# 2SC3063

Rev.E Mar.-2016

蓝箭电子 BLUE ROCKET ELECTRONICS

DATA SHEET

## / Descriptions

WR0459I ṂṂ Ł QSQ ÆṀ ч s ǁ ㄱ Silicon NPN transistor in a TO-126F Plastic Package.

## / Features

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High $V_{CEO}$, low $C_{ob}$.

## / Applications

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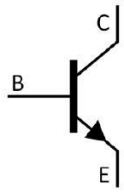
Video output amplifier.

## / Equivalent Circuit




## / Pinning


PIN1 χ Emitter PIN 2 χ Collector PIN 3 χ Base

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

ǒ м ㄱ ب ˝ See Marking Instructions.

## / Absolute Maximum Ratings(Ta=25 )

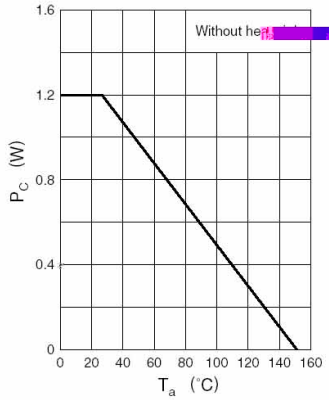
| v ̈Ω<br>Parameter | ϒ N<br>Symbol | ̈Ω Ö<br>Rating | D Ч<br>Unit |
|---|---|---|---|
| Collector to Base Voltage | $V_{CBO}$ | 300 | V |
| Collector to Emitter Voltage | $V_{CEO}$ | 300 | V |
| Emitter to Base Voltage | $V_{EBO}$ | 7.0 | V |
| Collector Current - Continuous | $I_C$ | 100 | mA |
| Collector Current – Continuous(Pulse) | $I_{CP}$ | 200 | mA |
| Collector Power Dissipation | $P_C$ | 1.2 | W |
| Junction Temperature | $T_j$ | 150 | ℃ |
| Storage Temperature Range | $T_{stg}$ | -55～150 | ℃ |

## / Electrical Characteristics(Ta=25 )

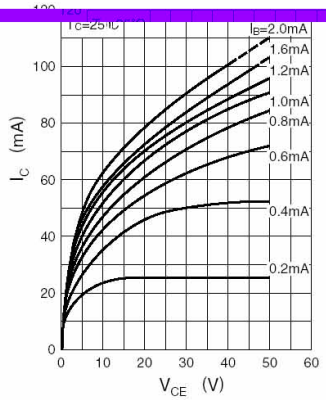
| v ̈Ω<br>Parameter | ϒ N<br>Symbol | Ш ː ϯ ϯ<br>Test Conditions | ω ņ Ö<br>Min | Ɛ ʒ Ö<br>Typ | ω ² Ö<br>Max | D Ч<br>Unit |
|---|---|---|---|---|---|---|
| Collector to Base Breakdown Voltage | $V_{CBO}$ | $I_C$=10 A $I_E$=0 | 300 | | | V |
| Collector to Emitter Breakdown Voltage | $V_{CEO}$ | $I_C$=0.1mA $I_B$=0 | 300 | | | V |
| Emitter to Base Breakdown Voltage | $V_{EBO}$ | $I_E$=10 A $I_C$=0 | 7.0 | | | V |
| DC Current Gain | $h_{FE}$ | $V_{CE}$=50V $I_C$=5.0mA | 50 | | 250 | |
| Collector to Emitter Saturation Voltage | $V_{CE(sat)}$ | $I_C$=30mA $I_B$=3.0mA | | | 1.5 | V |
| Base to Emitter Voltage | $V_{BE}$ | $V_{CE}$=10V $I_C$=30mA | | | 1.2 | V |
| Transition Frequency | $f_T$ | $V_{CB}$=30V $I_C$=20mA | 70 | 140 | | MHz |
| Collector Output Capacitance | $C_{ob}$ | $V_{CB}$=30V $I_E$=0 f=1.0MHz | | 2.4 | | pF |

