

**/ Descriptions**

SOT-23

NPN

Silicon NPN transistor in a SOT-23 Plastic Package.

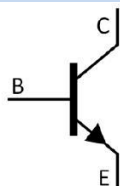
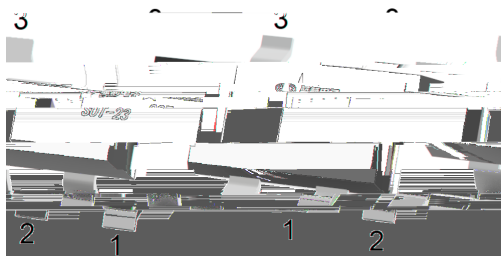
**/ Features**

AEC-Q101

Low current, Low voltage, Qualified to AEC-Q101 Standards for High Reliability, HF Product.

**/ Applications**

General purpose amplifier and switching, Meet the stringent requirements of automotive applications.

**/ Equivalent Circuit****/ Pinning**

PIN 1 Base

PIN 2 Emitter

PIN 3 Collector

**/ h<sub>FE</sub> Classifications & Marking**

|                       |         |
|-----------------------|---------|
| h <sub>FE</sub> Range | 100 300 |
| Marking               | · Q1A   |

# BRMMBT3904Q

Rev.B May.-2025



蓝箭电子  
BLUE ROCKET ELECTRONICS

DATA SHEET

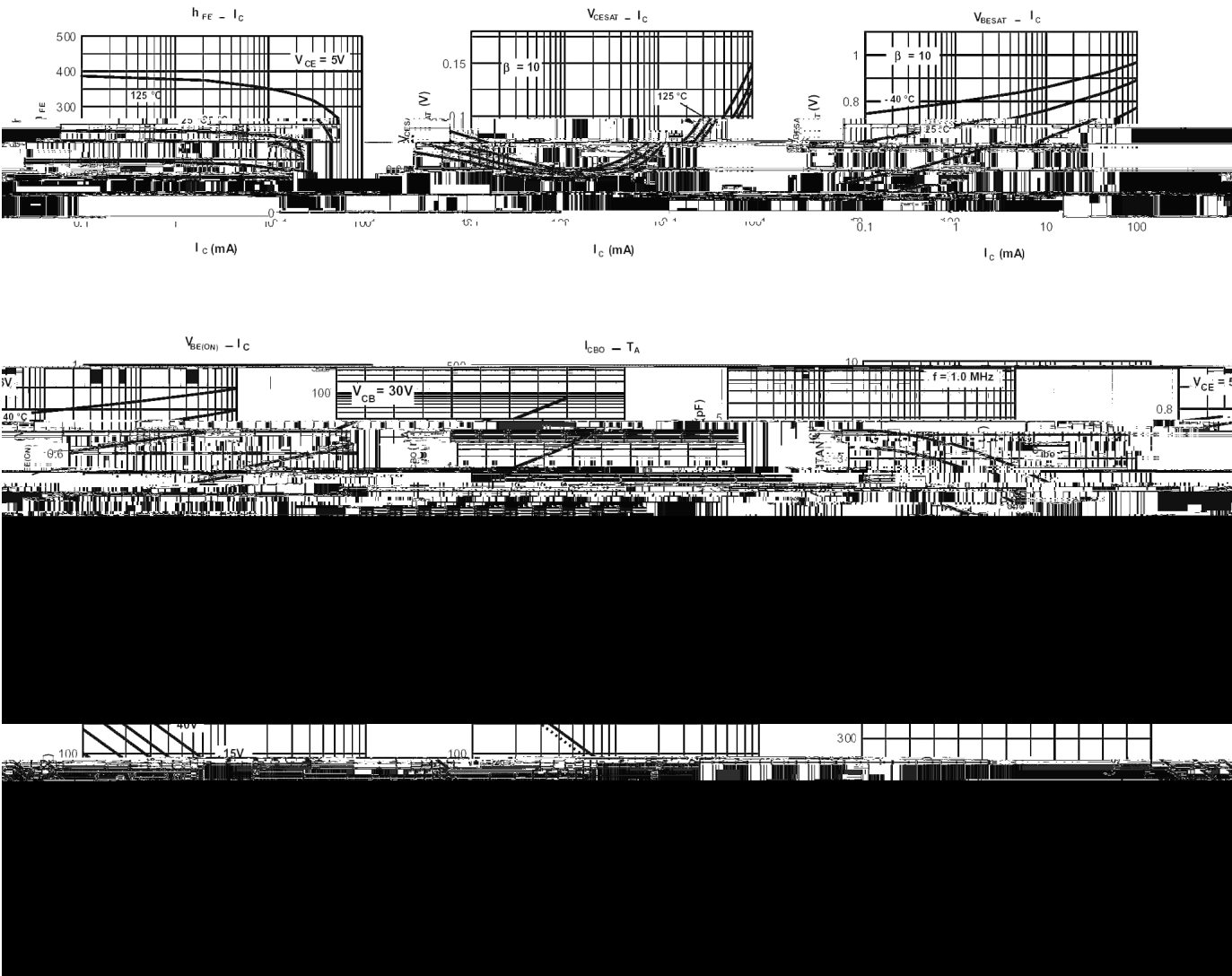
| Parameter                    | Symbol    | Rating  | Unit |
|------------------------------|-----------|---------|------|
| Collector to Base Voltage    | $V_{CBO}$ | 60      | V    |
| Collector to Emitter Voltage | $V_{CEO}$ | 40      | V    |
| Emitter to Base Voltage      | $V_{EBO}$ | 6.0     | V    |
| Collector Current            | $I_C$     | 200     | mA   |
| Collector Power Dissipation  | $P_C$     | 200     | mW   |
| Collector Power Dissipation  | $*P_C$    | 350     | mW   |
| Junction Temperature         | $T_j$     | 150     |      |
| Storage Temperature Range    | $T_{stg}$ | -55 150 |      |

