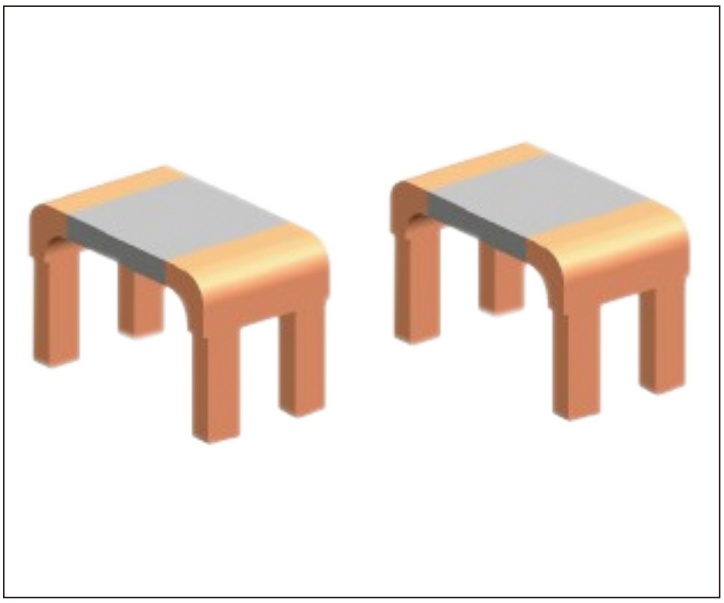


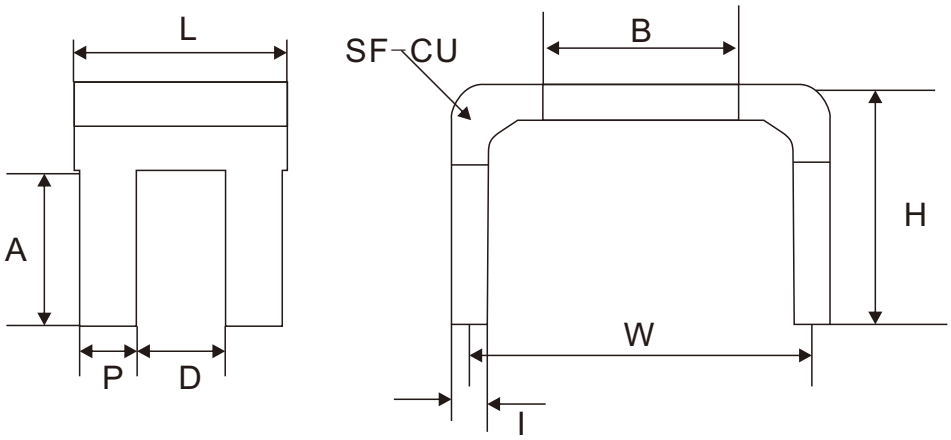
## Features

Ⅰ.Tolerance ± 1%or ± 5%
Ⅱ.TCR ± 20ppm/℃ or ± 50ppm/℃
Ⅲ.Resistance values down to 0R0003 Ω
Ⅳ. Low Inductance
Ⅴ.High application temperature range-55 to +170℃
Ⅵ.Lead-free
Ⅶ.Special tight toleranceare available on request

## Applications

Ⅰ.Current Sensing
Ⅱ.Feedback
Ⅲ.Low Inductance
Ⅳ.Surge and pulse
Ⅴ.High current applications for the automotive marker.
Ⅵ.Frequency converters
Ⅶ Power modules

## Dimensions




| Type | power (W) | Resistance | Dimensions(mm) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | B ± 0.3 | W ± 0.2 | L ± 0.3 | A ± 0.5 | P | H ± 1.0 | D | I |
| SHB-M-R0003 | 3W | 0.3mR | 4.9 | 8.3 | 5.3 | 3.8 | 1.3 | 5.0 | 1.8 | 1.43 |
| SHB-M-R0005 | | 0.5mR | 4.9 | 8.3 | 5.3 | 3.8 | 1.3 | 5.0 | 1.8 | 0.86 |
| SHB-M-R001 | | 1mR | 4.9 | 8.3 | 5.3 | 3.8 | 1.3 | 5.0 | 1.8 | 0.43 |
| SHB-N-R001 | | 1mR | 4.9 | 8.3 | 5.3 | 3.8 | 1.3 | 5.0 | 1.8 | 1.30 |