## / Electrical Characteristic Curve

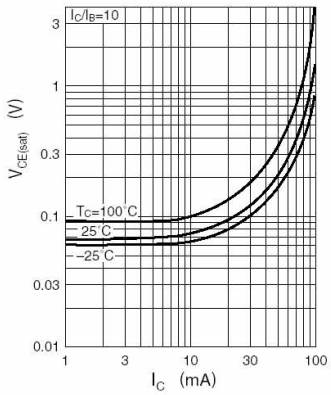
$P_C$ — $T_a$



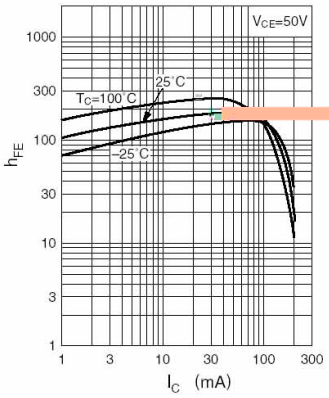

$I_C$ — $V_{CE}$



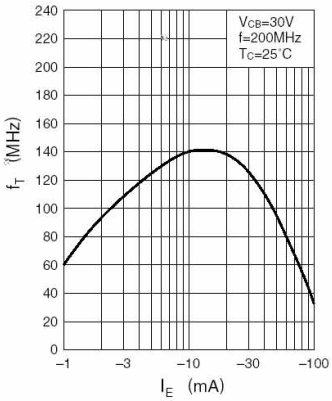

$V_{CE(sat)}$ — $I_C$



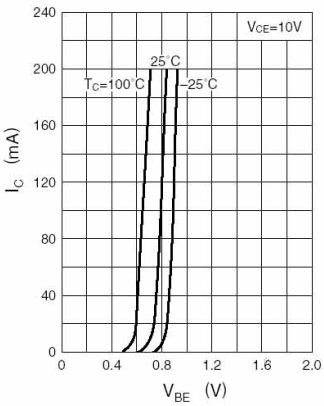

$h_{FE}$ — $I_C$




$f_T$ — $I_E$

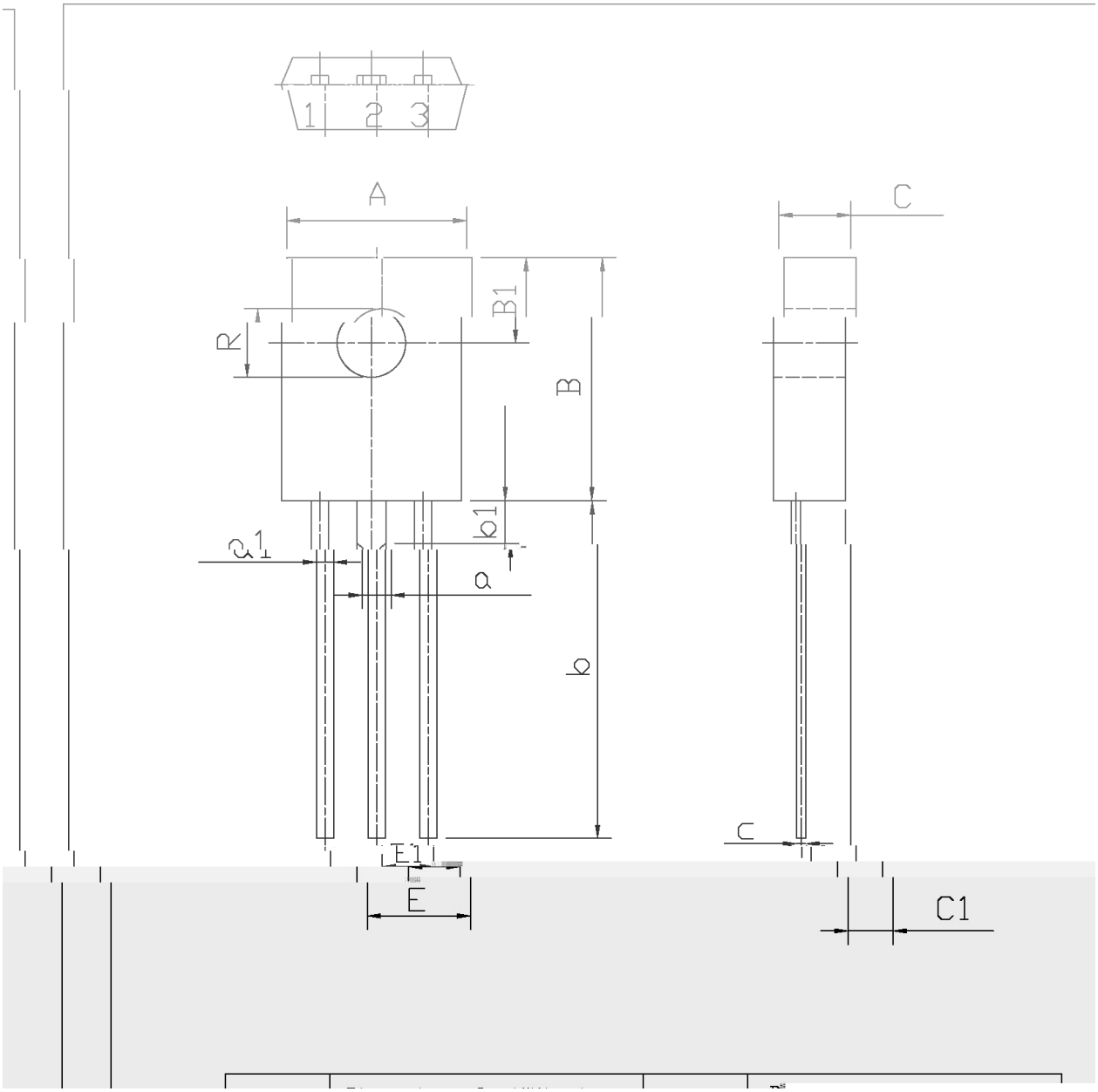



$I_C$ — $V_{BE}$



