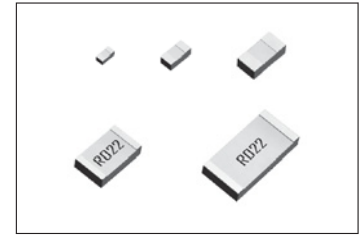


●Features

- 1) Very-low ohmic resistance from 11mΩ is in lineup by thick-film resistive element.
- 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 / ISO / TS16949 certification.
- 5) Corresponds to AEC-Q200. But UCR006 and UCR03 (under 100mΩ or less) are unsupported.



●Products List

Part No.	Size		Rated Power (70°C) (W)	Resistance Tolerance (%)	Temperature Coefficient (ppm / °C)	Resistance Range	Series	Operating Temperature Range (°C)
	(mm)	(inch)						
UCR006	0603	0201	0.1	J(±5%) F(±1%)	0 to 300	0.1Ω to 0.91Ω	E24	-55 to +155
UCR01	1005	0402	0.125	J(±5%) F(±1%)	0 to 300	0.068Ω to 0.091Ω		
					0 to 250	0.1Ω to 0.2Ω		
					0 to 200	0.22Ω to 0.91Ω		
UCR03	1608	0603	0.25	J(±5%) F(±1%)	0 to 250	0.020Ω to 0.047Ω		
					0 to 200	0.051Ω to 0.091Ω		
					0 to 150	0.1Ω to 0.2Ω		
UCR10	2012	0805	0.33	J(±5%) F(±1%)	250 ± 200	0.011Ω to 0.018Ω		
					0 to 250	0.020Ω to 0.047Ω		
					0 to 150	0.051Ω to 0.1Ω		
					0 to 250	0.020Ω to 0.047Ω		
					0 to 150	0.051Ω to 0.1Ω		
UCR18	3216	1206	0.5	J(±5%) F(±1%)	0 to 350	0.011Ω to 0.018Ω		
					0 to 200	0.020Ω to 0.039Ω		
					0 to 150	0.043Ω to 0.1Ω		

*Design and specifications are subject to change without notice.

Carefully check the specification sheet supplied with the product before using or ordering it.

●Part Number Description

UCR	10	EVH	J	L	R10																								
Part No. UCR (Thick Film Low Ohmic Chip Resistors)	Size (mm [inch]) 006 (0603 [0201]) 01 (1005 [0402]) 03 (1608 [0603]) 10 (2012 [0805]) 18 (3216 [1206])	Packaging Specifications Code	Resistance Tolerance F (±1%) J (±5%)	Special part code S : 0.011 to 0.091Ω L : 0.1Ω to	Nominal Resistance Resistance code, 3 or 4 digits. Resistance tolerance + Resistance code Special code FS,FL,JS : 4 digits JL : 3 digits																								
		<table border="1"> <thead> <tr> <th>Part No.</th> <th>Code</th> <th>Packaging specifications</th> <th>Quantity / Reel</th> </tr> </thead> <tbody> <tr> <td>UCR006</td> <td>YVP</td> <td>Paper tape (4mm Pitch)</td> <td>15,000</td> </tr> <tr> <td>UCR01</td> <td>MVP</td> <td>Paper tape (2mm Pitch)</td> <td>10,000</td> </tr> <tr> <td rowspan="2">UCR03</td> <td>EWP (20 to 47mΩ)</td> <td rowspan="2">Paper tape (4mm Pitch)</td> <td rowspan="2">5,000</td> </tr> <tr> <td>EVP (51 to 910mΩ)</td> </tr> <tr> <td>UCR10</td> <td>EVH</td> <td>Paper tape (4mm Pitch)</td> <td>5,000</td> </tr> <tr> <td>UCR18</td> <td>EVH</td> <td>Paper tape (4mm Pitch)</td> <td>5,000</td> </tr> </tbody> </table>	Part No.	Code	Packaging specifications	Quantity / Reel	UCR006	YVP	Paper tape (4mm Pitch)	15,000	UCR01	MVP	Paper tape (2mm Pitch)	10,000	UCR03	EWP (20 to 47mΩ)	Paper tape (4mm Pitch)	5,000	EVP (51 to 910mΩ)	UCR10	EVH	Paper tape (4mm Pitch)	5,000	UCR18	EVH	Paper tape (4mm Pitch)	5,000		
Part No.	Code	Packaging specifications	Quantity / Reel																										
UCR006	YVP	Paper tape (4mm Pitch)	15,000																										
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	EVP (51 to 910mΩ)																												
UCR10	EVH	Paper tape (4mm Pitch)	5,000																										
UCR18	EVH	Paper tape (4mm Pitch)	5,000																										