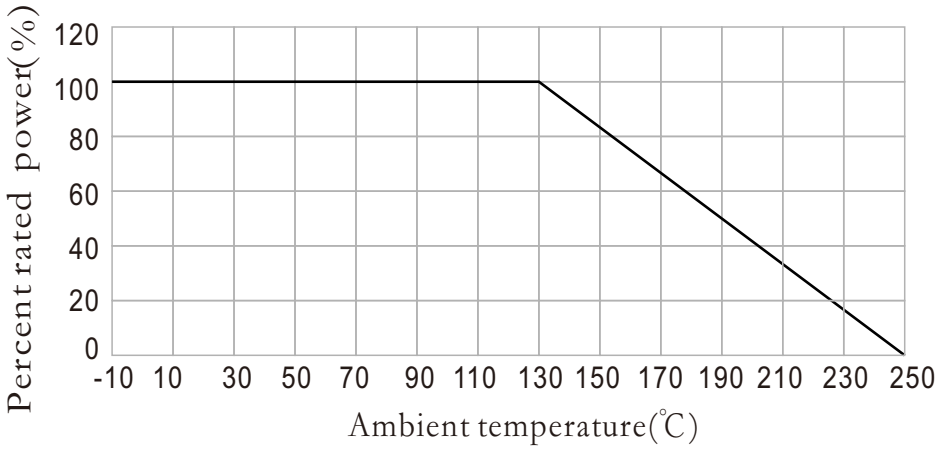
## Electrical data

| Powerrating at85℃ (max)watts | 3 | | |
|---|---|---|---|
| Resistance range ohms | 0.0003Ω | 0.005 | 0.001 |

