

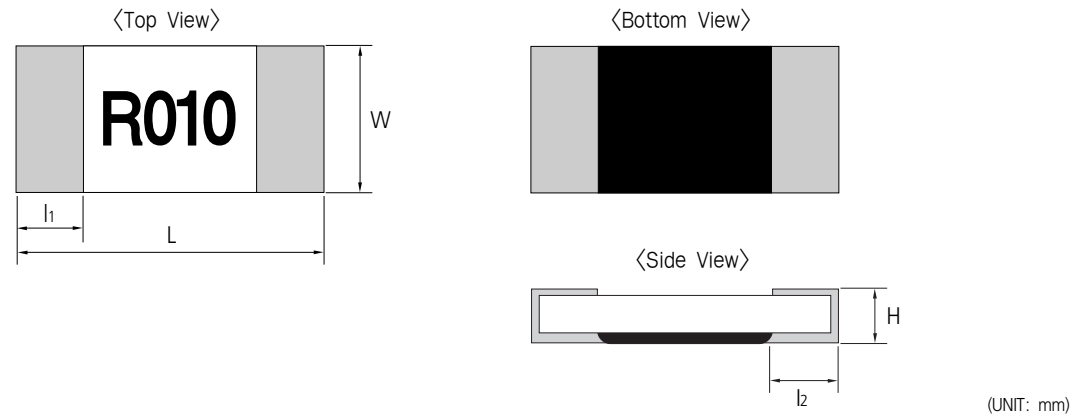
Feature

- Thick Film Type Ultra Low Ohm Resistor.
- High Precision Reliability.
- High Power with Low TCR.
- 100% Lead Free Products (PbO not used).
- RoHS Compliant.

Application

- Current Sensing.
- PCM of Battery Pack.
- Power supplying part, DC power charger, adapter.
- Mobile Phone, Mobile PC, Note PC, HDD, DSC, LCD.

Structure and Dimensions



Type	Inch	L	W	H	l ₁	l ₂	Average Weight
RU1005	0402	1.00±0.05	0.50±0.05	0.35±0.05	0.25±0.15	0.25±0.15	0.6mg
RU1608	0603	1.60±0.10	0.80±0.10	0.45±0.10	0.30±0.20	R ≤ 0.05: 0.50±0.20 R > 0.05: 0.35±0.20	2.2mg
RU2012	0805	2.00±0.15	1.25±0.15	0.55±0.10	0.40±0.20	R ≤ 0.05: 0.65±0.20 R > 0.05: 0.40±0.20	4.7mg
RU3216	1206	3.20±0.15	1.60±0.15	0.60±0.10	0.45±0.20	R ≤ 0.05: 0.90±0.20 R > 0.05: 0.60±0.20	9.4mg
RU3225	1210	3.20±0.20	2.55±0.20	0.55±0.10	0.45±0.20	R ≤ 0.05: 1.2±0.20 R > 0.05: 0.75±0.20	9.5mg
RU5025	2010	5.00±0.20	2.50±0.20	0.60±0.10	0.80±0.20	R ≤ 0.05: 1.5±0.20 R > 0.05: 0.90±0.20	27mg
RU6432	2512	6.30±0.20	3.20±0.20	0.60±0.10	1.00±0.20	R ≤ 0.05: 1.90±0.20 R > 0.05: 1.10±0.25	42mg

Parts Numbering System

• The part number system shall be in the following format

RU	2012	F	R051	CS
Code Designation	Dimension & Size Code	Tolerance	Resistance Value	Packaging Code
	1005: 1.0 × 0.5(mm) - 0402(inch)			
	1608: 1.6 × 0.8(mm) - 0603(inch)			
	2012: 2.0 × 1.2(mm) - 0805(inch)	F: ±1%		CS: Tape & Reel 7"
	3216: 3.2 × 1.6(mm) - 1206(inch)	G: ±2%	4-digit coding system	ES: Tape & Reel 10"
	3225: 3.2 × 2.5(mm) - 1210(inch)	J: ±5%		AS: Tape & Reel 13"
	5025: 5.0 × 2.5(mm) - 2010(inch)			
	6432: 6.4 × 3.2(mm) - 2512(inch)			
RU : Current sensing resistor				

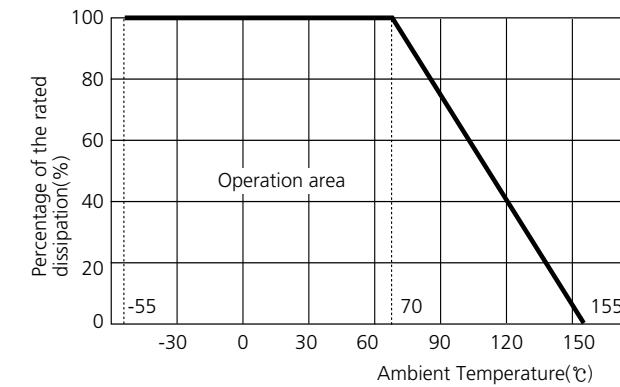
Specification

Type	Power Rating (W)	Rated Current (A)	Resistance Range (Ω)	T.C.R (ppm/°C)	Rated Ambient Temperature	Rated Working Temperature
RU1005	1/8 (0.125)	$\sqrt{P/R}$	25m~100m	R < 47m: ±500 R ≥ 47m: ±150	70°C	-55°C~+155°C
RU1608	1/4 (0.25)			10m~100m		
RU2012	1/3 (0.33)		R ≤ 25m: ±500 R < 33m: ±350 R ≥ 33m: ±150			
RU3216	1/2 (0.5)					
RU3225	2/3 (0.66)					
RU5025	3/4 (0.75)					
RU6432	1 (1)					

• Rated Current (A) = $\sqrt{\text{Rated Power(W)} / \text{Nominal Resistance Value(Ω)}}$
Please contact our sales representatives or product engineers for lower T.C.R or higher rated power products.