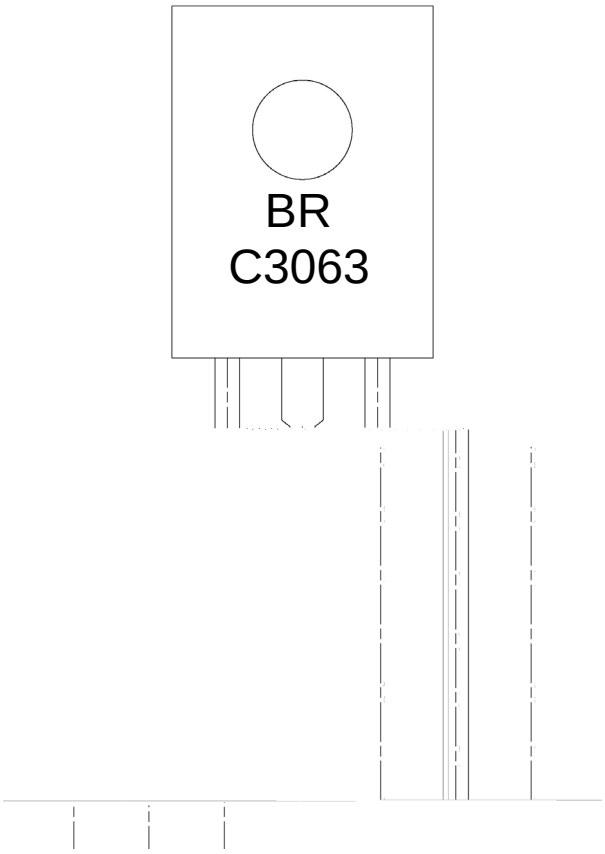
## / Package Dimensions

TO-126T 单位：mm




| | Min | Max | | Min | Max |
|---|---|---|---|---|---|
| A | 7.8 | 8.2 | a1 | 0.55 | 0.85 |
| B | 10.8 | 11.2 | E | 4.4 | 4.8 |
| B1 | 3.8 | 4.2 | C | 3.1 | 3.3 |
| R | 2.95 | 3.15 | C1 | 1.9 | 2.1 |
| b | 14 | 16 | c | 0.3 | 0.6 |
| b1 | 1.9 | | e | 1.27 | |
| E1 | 2.1 | 2.5 | | | |

