## / Descriptions

Silicon NPN transistor in a TO-220F Plastic Package.

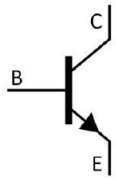
## / Features

Low saturation voltage, complementary to KTB1366.

## / Applications

General Purpose Application.

## / Equivalent Circuit




## / Pinning


PIN1 Base PIN 2 Collector PIN 3 Emitter

## / $h_{FE}$ Classifications & Marking

| $h_{FE}$ Classifications Symbol | O | Y |
|---|---|---|
| $h_{FE}$ Range | 60~120 | 100~200 |

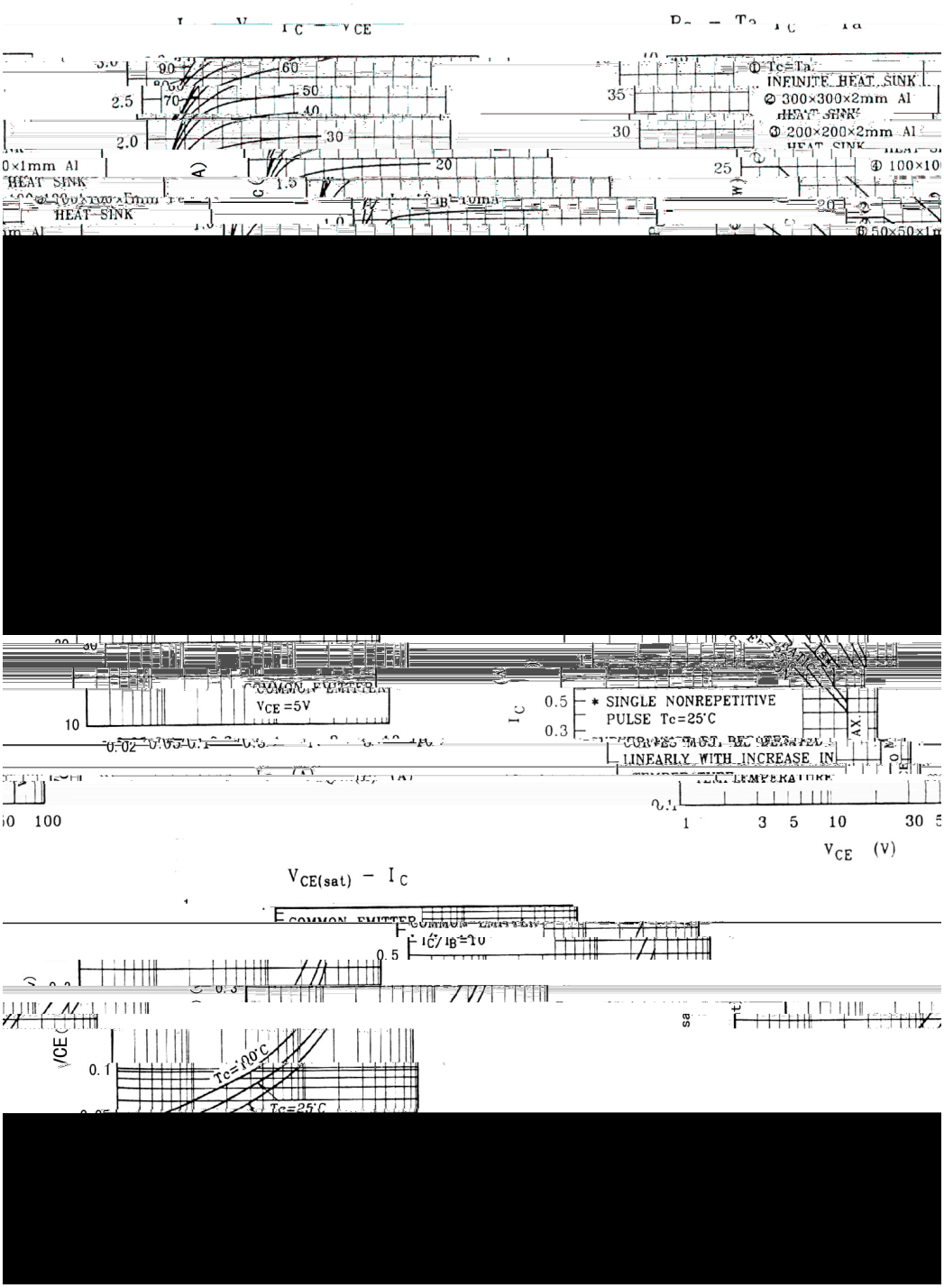
## / Absolute Maximum Ratings(Ta=25 )

| Parameter | Symbol | Rating | Unit |
|---|---|---|---|
| Collector to Base Voltage | $V_{CBO}$ | 60 | V |
| Collector to Emitter Voltage | $V_{CEO}$ | 60 | V |
| Emitter to Base Voltage | $V_{EBO}$ | 7.0 | V |
| Collector Current - Continuous | $I_C$ | 3.0 | A |
| Base Current | $I_B$ | 0.5 | A |
| Collector Power Dissipation | $P_C$ | 2.0 | W |
| Collector Power Dissipation | $P_C$(Tc=25 ) | 25 | W |
| Junction Temperature | $T_j$ | 150 | |
| Storage Temperature Range | $T_{sag}$ | -55 150 | |