\* 7×5×0.6mm

\*When mounted on a 7×5×0.6mm ceramic board

| Parameter                              | Symbol    | Test Conditions       | Min | Typ | Max | Unit |
|----------------------------------------|-----------|-----------------------|-----|-----|-----|------|
| Collector to Base Breakdown Voltage    | $V_{CBO}$ | $I_C=10\mu A$ $I_E=0$ | 60  |     |     | V    |
| Collector to Emitter Breakdown Voltage | $V_{CEO}$ | $I_C=1.0mA$ $I_B=0$   | 40  |     |     | V    |

/ Electrical Characteristic Curve



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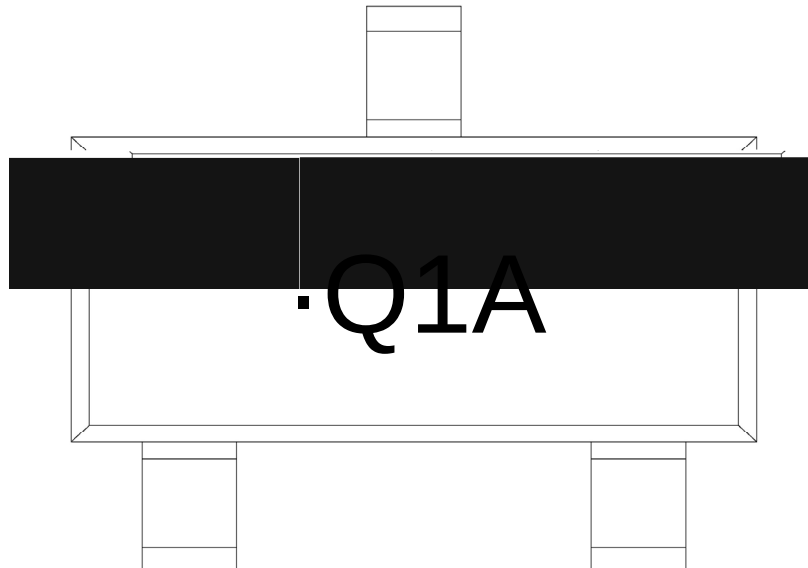


**蓝箭电子**  
BLUE ROCKET ELECTRONICS

DATA SHEET

## / Package Dimensions

**/ Marking Instructions**



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Q

1A

Note:

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Identify

Q: Automobile halogen-free product Code

1A Product Type Code

(     ) / Temperature Profile for IR Reflow Soldering(Pb-Free)

|  |
|--|
|  |
|  |
|  |
|  |
|  |
|  |
|  |

Note:

- 1

150    200

60    120sec;

1.Preheating:150~200    , Time:60~120sec.
- 2

255±5

5±0.5sec;

2.Peak Temp.:255±5    , Duration:5±0.5sec.
- 3

2    10

/sec.

3. Cooling Speed: 2~10    /sec.

/ Resistance to Soldering Heat Test Conditions

260±5

10±1 sec.

Temp.:260±5

Time:10±1 sec

/ Packaging SPEC.

/ REEL

| Package Type | Units | Dimension | (unit    mm <sup>3</sup> ) |
|--------------|-------|-----------|----------------------------|
| Units/Reel   |       |           |                            |