

# Product Acknowledgement Specification

CustomerName : \_\_\_\_\_

ProductName: Bare Alloy Resistor

ProductSpecification: HoLRS6568-5W-0.1mR-1%

ProductCode: \_\_\_\_\_

Dateofdocument: 2026-01-31

## Approved Company Signature

|              |               |             |                                                                                       |
|--------------|---------------|-------------|---------------------------------------------------------------------------------------|
| Edited by    | Reviewed by   | Approved by |  |
| ZhangyaoZeng | YongkangHuang | WenyiLeng   |                                                                                       |

## Customer confirmation seal

|                 |             |             |              |
|-----------------|-------------|-------------|--------------|
| Acknowledged by | Reviewed by | Approved by | Company Seal |
|                 |             |             |              |

## ■ Purpose

Through the description of the characteristics of the samples and inspection standards in this acknowledgement, we can better communicate with customers, reach agreement with customers and avoid product quality disputes caused by insufficient communication.

## ■ Scope of application

This Certificate of Acceptance applies to the samples provided by Shenzhen Milliohm Electronics Co., Ltd., and covers the product characteristics and inspection standards.

## ■ Order association

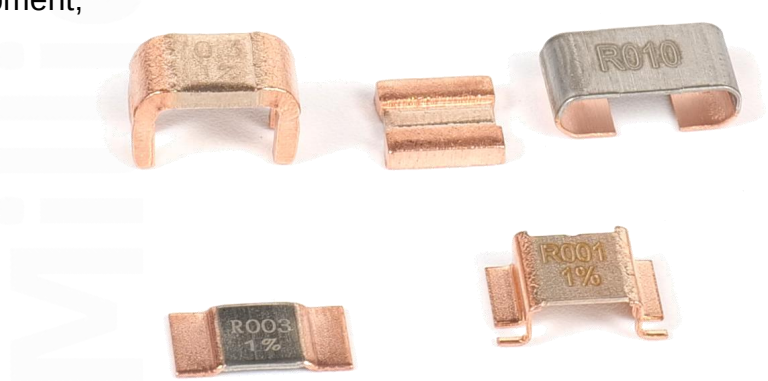
The Customer hereby acknowledges that the specifications and models of materials under all contractual orders with Shenzhen Milliohm Electronics Co., Ltd. are consistent with the delivered products. Should no objection or confirmation be received, this acknowledgement shall be deemed effective two weeks after the date of receipt by the Customer.

## ■ Product Features

1. Electron beam welding process, with dissimilar materials for the welded terminals and resistive elements, ensuring excellent performance and ease of soldering;
2. High reliability, high overload capability, and high product precision;
3. Wide operating temperature range with non-inductive design;
4. Compliant with ROHS requirements;

## ■ Product Application Scope

1. Power supply modules;
2. Industrial instrumentation and equipment;
3. Variable frequency drives;
4. Servo drive systems;
5. Medical equipment;
6. Lighting systems;