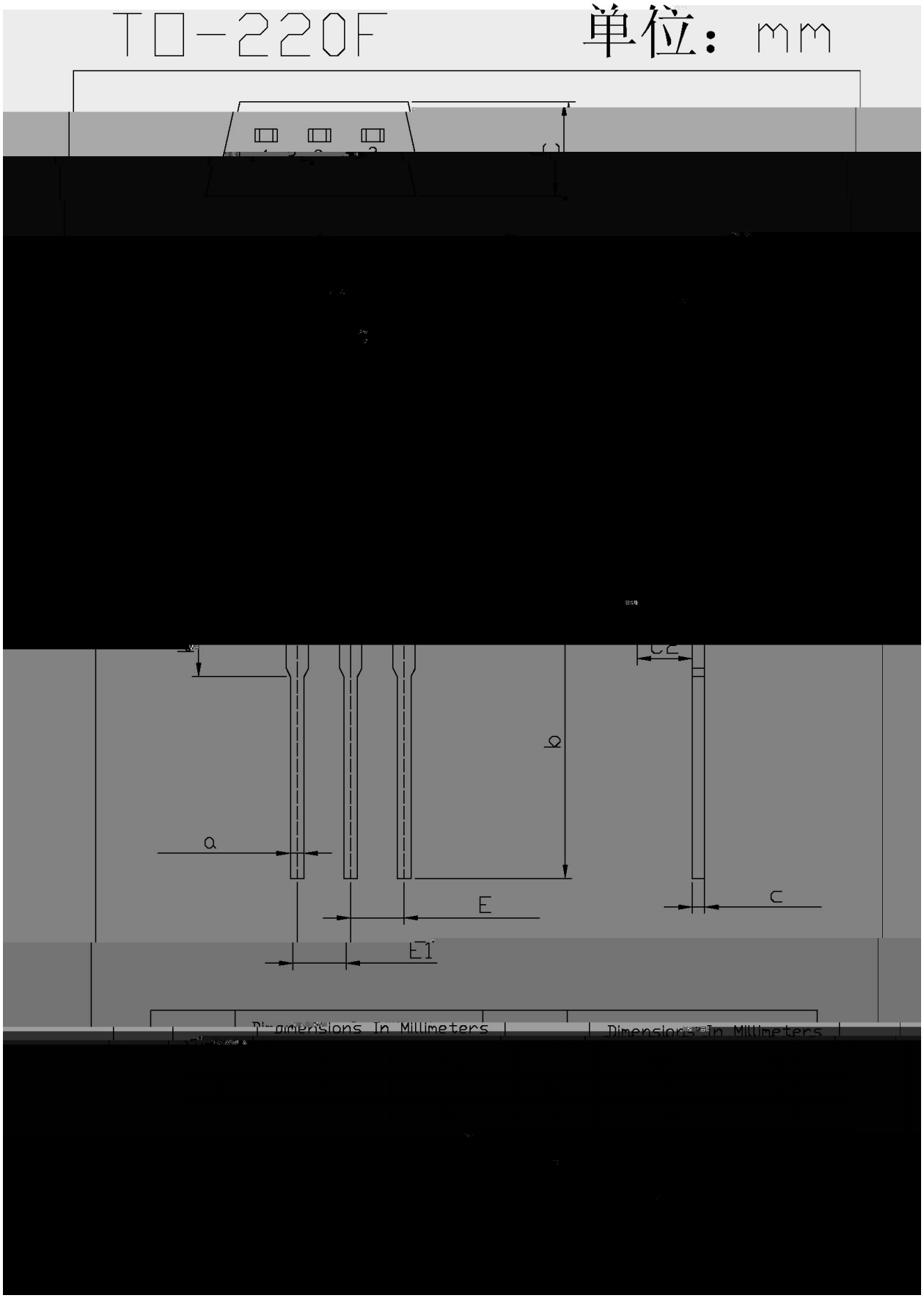
## / Electrical Characteristics(Ta=25 )

| Parameter | Symbol | Test Conditions | Min | Typ | Max | Unit |
|---|---|---|---|---|---|---|
| Collector-Emitter Breakdown Voltage | $V_{CEO}$ | $I_C$=50mA $I_B$=0 | 60 | | | V |
| Collector Cut-Off Current | $I_{CBO}$ | $V_{CB}$=60V $I_E$=0 | | | 100 | μA |
| Emitter Cut-Off Current | $I_{EBO}$ | $V_{EB}$=7.0V $I_C$=0 | | | 100 | μA |
| DC Current Gain | $h_{FE}$ | $V_{CE}$=5.0V $I_C$=500mA | 60 | | 200 | |
| Collector to Emitter Saturation Voltage | $V_{CE(sat)}$ | $I_C$=2.0A $I_B$=200mA | | 0.25 | 1.0 | V |
| Base-Emitter Voltage | $V_{BE}$ | $V_{CE}$=5.0V $I_C$=500mA | | 0.7 | 1.0 | V |
| Transition Frequency | $f_T$ | $V_{CE}$=5.0V $I_C$=500mA | | 3.0 | | MHz |
| Collector output capacitance | $C_{ob}$ | $V_{CB}$=10V $I_E$=0 f=1.0MHz | | 35 | | pF |
| Turn-On Time | $t_{on}$ | $I_{B1}$=-$I_{B2}$=0.2A | | 0.65 | | μS |
| Storage Time | $t_{stg}$ | $I_{B1}$=-$I_{B2}$=0.2A | | 1.3 | | μS |
| Fall Time | $t_f$ | $I_{B1}$=-$I_{B2}$=0.2A | | 0.65 | | μS |

