

TOSHIBA Transistor Silicon PNP Epitaxial Type

# 2SA1930

Power Amplifier Applications  
 Driver Stage Amplifier Applications

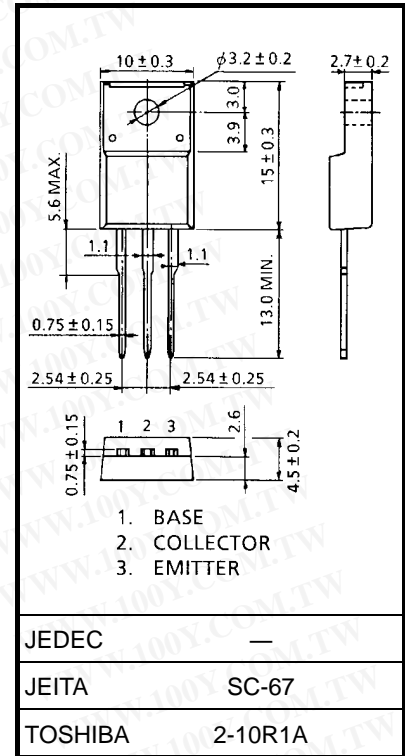
- High transition frequency:  $f_T = 200$  MHz (typ.)
- Complementary to 2SC5171

### Absolute Maximum Ratings (Tc = 25°C)

Characteristics	Symbol	Rating	Unit
Collector-base voltage	V <sub>CBO</sub>	-180	V
Collector-emitter voltage	V <sub>CEO</sub>	-180	V
Emitter-base voltage	V <sub>EBO</sub>	-5	V
Collector current	I <sub>C</sub>	-2	A
Base current	I <sub>B</sub>	-1	A
Collector power dissipation	P <sub>C</sub>	T <sub>a</sub> = 25°C	2.0
		T <sub>c</sub> = 25°C	20
Junction temperature	T <sub>j</sub>	150	°C
Storage temperature range	T <sub>stg</sub>	-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).

Unit: mm



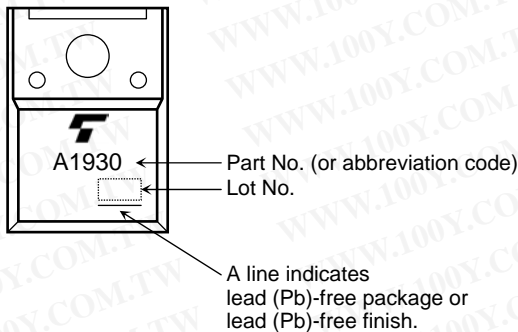
Weight: 1.7 g (typ.)

勝特力材料 886-3-5753170  
 勝特力电子(上海) 86-21-34970699  
 勝特力电子(深圳) 86-755-83298787  
[Http://www.100y.com.tw](http://www.100y.com.tw)

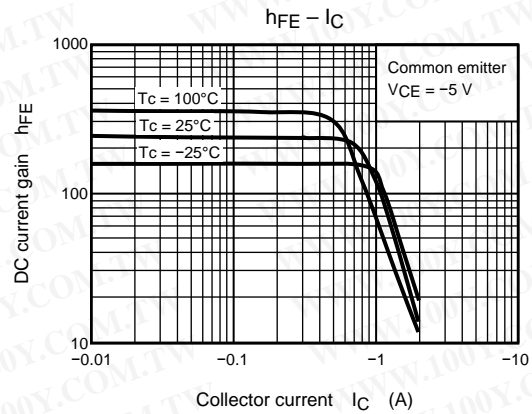
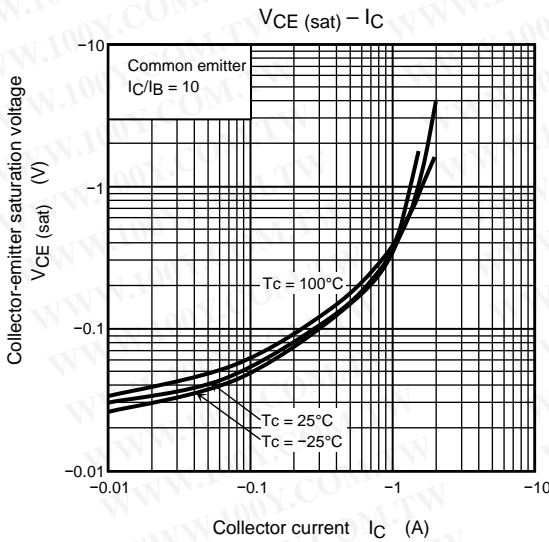
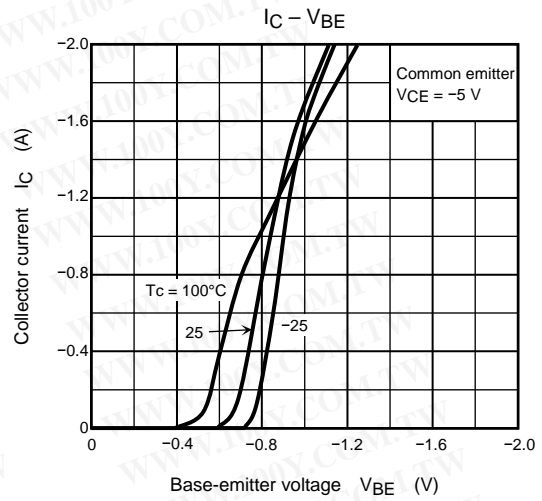
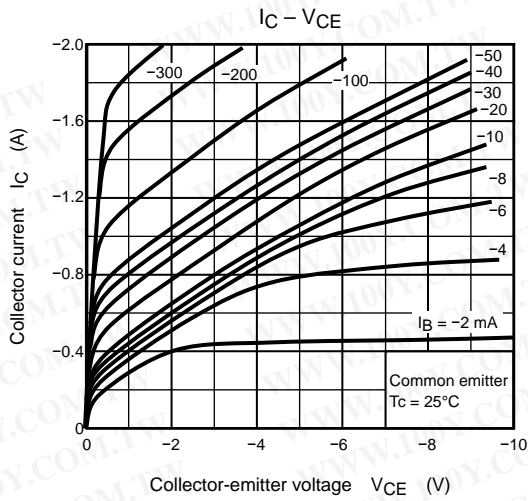
## Electrical Characteristics (Tc = 25°C)