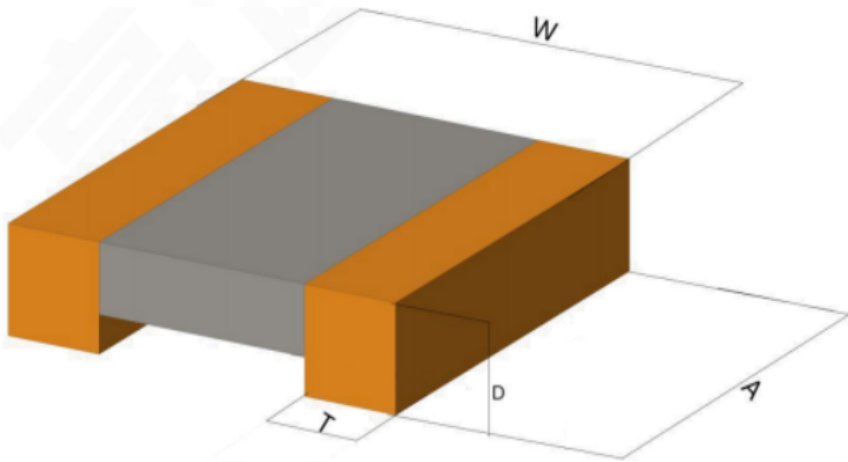


Selection Example: HoLRS6568-5W-0.1mR-1%

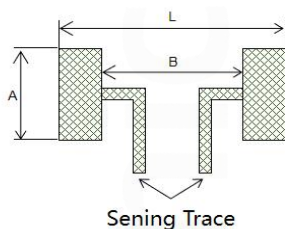
Bare Alloy Resistor

| H o          | LRS          | 6568             | 5W           | 0.1mR            | 1%                   |
|--------------|--------------|------------------|--------------|------------------|----------------------|
| ↓            | ↓            | ↓                | ↓            | ↓                | ↓                    |
| Manufacturer | Product Type | Dimensions (L×W) | Power Rating | Resistance value | Resistance Tolerance |
| Ho           | LRS          | 6568             | 5W           | 0.1mR            | 1%                   |

## Product dimensions

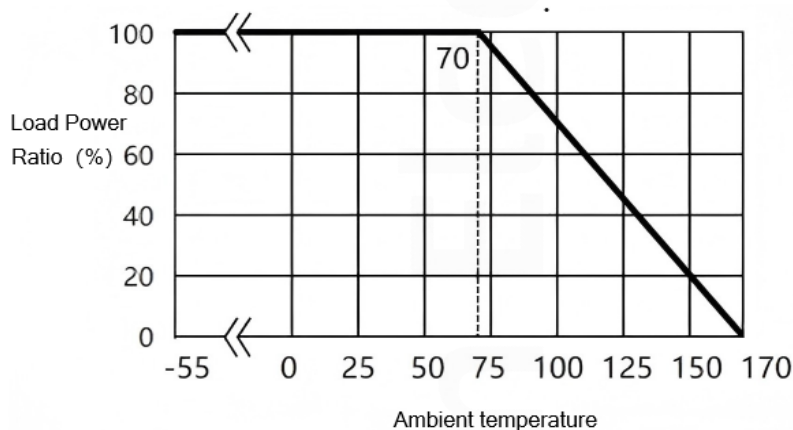
| Project                            | Parameters                                                                           |             |                 |             |
|------------------------------------|--------------------------------------------------------------------------------------|-------------|-----------------|-------------|
| Dimensions (mm)                    | A (6.9±0.5)                                                                          | W (6.6±0.5) | D (1.7±0.1)     | T (2.1±0.3) |
|                                    |                                                                                      |             |                 |             |
| ProductCode:                       |  |             |                 |             |
| Shenzhen Milliohm Electronic Ltd   |                                                                                      |             |                 |             |
| Controlled documents               |                                                                                      |             |                 |             |
| Rated Power                        | 5W                                                                                   |             |                 |             |
| Rated current                      | 223.60A                                                                              |             |                 |             |
| Accuracy Range                     | ±1%                                                                                  |             |                 |             |
| Resistance Temperature Coefficient | ±200ppm                                                                              |             |                 |             |
| Material                           | Manganin                                                                             |             |                 |             |
| Operating temperature              | -55℃~+170℃                                                                           |             |                 |             |
| Customer confirmation              | Customer Signature:                                                                  |             | Signature date: |             |

## Recommended Pad Dimensions



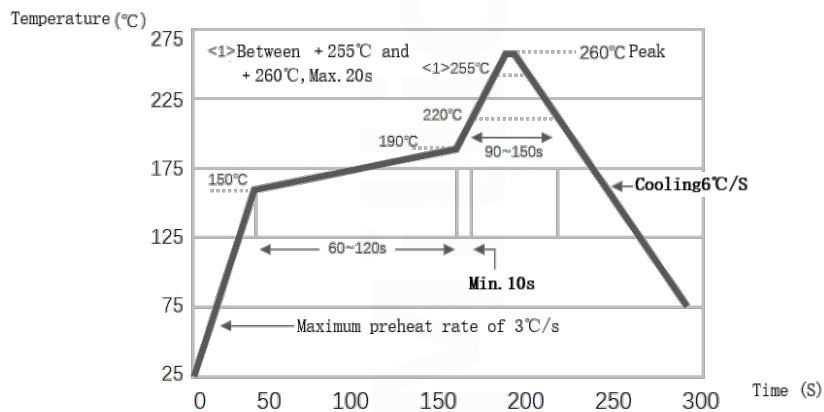
| Series | Solder pad | L   | A   | B   |
|--------|------------|-----|-----|-----|
| LRS    | 6568       | 7.5 | 7.2 | 2.4 |

