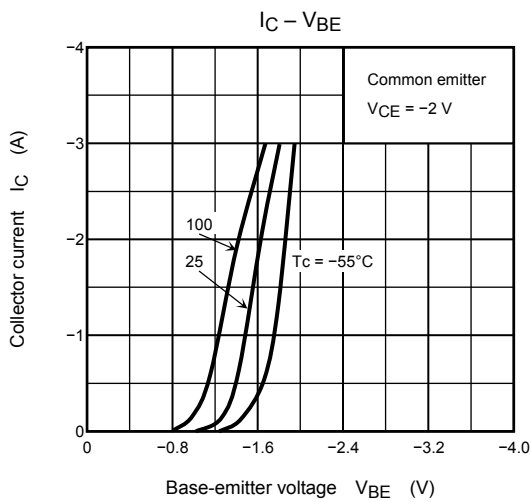
Electrical Characteristics (Ta = 25°C)

Characteristics		Symbol	Test Condition	Min	Typ.	Max	Unit
Collector cut-off current		I_{CBO}	$V_{CB} = -60 \text{ V}, I_E = 0$	—	—	-20	μA
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	—	—	
Collector-emitter saturation voltage		$V_{CE (sat)}$	$I_C = -2 \text{ A}, I_B = -4 \text{ mA}$	—	—	-1.5	V
Base-emitter saturation voltage		$V_{BE (sat)}$	$I_C = -2 \text{ A}, I_B = -4 \text{ mA}$	—	—	-2.0	V
Switching time	Turn-on time	t_{on}	 <p>$-I_{B1} = I_{B2} = 6 \text{ mA}, \text{DUTY CYCLE} \leq 1\%$</p>	—	0.30	—	μs
	Storage time	t_{stg}		—	0.60	—	
	Fall time	t_f		—	0.25	—	

Marking







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20070701-EN

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