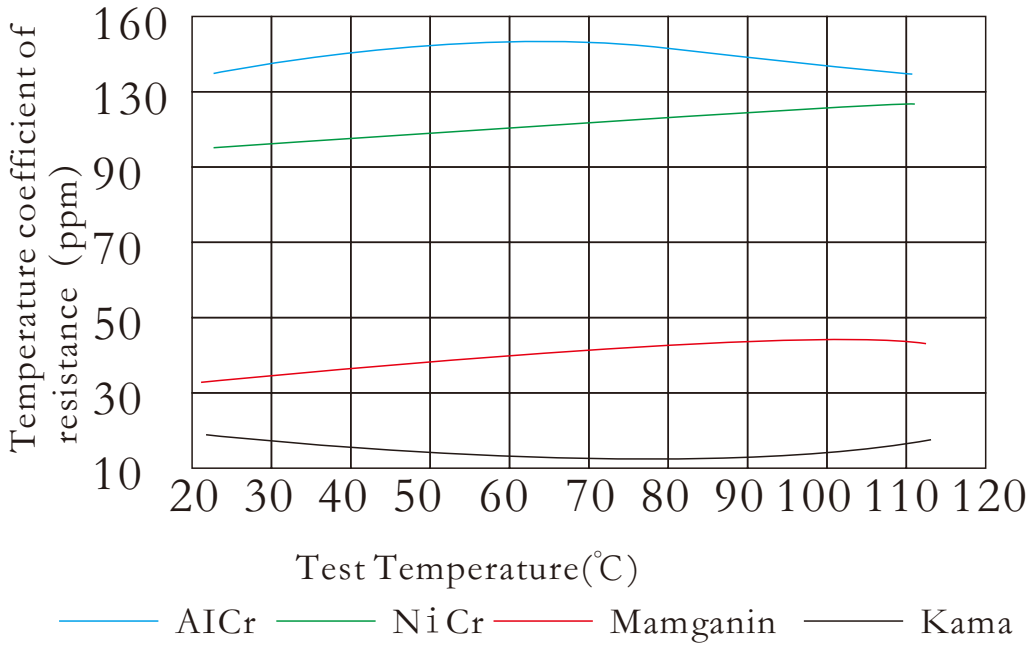
## Reference Standards

JIS C 5201-1

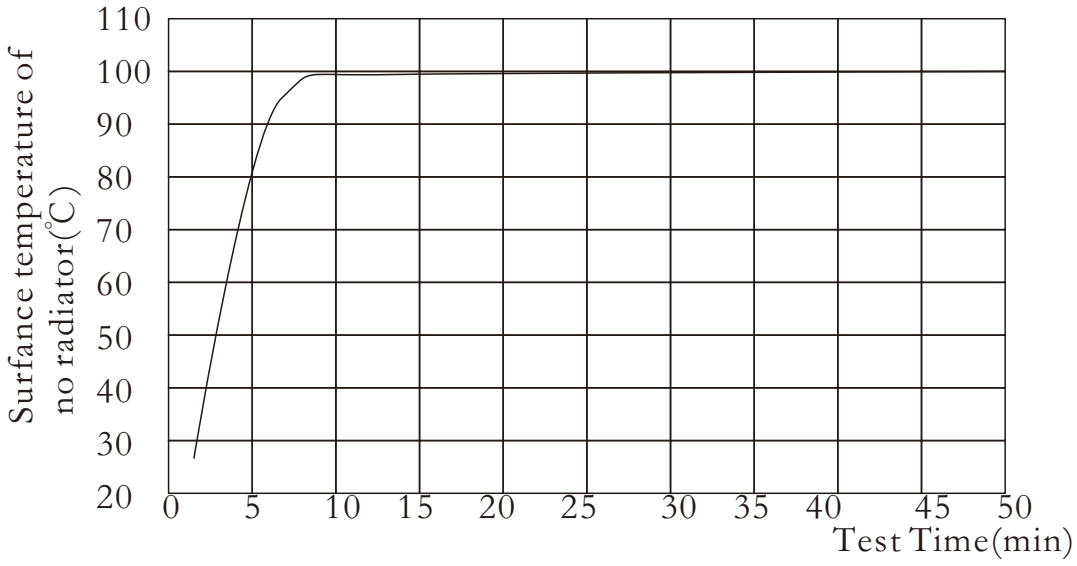
## Derating Curve




## TCR Derating




## Surface temperature



## Peformance

| TEST | CONDITIONS OF TEST | TEST LIMITS |
|---|---|---|
| Thermal Shock | -55'c to 150 c , 1000 cycles, 15 min at each extreme | △R ± (1.0%R+0.0005Ω) |
| Shot time overload | 5 x rated power for 5 s | △R ± (0.5%R+0.0005Ω) |
| Low temperature storage | -65 'C for 45 min | △R ± (0.5%R+0.0005Ω) |
| High temperature exposure | (1000 h) at+170 C: | △R ± (1.0%R+0.0005Ω) |
| Bias humidity | +85℃ , 85% RH, 10% bias, 1000 h | △R ± (0.5%R+0.0005Ω) |
| Mechanical shock | 100 g's for 6 ms, 5 pulses | △R ± (0.5%R+0.0005Ω) |
| Vibration | Frequency varied 10 Hz to 200 Hz in 1 min, 3 directions, 12 h | △R ± (0.5%R+0.0005Ω) |
| Load life | (1000 h) at + 70 ° C: 1.5 h ,iON", 0.5 h uOFF | △R ± (1.0%R+0.0005Ω) |
| Resistance to solder heat | + 260 ℃ solder, 10 s to 12 s dwell, 25 mm/s emergence | △R ± (0.5%R+0.0005Ω) |
| Moisture resistance | MIL-STD-202, method 106, 0 % power, 7a and 7b not required | △R ± (0.5%R+0.0005Ω) |

## Ordering Information

Example

| SBH | 3 | J | R0005 |
|---|---|---|---|
| Product Name | Power | Tol | Ohm |
| SBH Alloy Shunt Resistors | 3=3W | F=±1%<br>J=±5% | R0003=0.3mR<br>R0005=0.5mR<br>R001=1mR |