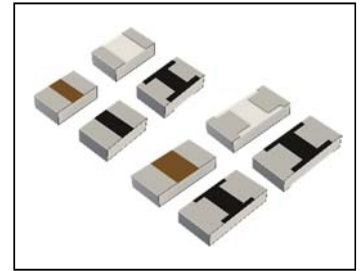


### ● UCRC series features

- 1) Copper-based resistive element formed by sintering
- 2) Achieves a rated power of 1.25W in a 0805 size through its unique chip structure.
- 3) Achieves excellent temperature characteristics (10 mΩ : ±75 ppm/°C)
- 4) Current detection chip resistors : Available from 10mΩ.
- 5) ROHM resistors have obtained ISO9001 / IATF16949 certification.
- 6) Corresponds to AEC-Q200.



### ● UCRC series products list

| Part No.                         | Size |        | Rated power<br>(W) | Rated ambient temperature<br>(°C) | Rated terminal temperature<br>(°C) | Resistance tolerance<br>(%) | Temperature coefficient<br>(ppm/°C) | Temperature coefficient<br>(ppm/°C) | Resistance range<br>(Ω) | Operating temperature range<br>(°C) | Automotive grade available<br>(AEC-Q200) |
|----------------------------------|------|--------|--------------------|-----------------------------------|------------------------------------|-----------------------------|-------------------------------------|-------------------------------------|-------------------------|-------------------------------------|------------------------------------------|
|                                  | (mm) | (inch) |                    |                                   |                                    |                             | *1 Condition 1                      | *2 Condition 2                      |                         |                                     |                                          |
| <div>New</div> <div>UCR10C</div> | 2012 | 0805   | 1                  | 70                                | 125                                | F (±1%)<br>J (±5%)          | 0~60                                | ±75                                 | 10m -                   | -55~+155                            | Yes                                      |
|                                  |      |        | ±50                |                                   |                                    |                             | 10m<R<16m (E24)                     |                                     |                         |                                     |                                          |
|                                  |      |        | -40~+30            |                                   |                                    |                             | ±60                                 | 16m≤R<39m (E24)                     |                         |                                     |                                          |
|                                  |      |        | -50~+10            |                                   |                                    |                             |                                     | 39m≤R≤43m (E24)                     |                         |                                     |                                          |
|                                  |      |        | -40~+10            |                                   |                                    |                             |                                     | 43m<R<56m (E24)                     |                         |                                     |                                          |
|                                  |      |        | -60~+10            |                                   |                                    |                             |                                     | 56m≤R≤100m (E24)                    |                         |                                     |                                          |
| <div>☆</div> <div>UCR18C</div>   | 3216 | 1206   | 2                  | 70                                | 115                                | F (±1%)<br>J (±5%)          | 0~75                                | 0~90                                | 10m≤R<12m (E24)         | -55~+155                            | Yes                                      |
|                                  |      |        | 70                 | 125                               | ±60                                |                             | ±60                                 | 12m≤R<20m (E24)                     |                         |                                     |                                          |
|                                  |      |        |                    |                                   | -70~0                              |                             | -70~+30                             | 20m≤R<36m (E24)                     |                         |                                     |                                          |
|                                  |      |        |                    |                                   | ±60                                |                             | ±60                                 | 36m≤R<50m (E24)                     |                         |                                     |                                          |
|                                  |      |        |                    |                                   | -70~0                              |                             | -70~+30                             | 50m≤R≤100m (E24)                    |                         |                                     |                                          |
|                                  |      |        |                    |                                   |                                    |                             |                                     |                                     |                         |                                     |                                          |

Design and specifications are subject to change without notice. Carefully check the specification sheet supplied with the product before using or ordering it.

Rated voltage is determined from the following.

Rated voltage =  $\sqrt{\text{Rated power} \times \text{Nominal Resistance}}$

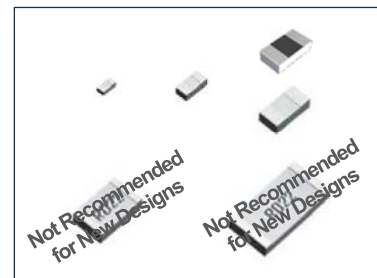
\*1 Condition1 : +25°C/+155°C

\*2 Condition2 : +25°C/-55°C, +25°C/+155°C

☆ : Under development

## ● UCR series features

- 1) Chip resistors for current detection.
- 2) Resistive element is located at bottom side, which reduces the resistance shift during mounting process.
- 3) ROHM's unique structure achieved improvement of heat.
- 4) ROHM resistors have obtained ISO9001 / IATF16949 certification.
- 5) Corresponds to AEC-Q200. (UCR03 less than 100mΩ are not supported.)



