# 2SD2061

Rev.E Mar.-2016

DATA SHEET

## / Descriptions

WR0553 I ṂṂ Ł QSQ ÆṀ ч s ‖ ⁊ Silicon NPN transistor in a TO-220F Plastic Package.

## / Features

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Low $V_{CE(sat)}$,excellent DC current gain characteristics, $P_C$=30W,wide SOA.

## / Applications

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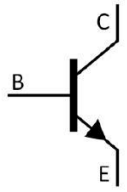
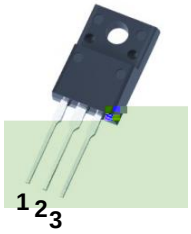
General Purpose Power Amplifier.

## / Equivalent Circuit




## / Pinning




PIN1 χ Base PIN 2 χ Collector PIN 3 χ Emitter

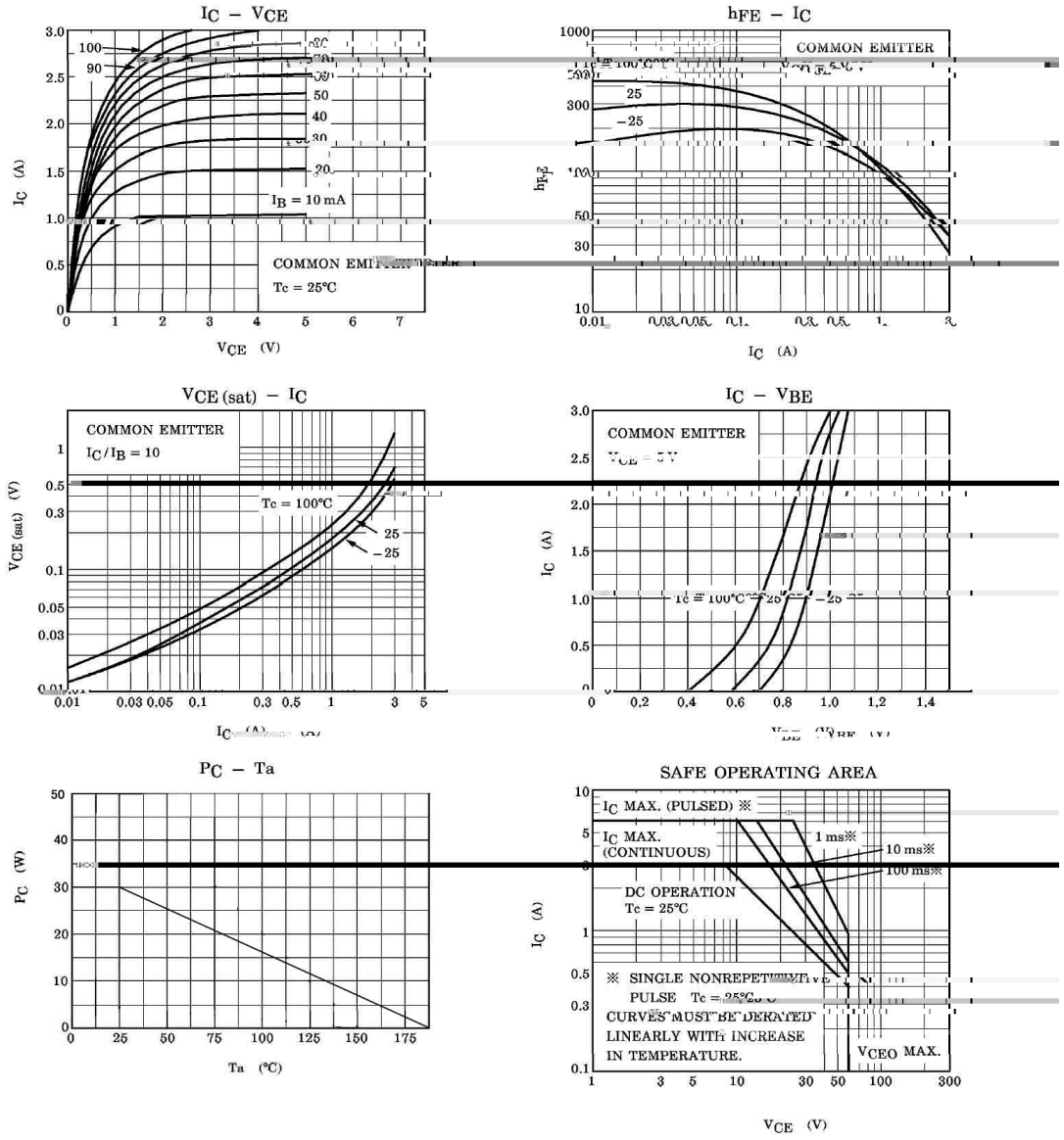
## / $h_{FE}$ Classifications & Marking

| $h_{FE}$ Classifications Symbol | E | F |
|---|---|---|
| $h_{FE}$ Range | 100 200 | 160 320 |