## Power Derating Curve



Power curve

## Recommended Welding Parameters

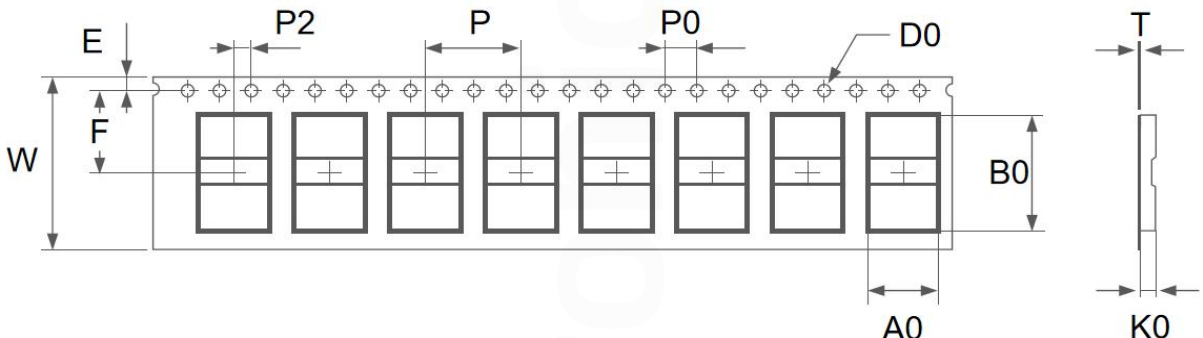


Reflow Soldering Temperature Profile Chart

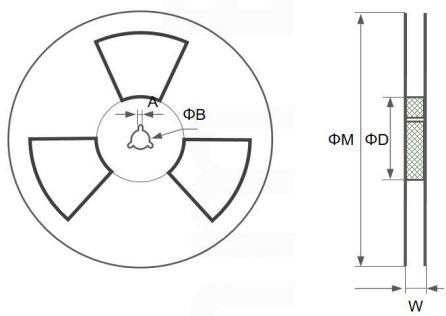
## ■ Performance Test

| Item                                  | Conditions of Tests                                                                                                                                                                                                                                 | Standards                               | Test Limits                                            |
|---------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|--------------------------------------------------------|
| Short time overload                   | 5 Times Rated Power for 5 Second Duration                                                                                                                                                                                                           | JIS-C-5201                              | $\Delta R \leq \pm 0.5\%$                              |
| Temperature coefficient of resistance | $TCR (ppm/^{\circ}C) = (R_2 - R_1 / R_1) \times (T_2 - T_1) \times 10^6$ R1:Resistance measured at room temperature( $\Omega$ ) R2:Resistance value measured at 125 $^{\circ}C$ ( $\Omega$ ) T1:Room temperature( $^{\circ}C$ ) T2: 125 $^{\circ}C$ | JIS-C-5201                              | Refer to the measured curve                            |
| Bending strength                      | 2mm judgment specification, at least 60 seconds of support time                                                                                                                                                                                     | AEC Q200-005                            | $\Delta R \leq \pm 0.5\%$                              |
| Solderability                         | Soldering temperature 245 $\pm 5^{\circ}C$ be immersed: 3 $\pm 0.5$ seconds                                                                                                                                                                         | AEC-Q200 TEST18 J-STD-002               | Solder coverage over than 95%                          |
| Solvent resistance                    | After soaking in 20~25 $^{\circ}C$ isopropyl alcohol solvent for 60+5seconds, take it out and let it stand for more than 24 hours, and measure the resistance change rate                                                                           | AEC-Q200 TEST 12 MIL-STD-202 Method 215 | $\Delta R \leq \pm 0.5\%$                              |
| Solder heat resistance test           | Immerse the resistor in a 260 $\pm 5^{\circ}C$ tin furnace for 10 $\pm 1$ seconds, take it out and let it stand for more than 60 minutes, then measure the resistance change rate.                                                                  | AEC-Q200 TEST 15 MIL-STD-202 Method 210 | $\Delta R \leq \pm 0.5\%$                              |
| Temperature Cycle                     | 1000 cycles (-55~155 $^{\circ}C$ ) The dwell time at each temperature is 30min, and the switching time (15 $^{\circ}C$ /min). Electrical test is performed within 24 $\pm 4$ hours after the test.                                                  | AEC-Q200 TEST 4 JESD22 Method JA- 104   | $\Delta R \leq \pm 0.5\%$ ,<br>No damage to appearance |
| High Temperature Exposure             | 155 $^{\circ}C$ for 1000h, no power, test the resistance change rate within 24 $\pm 4$ h                                                                                                                                                            | AEC-Q200 TEST 3 MIL-STD-202 Method 108  | $\Delta R \leq \pm 0.5\%$                              |
| Biased Humidity Test                  | 1000 hours, 85 $^{\circ}C$ , 85% relative humidity, load 10% rated power                                                                                                                                                                            | AEC-Q200 TEST 7 MIL-STD-202 Method 103  | $\Delta R \leq \pm 0.5\%$                              |
| Load Life                             | Rated current, Ta=125 $^{\circ}C$ , load 100% power, 0.5 hours off, 1.5 hours on, test time: 1000H                                                                                                                                                  | AEC-Q200 TEST 8 MIL-STD-202 Method 108  | $\Delta R \leq \pm 0.5\%$                              |
| Low Temperature Storage               | -55 $^{\circ}C$ , storage: 1000H                                                                                                                                                                                                                    | EC60115-1- 4.23.4 JIS-C5201-4.23.4      | $\Delta R \leq \pm 0.5\%$                              |
| Mechanical shock                      | Impact in three directions: X, Y, and Z, half-sine pulse, duration 0.5ms, peak acceleration 100g's                                                                                                                                                  | AEC-Q200 TEST 13 MIL-STD-202 Method 213 | $\Delta R \leq \pm 0.5\%$                              |
| Vibration                             | Traverse the entire frequency range from 10 to 2000 Hz within 20 minutes and return to 10 Hz; this cycle should be performed 12 times in each of the three mutually perpendicular directions (36 times in total)                                    | AEC-Q200 TEST 14 MIL-STD-202 Method 204 | $\Delta R \leq \pm 0.5\%$                              |

