

/ Descriptions

VRW056                      QSQ                      VloIf r q QSQ Gl j lwdo wudqvlw ru lq d VRW056 S0dvwl f Sdfnd j h1

/ Features

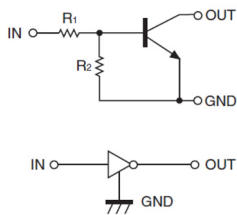
DHF0T 434

With built-in bias resistors, simplify circuit design, reduce a quantity of parts and manufacturing process, Qualified to AEC-Q101 Standards for High Reliability, HF Product.

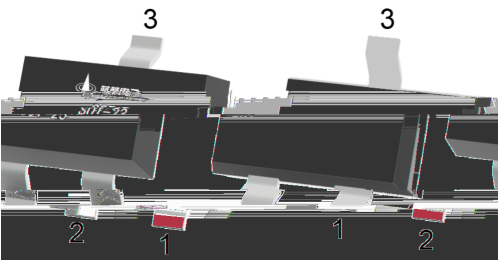
/ Applications

Switching applications, interface circuit and driver circuit applications, Meet the stringent requirements of automotive applications.

/ Equivalent Circuit



/ Pinning



PIN 1    IN                      PIN 2    GND                      PIN 3    OUT

/ hFE Classifications & Marking

|         |     |
|---------|-----|
| Marking | Q62 |
|---------|-----|

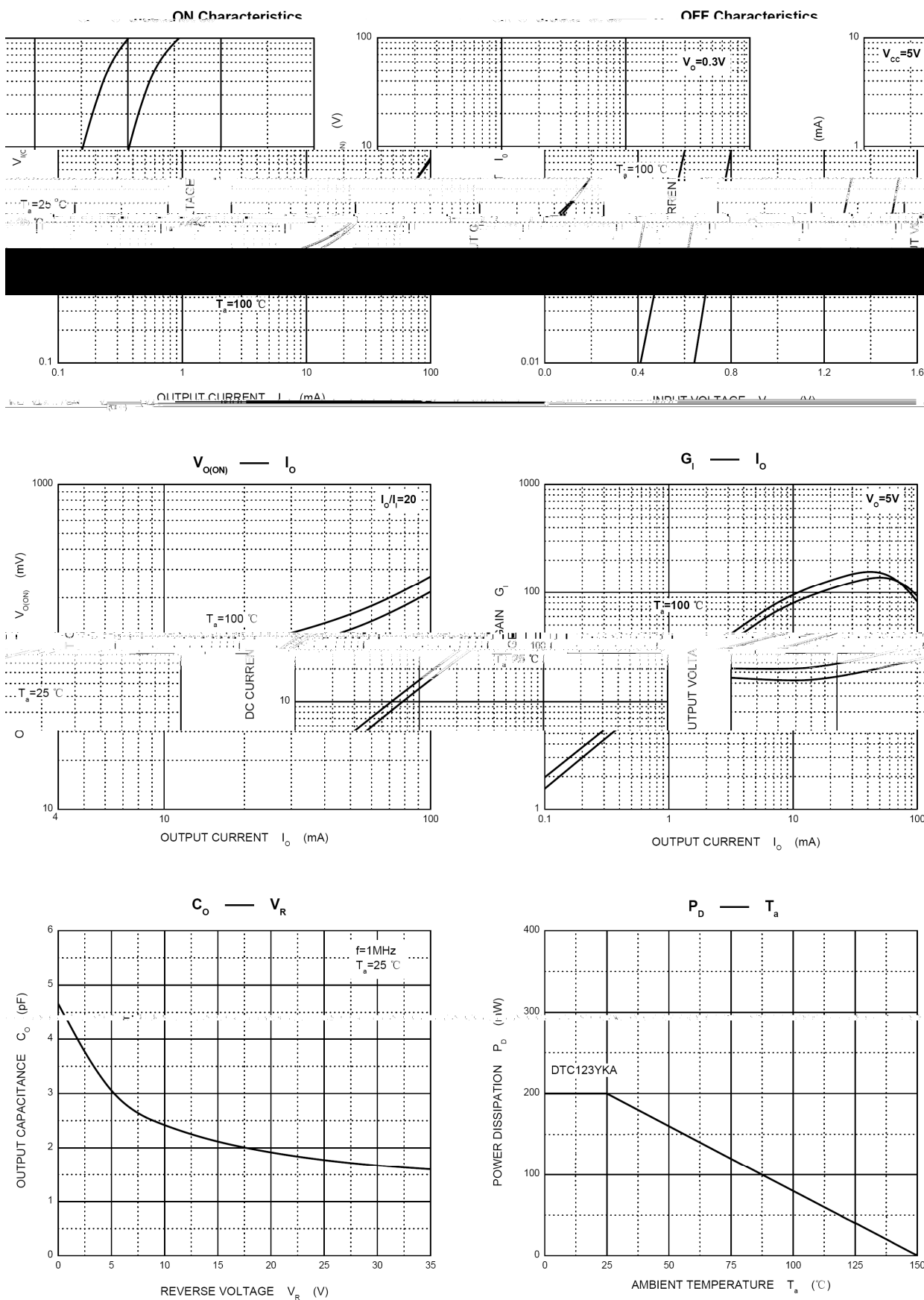
/ Absolute Maximum Ratings( $T_a=25^\circ\text{C}$ )