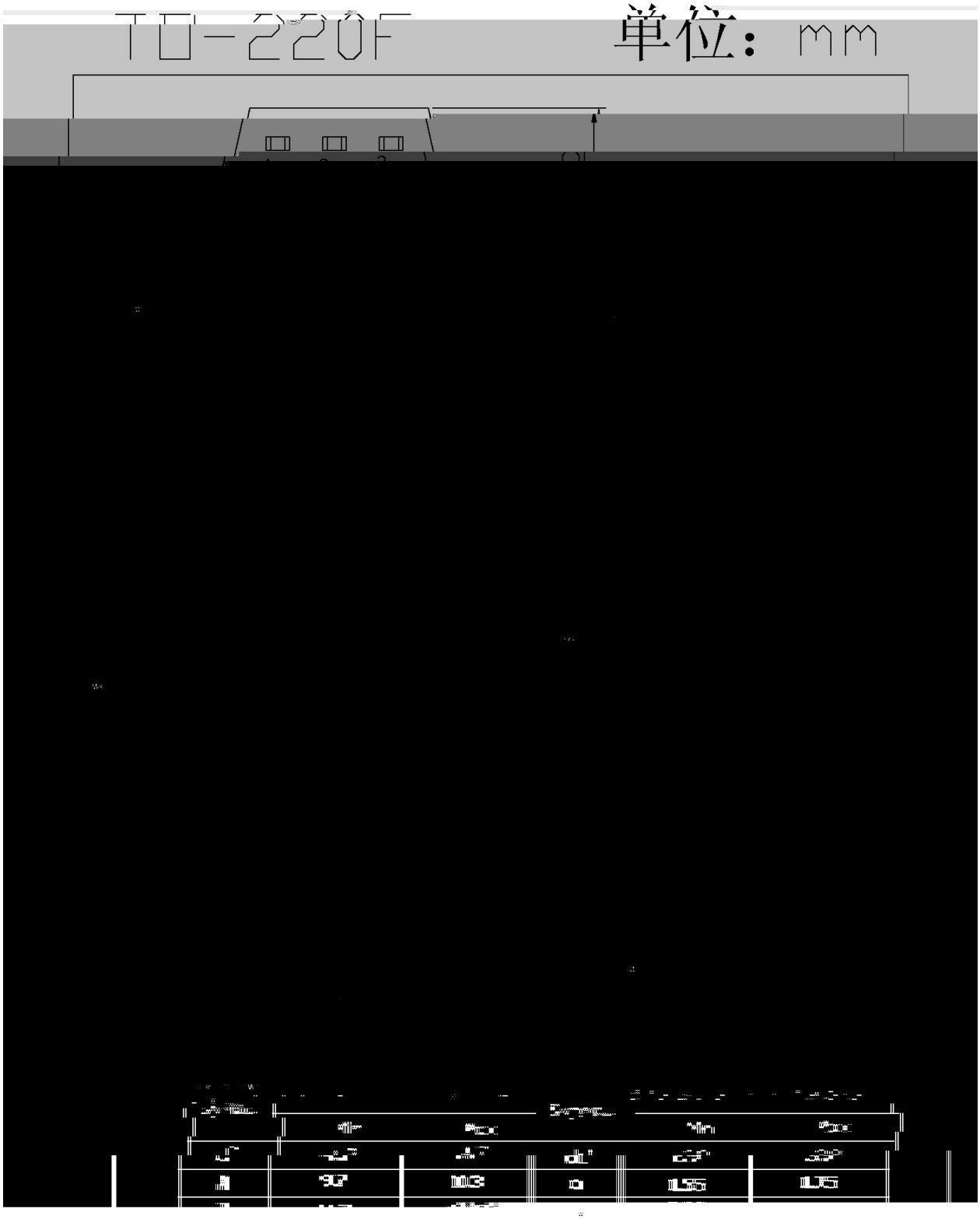
| v ̈Ω̣<br>Parameter | ɬ N<br>Symbol | ̈Ω̣Ö<br>Rating | D Ɉ<br>Unit |
|---|---|---|---|
| Collector to Base Voltage | $V_{CBO}$ | 80 | V |
| Collector to Emitter Voltage | $V_{CEO}$ | 60 | V |
| Emitter to Base Voltage | $V_{EBO}$ | 5.0 | V |
| Collector Current - Continuous | $I_C$ | 3.0 | A |
| Peak Collector Current | $I_{CM}$ | 6.0 | A |
| Collector Power Dissipation | $P_C$ | 2.0 | W |
| Collector Power Dissipation | $P_C$(Tc=25 ) | 30 | W |
| Junction Temperature | $T_j$ | 150 | |
| Storage Temperature Range | $T_{stg}$ | -55 150 | |

