

## Product Specification

|              |                                   |
|--------------|-----------------------------------|
| Product:     | Thick-Film Circuit Resistor Paste |
| Part Number: | 05H01 Series                      |

### Application Scope :

This product is suitable for thick film circuit and chip resistance.

### Usage Conditions :

|                  |                                                                                                                                                                   |
|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Substrate        | Alumina ceramics                                                                                                                                                  |
| Printing         | 200-250 mesh screen printing                                                                                                                                      |
| Leveling         | Let it level at room temperature for 5-15 minutes (adjust time based on actual leveling conditions).                                                              |
| Drying           | Bake in a ventilation oven at 100-150°C for 10-15 minutes (if the baking temperature is below 300°C, the baking time may be adjusted based on actual conditions). |
| Firing Condition | The sintering temperature is 850±2°C (recommended value) and the sintering time is 9-11 minutes.                                                                  |
| Thinner          | ST1000, ST1001                                                                                                                                                    |

### Characteristics :

#### 1. Paste Characteristics :

| Characteristic | Standard    | Test Method And Conditions                                                                                                         |
|----------------|-------------|------------------------------------------------------------------------------------------------------------------------------------|
| 1 Fineness     | ≤5μm        | FOG test                                                                                                                           |
| 2 Viscosity    | 100-200Pa.s | Brookfield HBT (Boli Fei) viscometer, rotor SC4-14/6R, 10 rpm, with adjustable viscosity at 25±1°C according to user requirements. |

#### 2. Characteristics After Curing :

Under the 1-sintering condition, the film thickness is 8-12 μm.

Check fired film produced under the conditions specified in 1) , (Film thickness is 8-12μm.)

| Characteristics | Standard          | Test Method And Conditions |
|-----------------|-------------------|----------------------------|
| 3 Appearance    | Compact and dense | Eyeballing                 |

| Product Line | Thick-Film Circuit Resistor Paste         |             |                                                |                 |            |                                                      |
|--------------|-------------------------------------------|-------------|------------------------------------------------|-----------------|------------|------------------------------------------------------|
| Product NO   | Square Resistance<br>( $\Omega/\square$ ) | Tolerance % | Main Compositions                              | TCR<br>(ppm/°C) | ESD<br>(%) | Firing Temp<br>(°C)                                  |
| 05H01-0R1    | 0.1                                       | ±15%        | Ag、 Pd 、 RuO <sub>2</sub>                      | -200～<br>+700   | ±1         | Air-fired<br>sintering at<br>850°C for 10<br>minutes |
| 05H01-0R2    | 0.2                                       | ±15%        | Ag、 Pd 、 RuO <sub>2</sub>                      | -200～<br>+700   |            |                                                      |
| 05H01-1R0    | 1.0                                       | ±15%        | Ag、 Pd 、 RuO <sub>2</sub>                      | -200～<br>+500   |            |                                                      |
| 05H01-4R0    | 4.0                                       | ±15%        | Ag、 Pd 、 RuO <sub>2</sub>                      | -200～<br>+500   |            |                                                      |
| 05H01-5R0    | 5.0                                       | ±15%        | Ag、 Pd 、 RuO <sub>2</sub>                      | -200～<br>+300   |            |                                                      |
| 05H01-6R0    | 6.0                                       | ±15%        | Ag、 Pd 、 RuO <sub>2</sub>                      | ±100            |            |                                                      |
| 05H01-8R0    | 8.0                                       | ±15%        | Ag、 Pd 、 RuO <sub>2</sub>                      |                 |            |                                                      |
| 05H01-011    | 10                                        | ±15%        | Ag、 Pd 、 RuO <sub>2</sub>                      |                 |            |                                                      |
| 05H01-021    | 20                                        | ±15%        | RuO <sub>2</sub>                               |                 |            |                                                      |
| 05H01-051    | 50                                        | ±15%        | RuO <sub>2</sub>                               |                 |            |                                                      |
| 05H01-101    | 100                                       | ±15%        | RuO <sub>2</sub>                               |                 |            |                                                      |
| 05H01-102    | 1K                                        | ±15%        | Pb <sub>2</sub> Ru <sub>2</sub> O <sub>6</sub> |                 |            |                                                      |
| 05H01-103    | 10K                                       | ±15%        | Pb <sub>2</sub> Ru <sub>2</sub> O <sub>6</sub> |                 |            |                                                      |
| 05H01-104    | 100K                                      | ±15%        | Pb <sub>2</sub> Ru <sub>2</sub> O <sub>6</sub> | ±200            |            |                                                      |
| 05H01-105    | 1M                                        | ±15%        | Pb <sub>2</sub> Ru <sub>2</sub> O <sub>6</sub> |                 |            |                                                      |
| 05H01-106    | 10M                                       | -30%        | Pb <sub>2</sub> Ru <sub>2</sub> O <sub>6</sub> |                 |            |                                                      |
| 05H01-107    | 100M                                      | -30%        | Pb <sub>2</sub> Ru <sub>2</sub> O <sub>6</sub> |                 |            |                                                      |
| 05H02-108    | 1G                                        | -30%        | Pb <sub>2</sub> Ru <sub>2</sub> O <sub>6</sub> |                 |            |                                                      |
| 05H02-109    | 10G                                       | -30%        | Pb <sub>2</sub> Ru <sub>2</sub> O <sub>6</sub> |                 |            |                                                      |
| 05H02-1010   | 100G                                      | -30%        | Pb <sub>2</sub> Ru <sub>2</sub> O <sub>6</sub> |                 |            |                                                      |

#### Save Conditions And Validity Period :

The product shall be stored in a sealed container at an ambient temperature of 5-25 $^{\circ}\text{C}$ , with a shelf life of six months from the date of shipment.

#### Packaging Method :

1000g/can