

Silicon NPN Power Transistors

2N6836

DESCRIPTION

- With TO-3 package
- High voltage ,high speed

APPLICATIONS

- Switching regulators
- Inverters
- Motor controls
- Deflection circuits

PINNING

PIN	DESCRIPTION
1	Base
2	Emitter
3	Collector



Fig.1 simplified outline (TO-3) and symbol

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

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	850	V
V_{CEO}	Collector-emitter voltage	Open base	450	V
V_{EBO}	Emitter-base voltage	Open collector	6	V
I_C	Collector current		15	A
I_{CM}	Collector current-peak		20	A
I_B	Base current		10	A
I_{BM}	Base current-peak		15	A
P_C	Collector power dissipation	$T_C = 25^\circ\text{C}$	175	W
T_j	Junction temperature		200	$^\circ\text{C}$
T_{stg}	Storage temperature		-65~200	$^\circ\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	VALUE	UNIT
$R_{th\ j-c}$	Thermal resistance junction to case	1.0	$^\circ\text{C/W}$

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CHARACTERISTICS

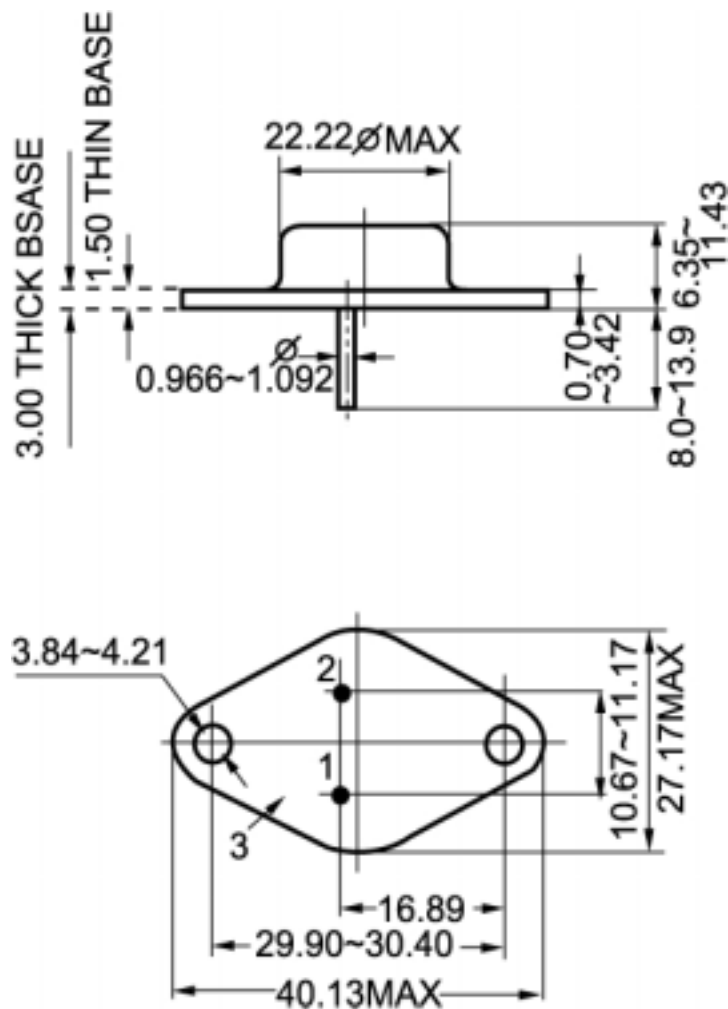
T_j=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CEQ(SUS)}	Collector-emitter sustaining voltage	I _C =0.1A ; I _B =0	450			V
V _{CEsat-1}	Collector-emitter saturation voltage	I _C =5A; I _B =0.7A			1.2	V
V _{CEsat-2}	Collector-emitter saturation voltage	I _C =10A; I _B =1.0A T _C =100°C			2.5 3.0	V
V _{BEsat}	Base-emitter saturation voltage	I _C =10A; I _B =1.0A T _C =100°C			1.5 1.5	V
I _{CEV}	Collector cut-off current	V _{CE} =850V; V _{BE} =-1.5V T _C =100°C			0.25 1.5	mA
I _{EBO}	Emitter cut-off current	V _{EB} =6V; I _C =0			1.0	mA
h _{FE-1}	DC current gain	I _C =10A ; V _{CE} =5V	8		30	
h _{FE-2}	DC current gain	I _C =15A ; V _{CE} =5V	5			
C _{OB}	Output capacitance	I _E =0 ; V _{CB} =10V;f=1MHz	50		400	pF
f _T	Transition frequency	I _C =0.25A ; V _{CE} =10V;f=10MHz	10		75	MHz

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PACKAGE OUTLINE

Fig.2 outline dimensions (unindicated tolerance: $\pm 0.1\text{mm}$)