| v ̈Ω̣<br>Parameter | ɬ N<br>Symbol | ⊥⊥ ;ɬ Ţ<br>Test Conditions | ω̣ ṇ Ö<br>Min | Ɛ ʒ Ö<br>Typ | ω̣ ᶻ Ö<br>Max | D Ɉ<br>Unit |
|---|---|---|---|---|---|---|
| Collector to Base Breakdown Voltage | $V_{CBO}$ | $I_C$=50 A | 80 | | | V |
| Collector to Emitter Breakdown Voltage | $V_{CEO}$ | $I_C$=1.0mA | 60 | | | V |
| Emitter to Base Breakdown Voltage | $V_{EBO}$ | $I_E$=50 A | 5.0 | | | V |
| Collector Cut-Off Current | $I_{CBO}$ | $V_{CB}$=60V $I_E$=0 | | | 10 | A |
| Emitter Cut-Off Current | $I_{EBO}$ | $V_{EB}$=4.0V $I_C$=0 | | | 10 | A |
| DC Current Gain | $h_{FE}$ | $V_{CE}$=5.0V $I_C$=500mA | 100 | | 320 | |

## / Electrical Characteristic Curve



## / Package Dimensions



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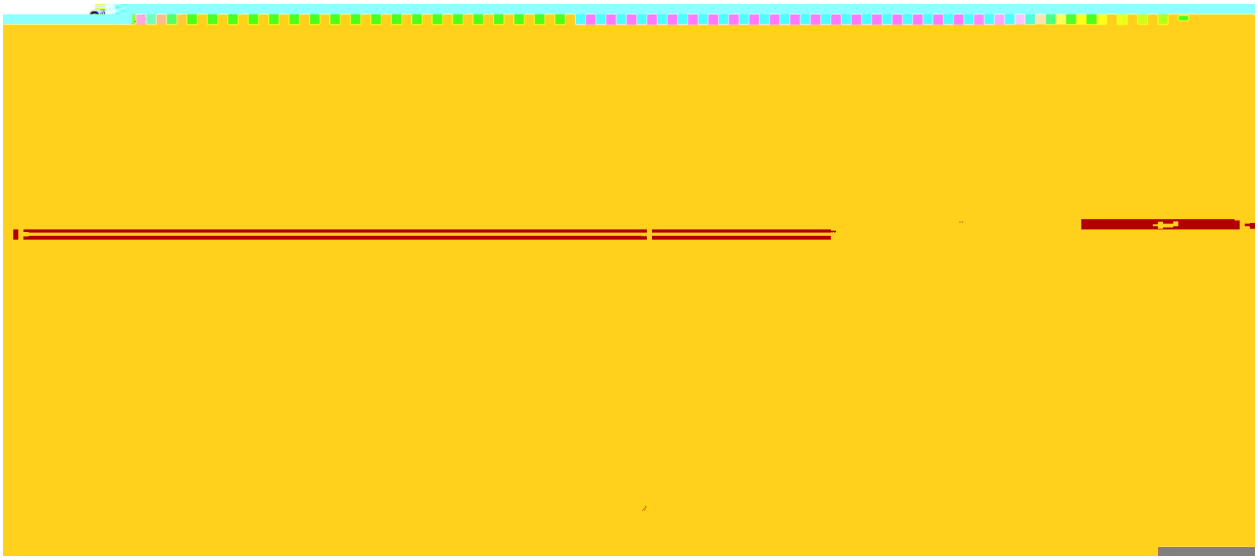
## ( ) / Temperature Profile for Dip Soldering(Pb-Free)



ب ˝ χ

1 ǂ ♬ □ ỷ 25 Ḱ 150 ɬ ı `H ڑ 60 Ḱ 90sec;

2 Š Ö □ ỷ 255 ° 5 ɬ ı `H ڑ ˋY ⺈ ⺮ 5 ° 0.5sec;

3 ì ˙ ⺈ ˛ ɔ ھ ỷ ⺮ 2 Ḱ 10 ɬ /sec.

Note:

1.Preheating:25~150 ɬ , Time:60~90sec.

2.Peak Temp.:255 ° 5 ɬ , Duration:5 ° 0.5sec.

3. Cooling Speed: 2~10 ɬ /sec.

## / Resistance to Soldering Heat Test Conditions

□ ỷ χ 270 ° 5 ɬ `H ڑ χ 10 ° 1 sec. Temp.:270±5 Time:10±1 sec

## / Packaging SPEC.

ˋΩ ţ γ Ł / BULK

| Package Type | Units | | | | | Dimension | | (unit mm$^3$) |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |
| | | | | | | | | |