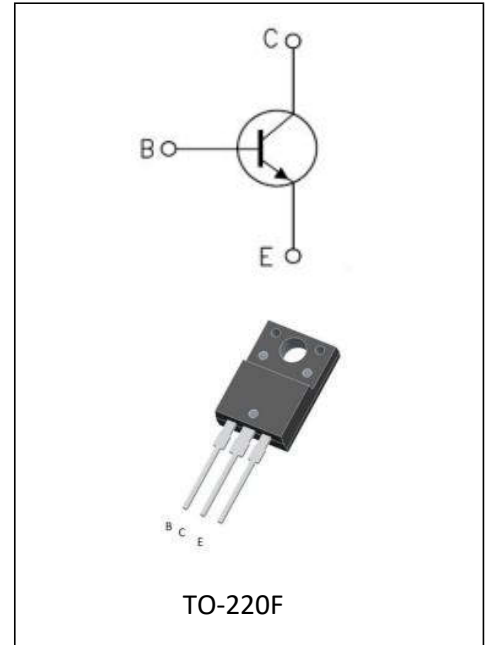


Minos Silicon NPN Triple diffusion Type

Power Amplifier Applications

- ① Complementary to 2SA1837
- ② High collector voltage: $V_{CEO}=230V$ (min)

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.



Absolute Maximum (°C):

Characteristics	Symbol	Rating	Unit
Collector-base voltage	V_{CBO}	230	V
Collector-emitter voltage	V_{CEO}	230	V
Emitter-base voltage	V_{EBO}	5	V
Collector current	I_C	1	A
Base current	I_B	0.2	A
Collector power dissipation (Tc=25°C)	P_C	50	W
Junction temperature	T_j	150	°C
Storage temperature range	T_{STG}	-55~150	°C

Thermal Characteristics

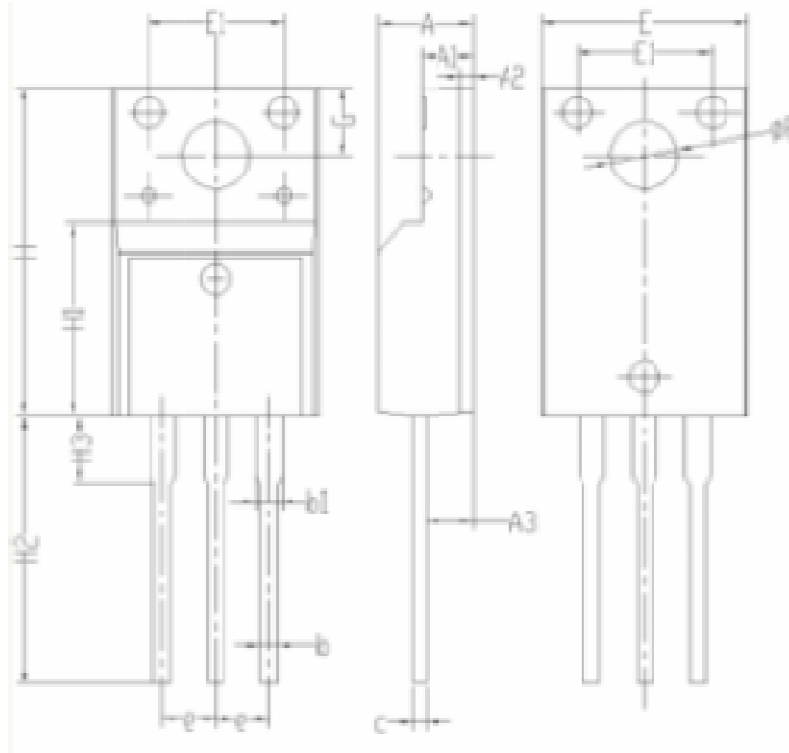
Symbol	Parameter	Typ	Units
$R_{\theta jc}$	Junction-to-Case	3.0	°C/W

Electrical Characteristics (°C):

Characteristics	Symbol	Test Condition	Min	Typ	Max	Unit
Collector-Base Cut-off Current	I_{CBO}	$V_{CB}=230V, I_E=0$			1.0	μA
Emitter-Base Cut-off Current	I_{EBO}	$V_{EB}=5V, I_C=0$			1.0	μA
Collector-Emitter Breakdown Voltage	V_{CEO}	$I_C=1mA$	230			V
DC current gain	h_{FE}	$I_C=0.1A; V_{CE}=5V$	100		300	
Collector-emitter saturation voltage	V_{CEsat}	$I_C=0.5A; I_B=0.05A$			0.5	V
Base-Emitter Saturation Voltage	V_{BEsat}	$I_C=0.5A, I_B=0.05A$			1.4	V
Base-emitter voltage	V_{BE}	$V_{CE}=5V; I_C=0.5A$			1.5	V
Transition frequency	f_T	$V_{CE}=10V; I_C=100mA$		40		MHz

Package Information

TO-220F PACKAGE



Symbol	Dimensions (millimeters)	
	Min	Max
A	4.35	4.75
A1	2.30	2.70
A2	0.40	0.80
A3	2.1	2.50
b	0.60	1.00
b1	1.00	1.40
c	0.30	0.70
e	2.30	2.70
E	9.80	10.2
E1	6.30	6.70
H	15.6	16.0
H1	8.80	9.20
H2	12.9	13.5
H3	3.10	3.50
G	3.10	3.50
φP	3.10	3.50

NOTE:

1. Exceeding the maximum ratings of the device in performance may cause damage to the device, even the permanent failure, which may affect the dependability of the machine. Please do not exceed the absolute maximum ratings of the device when circuit designing.
2. When installing the heat sink, please pay attention to the torsional moment and the smoothness of the heat sink.
3. MOSFETs is the device which is sensitive to the static electricity, it is necessary to protect the device from being damaged by the static electricity when using it.
4. Shenzhen Minos reserves the right to make changes in this specification sheet and is subject to change without prior notice.

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