## / Marking Instructions




| | |
|---|---|
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| F6396 χ | ѭ ӡ ɴ ґ |
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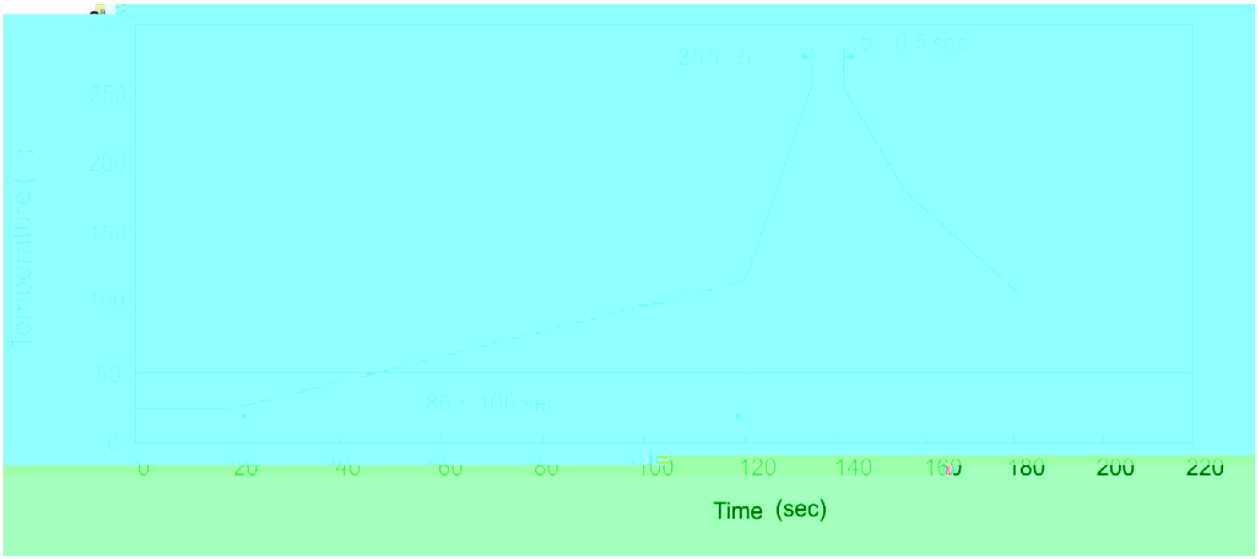
Note:

| | |
|---|---|
| BR: | Company Code |
| C3063: | Product Type. |
| ****: | Lot No. Code, code change with Lot No. |

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




ب ˝ χ

1 Ĺ ♬ □ ỷ 25 Ḱ 150 ł ı ˋH ڑ 60 Ḱ 90sec;

2 Š Ө □ ỷ 255 ° 5 ł ı ˋH ڑ ˋY ﾊ ㎞ 5 ° 0.5sec;

3 ì ˙ ﾘ ˛ ɔ ෯ ỷ ㎞ 2 Ḱ 10 ł /sec.

Note:

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

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

3. Cooling Speed: 2~10 ł /sec.

## / Resistance to Soldering Heat Test Conditions

□ ỷ χ 270 ° 5 ł ˋH ڑ χ 10 ° 1 sec. Temp.:270±5℃ Time:10±1 sec

## / Packaging SPEC.

ˈQ ţ ﾘ Ł / BULK

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

˛ ｱ ﾘ Ł / TUBE

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

## / Notices