

SavantIC Semiconductor

Product Specification

Silicon NPN Power Transistors

BU406 BU407

DESCRIPTION

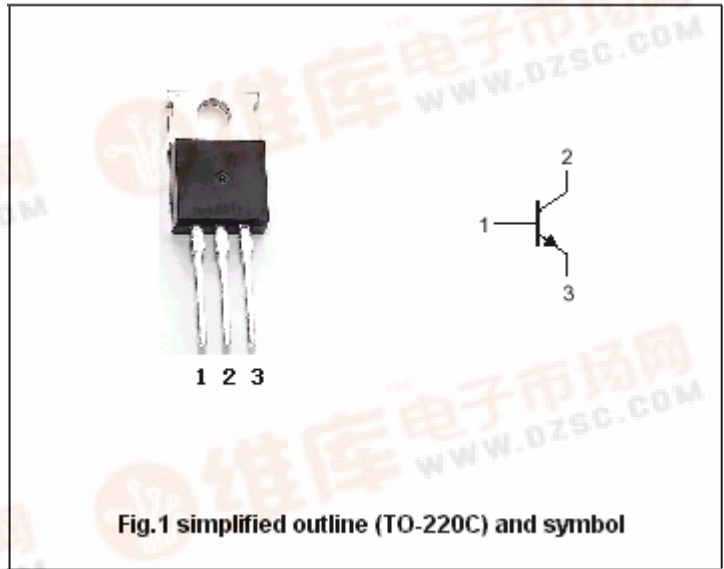
- With TO-220C package
- High voltage;high speed
- Low collector saturation voltage

APPLICATIONS

- For use in horizontal deflection output stages of TV's and CTV's circuits

PINNING

PIN	DESCRIPTION
1	Base
2	Collector;connected to mounting base
3	Emitter



Absolute maximum ratings (Ta=25℃)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V <sub>CBO</sub>	Collector-base voltage	BU406	400	V
		BU407	330	
V <sub>CEO</sub>	Collector-emitter voltage	BU406	200	V
		BU407	150	
V <sub>EBO</sub>	Emitter-base voltage	Open collector	6	V
I <sub>C</sub>	Collector current		7	A
I <sub>CM</sub>	Collector current-Peak		10	A
I <sub>B</sub>	Base current		4	A
P <sub>tot</sub>	Total power dissipation	T <sub>C</sub> =25℃	60	W
T <sub>j</sub>	Junction temperature		150	℃
T <sub>stg</sub>	Storage temperature		-65~150	℃

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R <sub>th j-c</sub>	Thermal resistance junction to case	2.08	℃/W

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## CHARACTERISTICS

T<sub>j</sub>=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>CEO(SUS)</sub>	Collector-emitter sustaining voltage	BU406	I <sub>C</sub> =100mA ; I <sub>B</sub> =0	200		V
		BU407		150		
V <sub>CEsat</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =5A ; I <sub>B</sub> =0.5A			1.0	V
V <sub>BEsat</sub>	Base-emitter saturation voltage	I <sub>C</sub> =5A ; I <sub>B</sub> =0.5A			1.2	V
I <sub>CES</sub>	Collector cut-off current	BU406	V <sub>CE</sub> =400V ; V <sub>BE</sub> =0		5	mA
		BU407		V <sub>CE</sub> =330V ; V <sub>BE</sub> =0		
I <sub>EBO</sub>	Emitter cut-off current	V <sub>EB</sub> =6.0V ; I <sub>C</sub> =0			1.0	mA
h <sub>FE</sub>	DC current gain	I <sub>C</sub> =2A ; V <sub>CE</sub> =5V	40		120	
f <sub>T</sub>	Transition frequency	I <sub>C</sub> =0.5A ; V <sub>CE</sub> =10V ; f=1.0MHz	10			MHz
C <sub>OB</sub>	Output capacitance	I <sub>E</sub> =0 ; V <sub>CB</sub> =10V ; f=1.0MHz		80		pF
t <sub>f</sub>	Fall time	I <sub>C</sub> =5A ; V <sub>CC</sub> =40V I <sub>B1</sub> = -I <sub>B2</sub> =0.6A ; L=150μH			0.75	μs