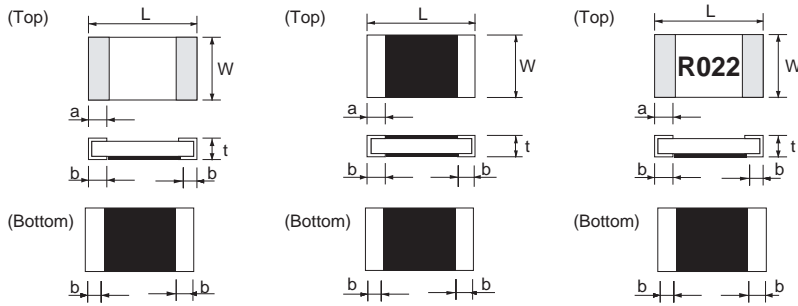
●Chip Resistor Dimensions and Markings

■ UCR006/01

■ UCR03 (50mΩ ≤ R ≤ 910mΩ)

■ UCR03 (20mΩ ≤ R < 50mΩ)

■ UCR10 / 18



<Marking method>

There are three or four digits used for the calculation number according to IEC code and "R" is used for the decimal point.

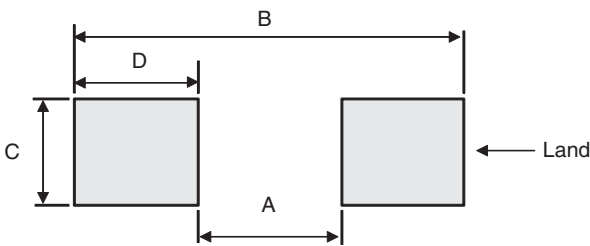
Ex.) 4digits.....0.1Ω=R100

3digits.....0.1Ω=R10

(Unit : mm)

Part No.	(mm)	(inch)	L	W	t	a	b	Marking existence
UCR006	0603	0201	0.62±0.05	0.32±0.05	0.24±0.05	0.18±0.1	0.22±0.1	No
UCR01	1005	0402	1.0±0.1	0.55±0.1	0.37±0.05	0.28±0.1	0.34±0.1	No
UCR03	1608	0603	1.6±0.1	0.87±0.1	0.5±0.1	0.45±0.2	0.45±0.2	No
UCR10	2012	0805	2.0±0.1	1.25±0.1	0.55±0.1	0.24±0.2	0.5±0.2	Yes
UCR18	3216	1206	3.2±0.15	1.6±0.15	0.55±0.1	0.3±0.2	0.9±0.25	Yes

●Land pattern Example



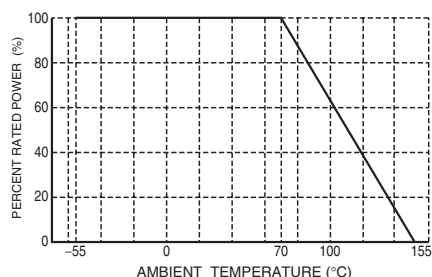
(Unit : mm)

Part No.	A	B	C	D
UCR006	0.3	1.2	0.5	0.45
UCR01	0.5	1.8	0.5	0.65
UCR03	0.5	2.5	0.9	1.0
UCR10	0.8	3.4	1.3	1.3
UCR18	1.4	4.0	1.8	1.3

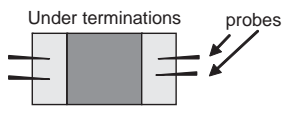
●Derating Curve

When the ambient temperature exceeds 70°C, power dissipation must be adjusted according to the derating curves below.

■ UCR006 / 01 / 03 / 10 / 18



●Characteristics (UCR01 / 03 / 10 / 18)

Test Items	Guaranteed Value	Test Conditions
	Resistor Type	
Resistance	See P.1	20°C Measuring method : Measure under terminations by 4 probes. 
Variation of resistance with temperature	See P.1	Measurement : +20 / -55 / +20 / +125°C
Overload	± (2.0%+0.005Ω)	Rated voltage (current) ×2.5, 2s
Solderability	A new uniform coating of minimum of 95% of the surface being immersed and no soldering damage.	Rosin-Ethanol : 25% (Weight) Soldering condition : 235±5°C Duration of immersion : 2.0±0.5s
Resistance to soldering heat	± (1.0%+0.005Ω) No remarkable abnormality on the appearance.	Soldering condition : 260±5°C Duration of immersion : 10±1s
Rapid change of temperature	± (1.0%+0.005Ω)	Test temp. : -55°C to +125°C 5cycle
Damp heat, steady state	± (3.0%+0.005Ω)	40°C, 93%RH (Relative Humidity) Test time : 1,000h to 1,048h
Endurance at 70°C	± (3.0%+0.005Ω)	70°C Rated voltage (current) 1.5h : ON – 0.5h : OFF Test time : 1,000h to 1,048h
Endurance	± (3.0%+0.005Ω)	155°C Test time : 1,000h to 1,048h
Resistance to solvent	± (0.5%+0.005Ω)	23±5°C, Immersion cleaning, 5±0.5min Solvent : 2-propanol
Bend strength of the end face plating	Without mechanical damage such as breaks.	-

*Please contact us for guarantee of the test conditions other than those described above.