| Parameter                 | Symbol    | Rating  | Unit |
|---------------------------|-----------|---------|------|
| Supply Voltage            | $V_{CC}$  | 50      | V    |
| Input Voltage             | $V_{IN}$  | 12      | V    |
|                           |           | -5      | V    |
| Output Current            | $I_O$     | 100     | mA   |
| Power Dissipation         | $P_D$     | 200     | mW   |
| Junction Temperature      | $T_j$     | -55~150 |      |
| Storage Temperature Range | $T_{stg}$ | -55~150 |      |

/ Electrical Characteristics( $T_a=25^\circ\text{C}$ )

| Parameter              | Symbol       | Test Conditions                     | Min  | Typ | Max  | Unit      |
|------------------------|--------------|-------------------------------------|------|-----|------|-----------|
| Input Voltage          | $V_{I(off)}$ | $V_{CC}=5.0V$ $I_O=100\mu A$        | 0.3  |     |      | V         |
| Input Voltage          | $V_{I(on)}$  | $V_O=0.3V$ $I_O=20mA$               |      |     | 3    | V         |
| Output Voltage         | $V_{O(on)}$  | $I_O=10mA$ $I_I=0.5mA$              |      | 0.1 | 0.3  | V         |
| Input Current          | $I_I$        | $V_I=5.0V$                          |      |     | 3.8  | mA        |
| Output Cut-off Current | $I_{O(off)}$ | $V_{CC}=50V$ $V_I=0V$               |      |     | 0.5  | $\mu A$   |
| DC Current Gain        | $G_I$        | $V_O=5.0V$ $I_O=10mA$               | 33   |     |      |           |
| Resistance1            | $R_1$        |                                     | 1.54 | 2.2 | 2.86 | $K\Omega$ |
| Resistance Ratio       | $R_2/R_1$    |                                     | 3.6  | 4.5 | 5.5  |           |
| Transition Frequency   | $f_T$        | $V_O=10V$ $I_O=5.0mA$<br>$f=100MHz$ |      | 250 |      | MHz       |

## / Electrical Characteristic Curve







**/ Marking Instructions**



Q

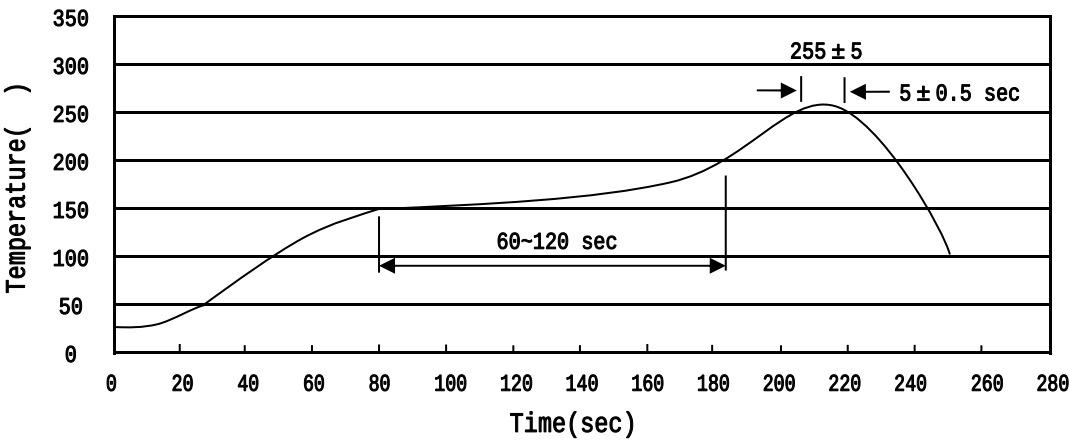
62

Note:

Q: Automobile halogen-free product Code

62 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<br>封装形式 | Units 包装数量         |                         |                        |                              |                        | Dimension 包装尺寸 (unit: mm <sup>3</sup> ) |             |             |
|----------------------|--------------------|-------------------------|------------------------|------------------------------|------------------------|-----------------------------------------|-------------|-------------|
|                      | Units/Reel<br>只/卷盘 | Reels/Inner Box<br>卷盘/盒 | Units/Inner Box<br>只/盒 | Inner Boxes/Outer Box<br>盒/箱 | Units/Outer Box<br>只/箱 | Reel                                    | Inner Box 盒 | Outer Box 箱 |
| SOT-23               | 3,000              | 10                      | 30,000                 | 6                            | 180,000                | 7 × 8                                   | 180×120×180 | 390×385×205 |

/ Notices