## ■ Tape Specifications (mm)

|  |              |              |             |             |             |              |              |             |              |              |
|------------------------------------------------------------------------------------|--------------|--------------|-------------|-------------|-------------|--------------|--------------|-------------|--------------|--------------|
| Size                                                                               | $A0 \pm 0.1$ | $B0 \pm 0.1$ | $W \pm 0.3$ | $F \pm 0.1$ | $E \pm 0.1$ | $T \pm 0.05$ | $K0 \pm 0.1$ | $P \pm 0.1$ | $P0 \pm 0.1$ | $P2 \pm 0.1$ |
| 6568                                                                               | 7.4          | 7.0          | 16          | 7.5         | 1.75        | 0.3          | 1.9          | 12          | 4            | 2            |

## ■ Reel Specifications ( mm )

|  |             |             |              |              |             |          |
|--------------------------------------------------------------------------------------|-------------|-------------|--------------|--------------|-------------|----------|
| Size                                                                                 | $\Phi D$    | $\Phi M$    | $\Phi B$     | W            | A           | Quantity |
| 6568                                                                                 | $100 \pm 2$ | $350 \pm 1$ | $13.2 \pm 1$ | $16 \pm 0.5$ | $2.3 \pm 1$ | 2500PCS  |

## ■ Instructions for Use:

### 1、Product User Manual

- ① During product use, ensure surface protection to prevent defects such as dents or scratches on the product surface.
- ② When handling the product, avoid using sharp tools to prevent surface scratches that may cause resistance drift and failure.
- ③ During installation and use, avoid subjecting the product to mechanical stress.
- ④ Long-term operating power must not exceed the rated power to prevent resistance drift caused by sustained overloading.
- ⑤ When operating under high temperatures or poor heat dissipation conditions, refer to the derating curve for power reduction applications.
- ⑥ Before use, avoid removing the product from the tape reel to prevent oxidation risks that could lead to soldering defects.

### 2、Product Storage Instructions

- ① Store the product at ambient temperatures between 5°C and 35°C, with relative humidity below 65%. Maintain humidity at the lowest possible level.
- ② Keep the product in a clean, dry environment free from harmful gases.
- ③ Avoid removing the product from its packaging until ready for use.
- ④ Under the specified storage conditions, the product remains viable for one year.
- ⑤ For products stored longer than one year, inspect the surface for oxidation and conduct solderability testing.