Unit: mm

TOSHIBA Transistor Silicon PNP Epitaxial Type

# 2SA1837

Power Amplifier Applications
Driver Stage Amplifier Applications

- High transition frequency:  $f_T = 70 \text{ MHz}$  (typ.)
- Complementary to 2SC4793

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

Characteristics		Symbol	Rating	Unit	
Collector-base voltage		$V_{CBO}$	-230	V	
Collector-emitter voltage		V <sub>CEO</sub>	-230	V	
Emitter-base voltage		V <sub>EBO</sub>	-5	V	
Collector current		IC	-1	Α	
Base current		Ι <sub>Β</sub>	-0.1	Α	
Collector power dissipation	Ta = 25°C	D.	2.0	W	
	Tc = 25°C	P <sub>C</sub>	20		
Junction temperature		Tj	150	°C	
Storage temperature range		T <sub>stg</sub>	-55 to 150	°C	

Weight: 1.7 g (typ.)

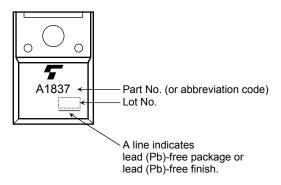
Note: Using continuously under heavy loads (e.g. the application of high temperature/current/voltage and the significant change in

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).

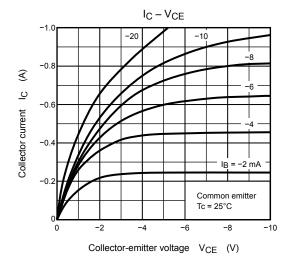
# Electrical Characteristics (Tc = 25°C)

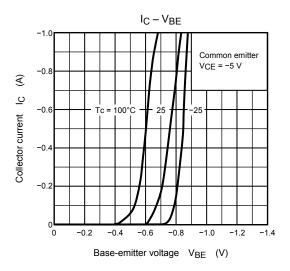
Characteristics	Symbol	Test Condition	Min	Тур.	Max	Unit
Collector cut-off current	I <sub>CBO</sub>	$V_{CB} = -230 \text{ V}, I_{E} = 0$	_	_	-1.0	μΑ
Emitter cut-off current	I <sub>EBO</sub>	$V_{EB} = -5 \text{ V}, I_{C} = 0$	_	_	-1.0	μA
Collector-emitter breakdown voltage	V (BR) CEO	$I_C = -10 \text{ mA}, I_B = 0$	-230	_	_	V
DC current gain	h <sub>FE</sub>	$V_{CE} = -5 \text{ V}, I_{C} = -100 \text{ mA}$	100	_	320	
Collector-emitter saturation voltage	V <sub>CE</sub> (sat)	$I_C = -500 \text{ mA}, I_B = -50 \text{ mA}$	_	_	-1.5	V
Base-emitter voltage	$V_{BE}$	V <sub>CE</sub> = -5 V, I <sub>C</sub> = -500 mA	_	_	-1.0	V
Transition frequency	f <sub>T</sub>	V <sub>CE</sub> = -10 V, I <sub>C</sub> = -100 mA	_	70	_	MHz
Collector output capacitance	C <sub>ob</sub>	V <sub>CB</sub> = -10 V, I <sub>C</sub> = 0, f = 1 MHz	_	30	_	pF

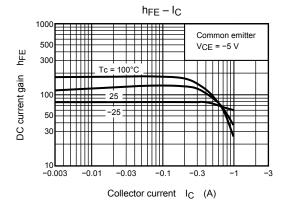
## Marking

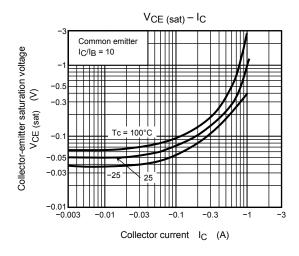


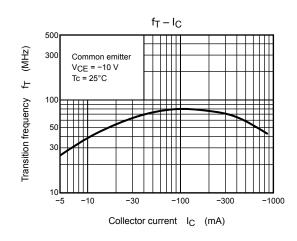
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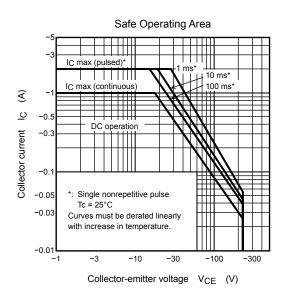












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