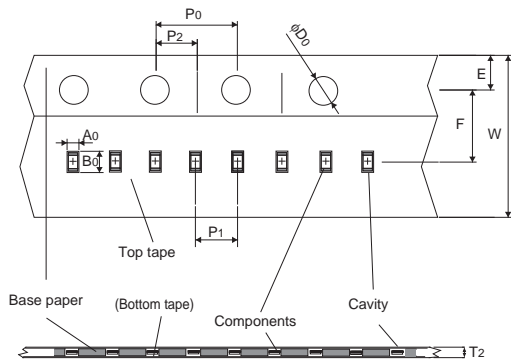
Compliance Standard(s) : IEC60115-8
JISC 5201-8

●Chip weight (typical value)

Parameter	Unit	UCR006	UCR01	UCR03	UCR10	UCR18
Weight	mg/pc	0.211	0.848	2.53 (20 to 47mΩ) 3.06 (51 to 910mΩ)	5.27	10.16

●Tape Dimensions

■ Paper Tape

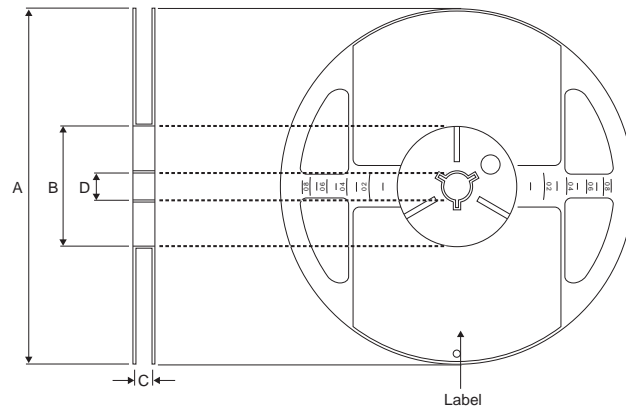


(Unit : mm)

Part No.	W	F	E	A0	B0
UCR006	8.0±0.3	3.5±0.05	1.75±0.1	0.39±0.1	0.7±0.1
UCR01	8.0±0.3	3.5±0.05	1.75±0.1	0.7±0.1	1.2±0.1
UCR03	8.0±0.3	3.5±0.05	1.75±0.1	1.1±0.1	1.9±0.1
UCR10	8.0±0.3	3.5±0.05	1.75±0.1	1.65 ^{+0.2} _{-0.1}	2.4 ^{+0.2} _{-0.1}
UCR18	8.0±0.3	3.5±0.05	1.75±0.1	1.95 ^{+0.1} _{-0.05}	3.5 ^{+0.15} _{-0.05}

Part No.	D0	P0	P1	P2	T2
UCR006	φ1.5 ^{+0.1} ₀	4.0±0.1	2.0±0.05	2.0±0.05	Max0.46
UCR01	φ1.5 ^{+0.1} ₀	4.0±0.1	2.0±0.05	2.0±0.05	Max 1.1
UCR03	φ1.5 ^{+0.1} ₀	4.0±0.1	4.0±0.05	2.0±0.05	Max 1.1
UCR10	φ1.5 ^{+0.1} ₀	4.0±0.1	4.0±0.1	2.0±0.05	Max 1.1
UCR18	φ1.5 ^{+0.1} ₀	4.0±0.1	4.0±0.1	2.0±0.05	Max 1.1

●Reel Dimensions



ACCORDING TO EIAJ ET-7200B

(Unit : mm)

Part No.	A	B	C	D
UCR006	φ180 ⁰ _{-1.5}	φ60 ^{+1.0} ₀	9 ^{+1.0} ₀	φ13±0.2
UCR01				
UCR03				
UCR10				
UCR18				

Notes

- 1) The information contained herein is subject to change without notice.
- 2) Before you use our Products, please contact our sales representative and verify the latest specifications :
- 3) Although ROHM is continuously working to improve product reliability and quality, semiconductors can break down and malfunction due to various factors.
Therefore, in order to prevent personal injury or fire arising from failure, please take safety measures such as complying with the derating characteristics, implementing redundant and fire prevention designs, and utilizing backups and fail-safe procedures. ROHM shall have no responsibility for any damages arising out of the use of our Products beyond the rating specified by ROHM.
- 4) Examples of application circuits, circuit constants and any other information contained herein are provided only to illustrate the standard usage and operations of the Products. The peripheral conditions must be taken into account when designing circuits for mass production.
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- 7) The Products specified in this document are not designed to be radiation tolerant.
- 8) For use of our Products in applications requiring a high degree of reliability (as exemplified below), please contact and consult with a ROHM representative : transportation equipment (i.e. cars, ships, trains), primary communication equipment, traffic lights, fire/crime prevention, safety equipment, medical systems, servers, solar cells, and power transmission systems.
- 9) Do not use our Products in applications requiring extremely high reliability, such as aerospace equipment, nuclear power control systems, and submarine repeaters.
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