Characteristics	Symbol	Test Condition	Min	Typ.	Max	Unit
Collector cut-off current	$I_{CBO}$	$V_{CB} = -180\text{ V}, I_E = 0$	—	—	-5.0	$\mu\text{A}$
Emitter cut-off current	$I_{EBO}$	$V_{EB} = -5\text{ V}, I_C = 0$	—	—	-5.0	$\mu\text{A}$
Collector-emitter breakdown voltage	$V_{(BR) CEO}$	$I_C = -10\text{ mA}, I_B = 0$	-180	—	—	V
DC current gain	$h_{FE} (1)$	$V_{CE} = -5\text{ V}, I_C = -0.1\text{ A}$	100	—	320	
	$h_{FE} (2)$	$V_{CE} = -5\text{ V}, I_C = -1\text{ A}$	50	—	—	
Collector-emitter saturation voltage	$V_{CE (sat)}$	$I_C = -1\text{ A}, I_B = -0.1\text{ A}$	—	-0.24	-1.0	V
Base-emitter voltage	$V_{BE}$	$V_{CE} = -5\text{ V}, I_C = -1\text{ A}$	—	-0.68	-1.5	V
Transition frequency	$f_T$	$V_{CE} = -10\text{ V}, I_C = -0.3\text{ A}$	—	200	—	MHz
Collector output capacitance	$C_{ob}$	$V_{CB} = -10\text{ V}, I_C = 0, f = 1\text{ MHz}$	—	26	—	pF

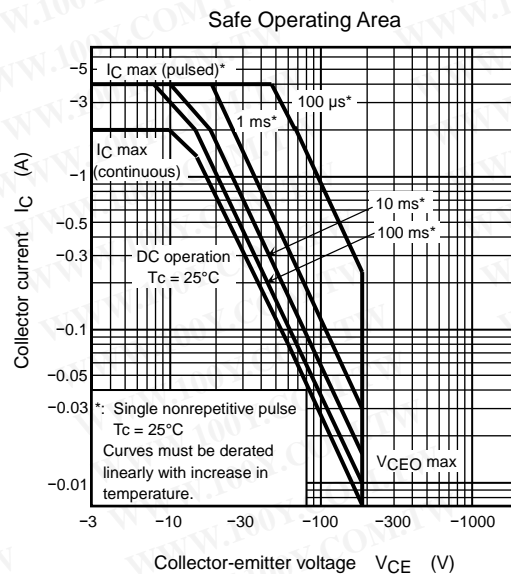
## Marking

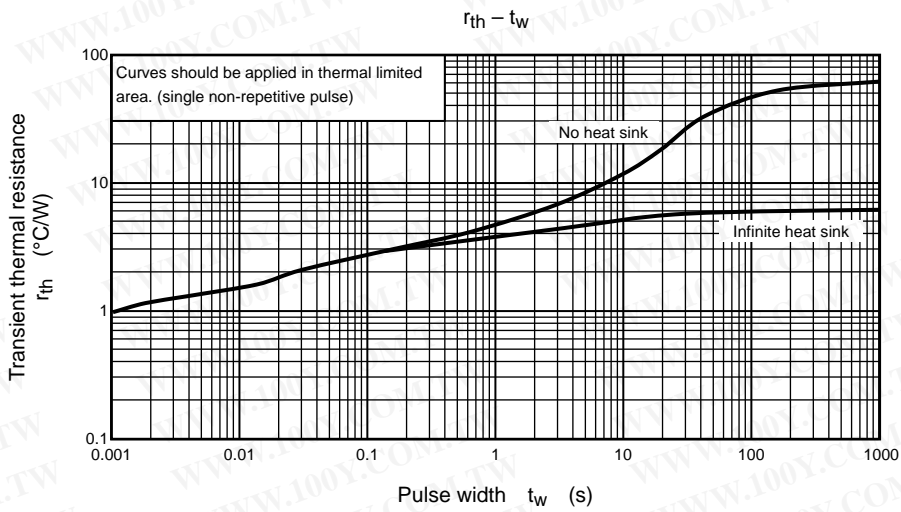


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