## ● UCR series products list

| Part No.        | Size |        | Rated power<br>(70℃)<br>(W) | Resistance<br>tolerance<br>(%) | Temperature<br>coefficient<br>(ppm/℃) | Resistance range<br>(Ω) | Operating<br>temperature range<br>(℃) | Automotive<br>Grade<br>Available<br>(AEC-Q200) |
|-----------------|------|--------|-----------------------------|--------------------------------|---------------------------------------|-------------------------|---------------------------------------|------------------------------------------------|
|                 | (mm) | (inch) |                             |                                |                                       |                         |                                       |                                                |
| UCR006          | 0603 | 0201   | 0.1                         | F (±1%)                        | 0~300                                 | 100m≤R≤910m (E24)       | -55~+155                              | Yes                                            |
| UCR01           | 1005 | 0402   | 0.125                       | F (±1%)                        | 0~300                                 | 68m≤R≤91m (E24)         | -55~+155                              | Yes                                            |
|                 |      |        |                             |                                | 0~250                                 | 100m≤R≤200m (E24)       |                                       |                                                |
|                 |      |        |                             |                                | 0~200                                 | 220m≤R≤910m (E24)       |                                       |                                                |
| UCR03           | 1608 | 0603   | 0.25                        | F (±1%)                        | 0~250                                 | 20m≤R≤47m (E24)         | -55~+155                              | Yes*                                           |
|                 |      |        |                             |                                | 0~200                                 | 50m≤R≤91m (E24)         |                                       |                                                |
|                 |      |        |                             |                                | 0~150                                 | 100m≤R≤200m (E24)       |                                       |                                                |
|                 |      |        | 0.2                         | J (±5%)                        | 0~150                                 | 220m≤R≤910m (E24)       |                                       |                                                |
| UCR10<br>(NRND) | 2012 | 0805   | 0.33                        | F (±1%)                        | 250±200                               | 11m≤R≤18m (E24)         | -55~+155                              | Yes                                            |
|                 |      |        |                             |                                | 0~250                                 | 20m≤R≤47m (E24)         |                                       |                                                |
|                 |      |        |                             |                                | 0~150                                 | 51m≤R≤100m (E24)        |                                       |                                                |
| UCR18<br>(NRND) | 3216 | 1206   | 1                           | F (±1%)                        | 0~350                                 | 11m≤R≤18m (E24)         | -55~+155                              | Yes                                            |
|                 |      |        | 0.5                         |                                | 0~200                                 | 20m≤R≤39m (E24)         |                                       |                                                |
|                 |      |        |                             |                                | 0~150                                 | 43m≤R≤100m (E24)        |                                       |                                                |

Design and specifications are subject to change without notice. Carefully check the specification sheet supplied with the product before using or ordering it.

Rated voltage is determined from the following.

Rated voltage =  $\sqrt{\text{Rated power} \times \text{Nominal Resistance}}$

\*UCR03 corresponds to AEC-Q200 only to 100mΩ or more.

●UCRC series composition of part number

| UCR                                                                   | 10C                                    | EVP                                                | F                  | S                                | R047                                                                                              |
|-----------------------------------------------------------------------|----------------------------------------|----------------------------------------------------|--------------------|----------------------------------|---------------------------------------------------------------------------------------------------|
| Part No.                                                              | Size                                   | Packaging code                                     | Tolerance          | Special code                     | Nominal resistance                                                                                |
| UCR                                                                   | Size (mm) [inch]                       | Packaging code                                     | Tolerance          | Special code                     | Nominal resistance                                                                                |
| High Power Sintered Metal Shunt Resistors <Narrow TCR>                | 10C (2012) [0805]<br>18C (3216) [1206] | Type Code Packaging specifications Quantity / Reel | F (±1%)<br>J (±5%) | U 10mΩ<br>S 11mΩ~91mΩ<br>L 100mΩ | Resistance code, 3 or 4 digits.                                                                   |
|                                                                       |                                        | UCR10C EWP*3 Paper tape (4mm Pitch) 5,000          |                    |                                  | Resistance tolerance + Special code Resistance code<br>FU,FS,FL,JS : 4 digits<br>JU,JL : 3 digits |
|                                                                       |                                        | UCR10C EVP*4 Paper tape (4mm Pitch) 5,000          |                    |                                  |                                                                                                   |
|                                                                       |                                        | UCR18C EWP*3 Paper tape (4mm Pitch) 5,000          |                    |                                  |                                                                                                   |
|                                                                       |                                        | UCR18C EVP*4 Paper tape (4mm Pitch) 5,000          |                    |                                  |                                                                                                   |
| *3 : EVP specification UCR10C : 10mΩ≤R≤43mΩ<br>UCR18C : 10mΩ≤R≤36mΩ   |                                        |                                                    |                    |                                  |                                                                                                   |
| *4 : EVP specification UCR10C : 43mΩ<R≤100mΩ<br>UCR18C : 36mΩ<R≤100mΩ |                                        |                                                    |                    |                                  |                                                                                                   |

●UCR series composition of part number

| UCR                                         | 03                                                                                                | EVP                                                                                                                                                                                                                                                                                                      | J                  | L                            | R33                                                                                                                               |
|---------------------------------------------|---------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|
| Part No.                                    | Size                                                                                              | Packaging code                                                                                                                                                                                                                                                                                           | Tolerance          | Special code                 | Nominal resistance                                                                                                                |
| UCR                                         | Size (mm) [inch]                                                                                  | Packaging code                                                                                                                                                                                                                                                                                           | Tolerance          | Special code                 | Nominal resistance                                                                                                                |
| Thick Film Shunt Resistors (Face Down type) | 006 (0603) [0201]<br>01 (1005) [0402]<br>03 (1608) [0603]<br>10 (2012) [0805]<br>18 (3216) [1206] | Type Code Packaging specifications Quantity / Reel<br>UCR006 YVP Paper tape (2mmPitch) 15,000<br>UCR01 MVP Paper tape (2mmPitch) 10,000<br>UCR03 EWP (20mΩ~47mΩ) Paper tape (4mmPitch) 5,000<br>UCR03 EVP (51mΩ~910mΩ)<br>UCR10 EVH Paper tape (4mmPitch) 5,000<br>UCR18 EVH Paper tape (4mmPitch) 5,000 | F (±1%)<br>J (±5%) | S 11mΩ~91mΩ<br>L 100mΩ~910mΩ | Resistance code, 3 or 4 digits.<br>Resistance tolerance + Resistance code<br>Special code<br>FS,FL,JS : 4 digits<br>JL : 3 digits |