

SavantIC Semiconductor

Product Specification

Silicon NPN Power Transistors

2SD866 2SD866A

DESCRIPTION

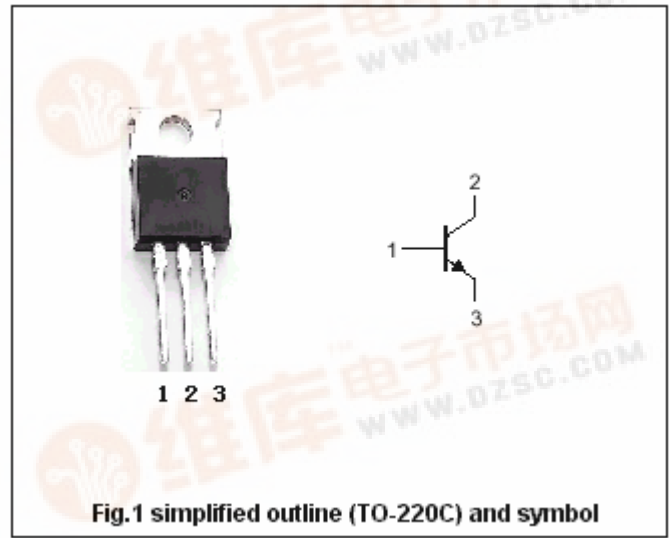
- With TO-220C package
- Low collector saturation voltage
- Excellent linearity of h_{FE}
- High collector current

APPLICATIONS

- For power switching applications

PINNING

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



Absolute maximum ratings($T_c=25^\circ\text{C}$)

SYMBOL	PARAMETER		CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	2SD866	Open emitter	130	V
		2SD866A		150	
V_{CEO}	Collector-emitter voltage	2SD866	Open base	80	V
		2SD866A		100	
V_{EBO}	Emitter-base voltage		Open collector	7	V
I_C	Collector current			7	A
I_{CM}	Collector current-peak			15	A
P_C	Collector power dissipation		$T_c=25^\circ\text{C}$	40	W
T_j	Junction temperature			150	$^\circ\text{C}$
T_{stg}	Storage temperature			-55~150	$^\circ\text{C}$

Silicon NPN Power Transistors

2SD866 2SD866A

CHARACTERISTICS

Tj=25°C unless otherwise specified

SYMBOL	PARAMETER		CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	2SD866	$I_C=0.2A; I_B=0$	80			V
		2SD866A		100			
V_{CEsat}	Collector-emitter saturation voltage		$I_C=5A; I_B=0.25A$			0.5	V
V_{BEsat}	Base-emitter saturation voltage		$I_C=5A; I_B=0.25A$			1.5	V
I_{CBO}	Collector cut-off current		$V_{CB}=100V; I_E=0$			10	μA
I_{EBO}	Emitter cut-off current		$V_{EB}=5V; I_C=0$			50	μA
h_{FE-1}	DC current gain		$I_C=0.1A; V_{CE}=2V$	45			
h_{FE-2}	DC current gain		$I_C=3A; V_{CE}=2V$	60		260	
f_T	Transition frequency		$I_C=0.5A; V_{CE}=10V$		30		MHz

Switching times

t_{on}	Turn-on time	$I_C=3A; I_{B1}=-I_{B2}=0.3A$		0.5		μs
t_s	Storage time			1.5		μs
t_f	Fall time			0.1		μs

◆ h_{FE-2} classifications

R	Q	P
60-120	90-180	130-260

Silicon NPN Power Transistors

2SD866 2SD866A

PACKAGE OUTLINE

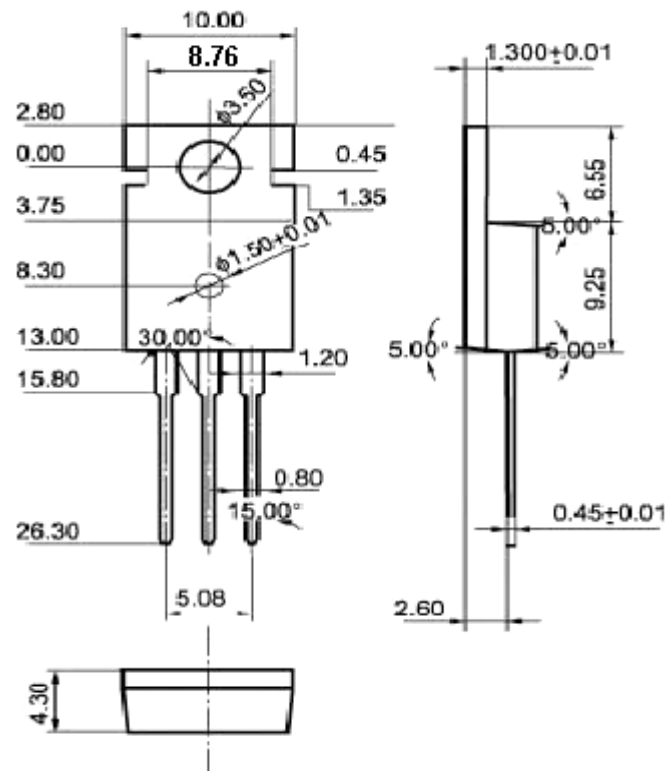


Fig.2 Outline dimensions (unindicated tolerance:±0.10 mm)