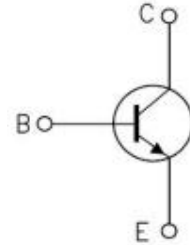


### Power Amplifier Applications

- 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.



TO-220F

### 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 ( $T_c=25^\circ\text{C}$ )	$P_C$	50	W
Junction temperature	$T_j$	150	$^\circ\text{C}$
Storage temperature range	$T_{STG}$	-55~150	$^\circ\text{C}$

### Thermal Characteristics

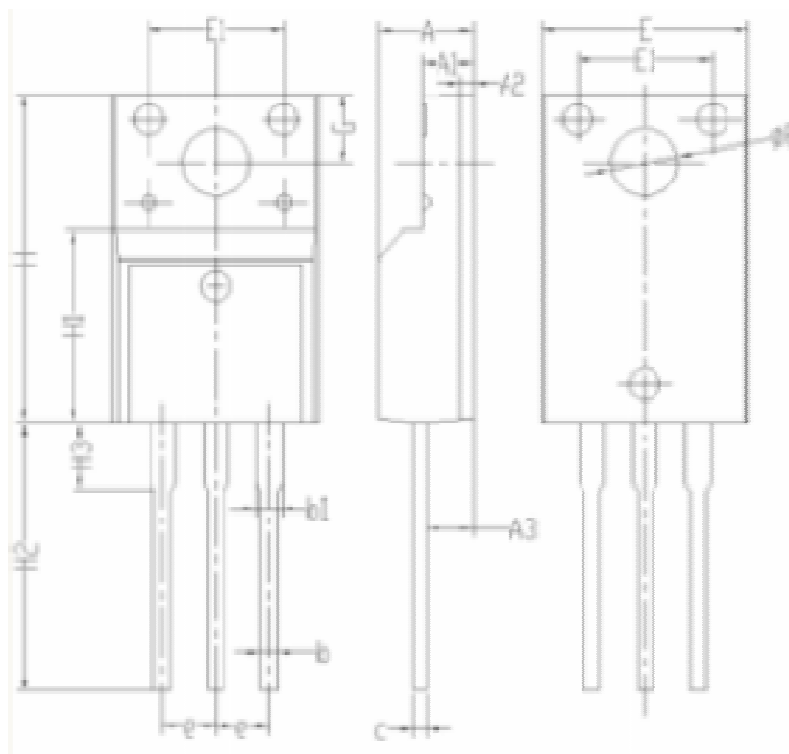
Symbol	Parameter	Typ	Units
$R_{\theta jc}$	Junction-to-Case	3.0	$^\circ\text{C}/\text{W}$

**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	$\mu A$
Emitter-Base Cut-off Current	$I_{EBO}$	$V_{EB}=5V, I_C=0$			1.0	$\mu A$
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