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PACKAGE OUTLINE

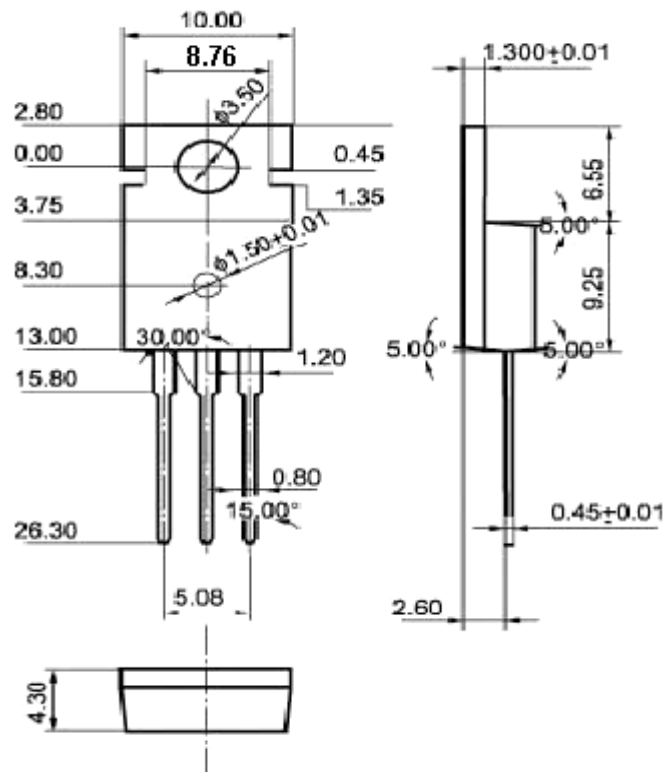


Fig.2 Outline dimensions (unindicated tolerance:  $\pm 0.10\text{mm}$ )

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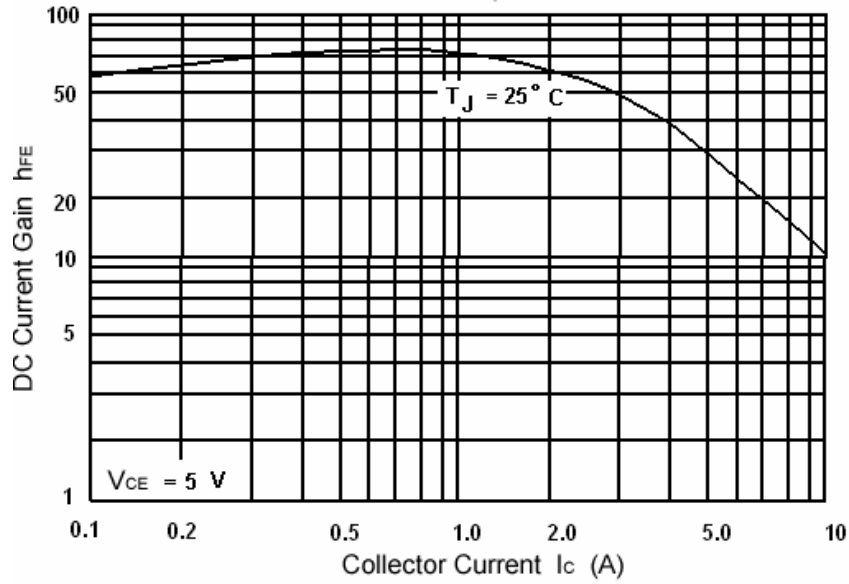


Fig.3 DC current Gain

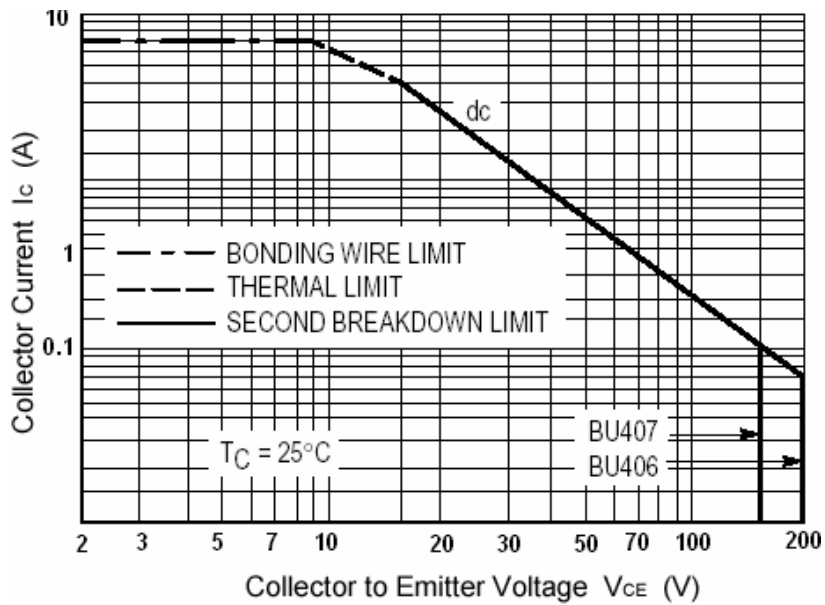


Fig.4 Safe Operating Area