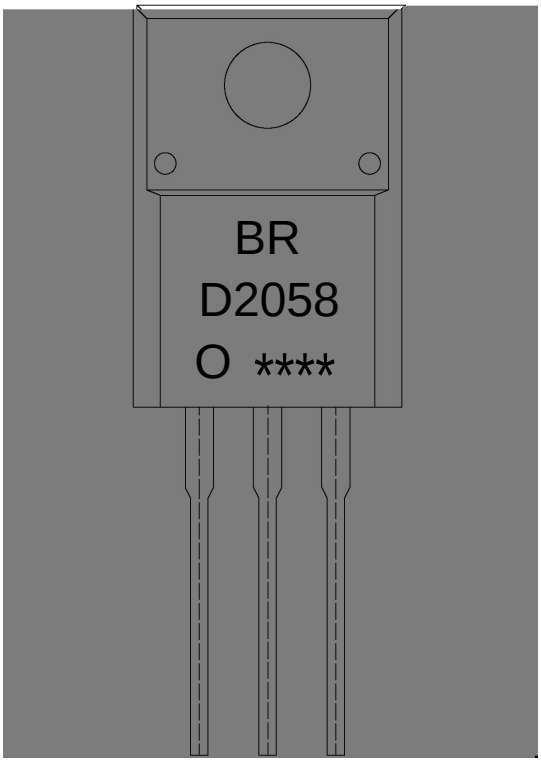
## / Electrical Characteristic Curve



## / Package Dimensions



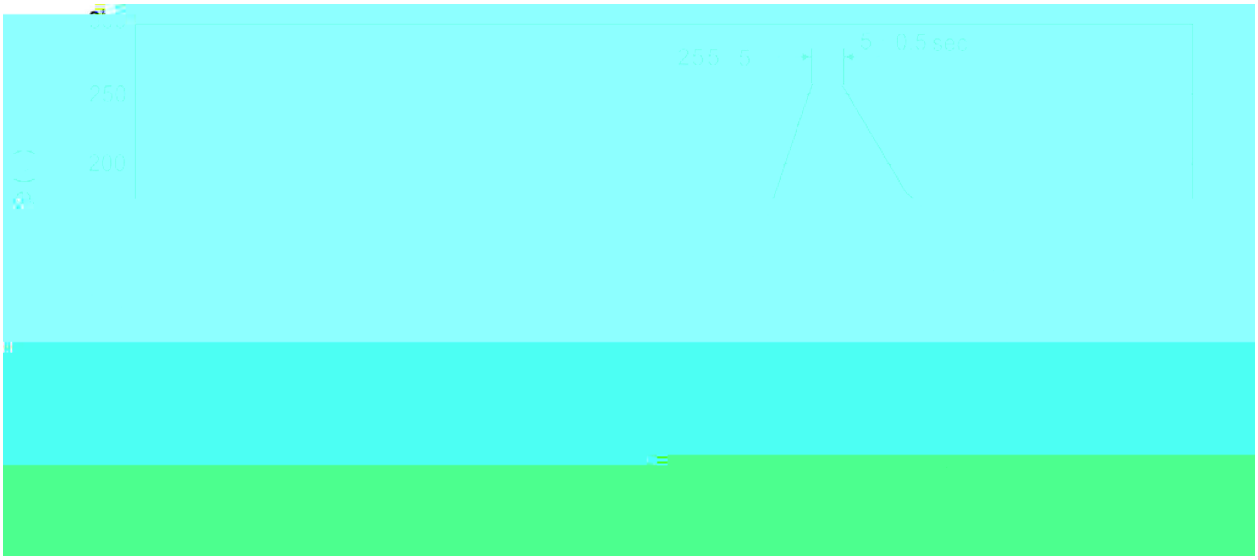
## / Marking Instructions




Note:

| | |
|---|---|
| BR: | Company Code. |
| D2058: | Product Type. |
| O: | $h_{FE}$ Classifications Symbol. |
| ****: | Lot No. Code, code change with Lot No. |

## ( ) / Temperature Profile for Dip Soldering(Pb-Free)




| | | | | | |
|---|---|---|---|---|---|
| | | | | | Note: |
| 1 | 25 | 150 | 60 | 90sec; | 1.Preheating:25~150 |