

## TO-220F Plastic-Encapsulate Transistors

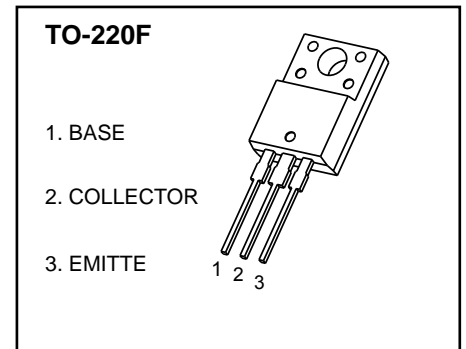
### 3DA5371 TRANSISTOR (NPN)

#### FEATURES

- Breakdown Voltage High
- Reverse Cut-off Current Small
- Saturation Voltage Low
- Power dissipation

$P_{CM} : 1.5W (T_a=25.)$

$25 W (T_c=25.)$



#### MAXIMUM RATINGS ( $T_a=25^{\circ}C$ unless otherwise noted)

Symbol	Parameter	Value	Unit
$V_{CBO}$	Collector-Base Voltage	180	V
$V_{CEO}$	Collector-Emitter Voltage	160	V
$V_{EBO}$	Emitter-Base Voltage	6	V
$I_C$	Collector Current -Continuous	1.5	A
$T_J$	Junction Temperature	150	$^{\circ}C$
$T_{stg}$	Storage Temperature	-55-150	$^{\circ}C$

#### ELECTRICAL CHARACTERISTICS ( $T_a=25^{\circ}C$ unless otherwise specified)

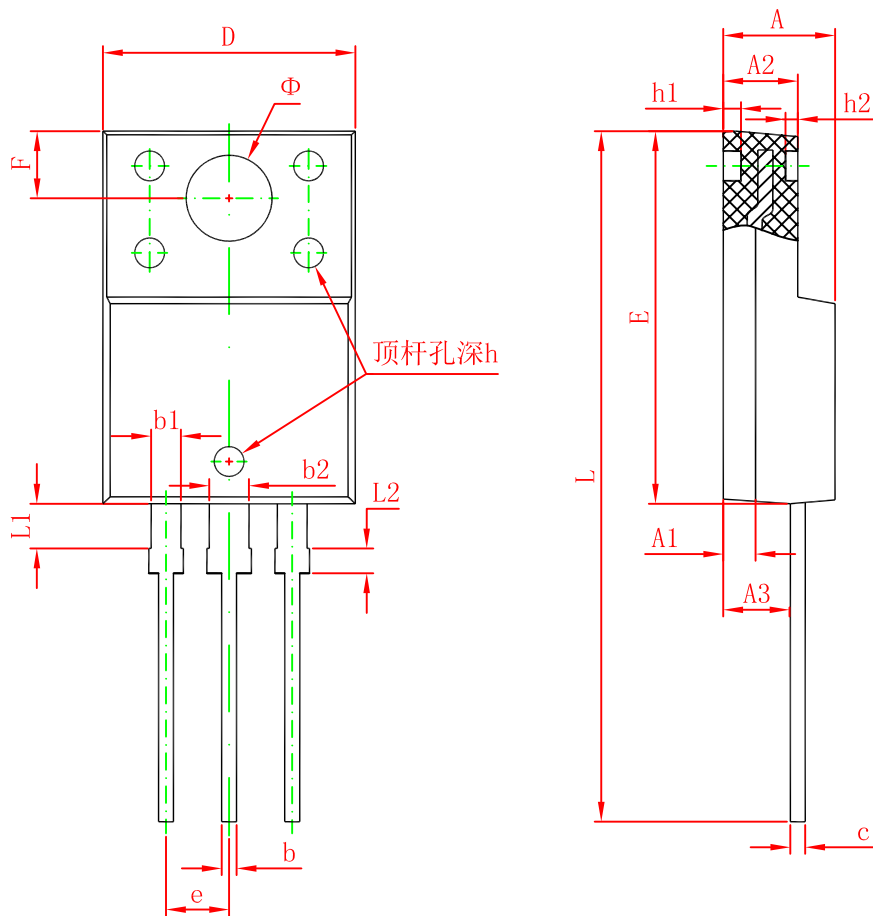
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=1mA, I_E=0$	180			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=10mA, I_B=0$	160			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=100\mu A, I_C=0$	6			V
Collector cut-off current	$I_{CBO}$	$V_{CB}=180V, I_E=0$			10	$\mu A$
Emitter cut-off current	$I_{EBO}$	$V_{EB}=6V, I_C=0$			10	$\mu A$
DC current gain	$h_{FE}^*$	$V_{CE}=5V, I_C=200mA$	60		240	
Collector-emitter saturation voltage	$V_{CE(sat)}^*$	$I_C=500mA, I_B=50mA$			1	V
Transition frequency	$f_T$	$V_{CE}=10V, I_C=50mA$	50			MHz

\*Pulse test:  $t_p \leq 300\mu S, \delta \leq 0.02$ .

#### CLASSIFICATION OF $h_{FE}$

Rank	O	R
Range	60-140	100-240

# TO-220F Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	4.300	4.700	0.169	0.185
A1	1.300 REF.		0.051 REF.	
A2	2.800	3.200	0.110	0.126
A3	2.500	2.900	0.098	0.114
b	0.500	0.750	0.020	0.030
b1	1.100	1.350	0.043	0.053
b2	1.500	1.750	0.059	0.069
c	0.500	0.750	0.020	0.030
D	9.960	10.360	0.392	0.408
E	14.800	15.200	0.583	0.598
e	2.540 TYP.		0.100 TYP.	
F	2.700 REF.		0.106 REF.	
Φ	3.500 REF.		0.138 REF.	
h	0.000	0.300	0.000	0.012
h1	0.800 REF.		0.031 REF.	
h2	0.500 REF.		0.020 REF.	
L	28.000	28.400	1.102	1.118
L1	1.700	1.900	0.067	0.075
L2	0.900	1.100	0.035	0.043