Power Derating Curve

The rated power is the maximum continuous loading power at 70°C ambient temperature. For ambient temperature above 70°C, the loading power follows the below power derating curve.



Marking

4-digit Coding System

- R means decimal point.
- Other digits represent the significant value.
- Example : R010
R010 = .010 = 0.010 Ω
= 0.01 Ω or 10 mΩ



Resistance Value Table

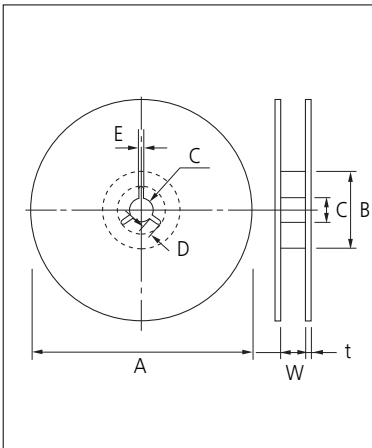
Code	Value (Ω)	Tol (%)	Code	Value (Ω)	Tol (%)	Code	Value (Ω)	Tol (%)	Code	Value (Ω)	Tol (%)
R010	0.01	±1, ±5	R020	0.02	±1, ±5	R039	0.039	±1, ±5	R062	0.062	±1, ±5
R011	0.011	±1, ±5	R022	0.022	±1, ±5	R040	0.04	±1, ±5	R068	0.068	±1, ±5
R012	0.012	±1, ±5	R024	0.024	±1, ±5	R043	0.043	±1, ±5	R075	0.075	±1, ±5
R013	0.013	±1, ±5	R027	0.027	±1, ±5	R047	0.047	±1, ±5	R082	0.082	±1, ±5
R015	0.015	±1, ±5	R030	0.03	±1, ±5	R050	0.05	±1, ±5	R091	0.091	±1, ±5
R016	0.016	±1, ±5	R033	0.033	±1, ±5	R051	0.051	±1, ±5	R100	0.1	±1, ±5
R018	0.018	±1, ±5	R036	0.036	±1, ±5	R056	0.056	±1, ±5			

The specifications and designs contained herein may be subject to change without notice. Please contact our sales representatives or product engineers before order.

- Operation Notes
- Example of land Pattern Design
- Recommended Soldering Conditions
- General Structure
- General
- Precision
- Jumper
- Low ohms (RUT Series)
- Ultra Low ohms (RU Series)
- Ultra Low Ohms (RUK Series)
- Ultra Low Ohms (RJ Series)
- Arrays (CONVEX Type)
- Arrays (CONCAVE Type)
- Arrays (FLAT Type)
- Anti-Sulfur Resistors
- Attenuator
- Characteristics Performance
- Packaging
- Standard Resistance Value

Taping Type

• Reel dimensions



Unit: mm

Symbol	Tape Width	A	B	C	D
7" Reel	8mm	∅180+0/-3	∅60±1.0	∅13±0.3	4±0.2
	12mm	∅180+0/-3	∅60±1.0	∅13±0.3	4±0.2
10" Reel	8mm	∅258+0/-3	∅80±1.0	∅13±0.3	4±0.2
	12mm	∅258+0/-3	∅80±1.0	∅13±0.3	4±0.2
13" Reel	8mm	∅330±2.0	∅100±1.0	∅13±0.3	4±0.2
	12mm	∅330±2.0	∅80±1.0	∅13±0.3	4±0.2

Symbol	Tape Width	E	W	t
7" Reel	8mm	2.0±0.5	9±0.5	1.2±0.2
	12mm	2.0±0.5	13±0.5	1.2±0.2
10" Reel	8mm	2.0±0.5	9±0.5	1.8±0.2
	12mm	2.0±0.5	13±0.5	1.8±0.2
13" Reel	8mm	2.0±0.5	9±0.5	2.2±0.2
	12mm	2.0±0.5	13±0.5	2.2±0.2

• Tape dimensions

(UNIT: mm)

Type	Pitch	Width	Dimensions																																												
Press Pocket or Punched Paper	2mm	8mm	<table border="1"> <thead> <tr> <th></th> <th>A</th> <th>B</th> <th>T</th> </tr> </thead> <tbody> <tr> <td>0402</td> <td>0.24±0.03</td> <td>0.45±0.03</td> <td>0.5 Max</td> </tr> <tr> <td>0603</td> <td>0.38±0.05</td> <td>0.68±0.05</td> <td>0.5 Max</td> </tr> <tr> <td>1005</td> <td>0.70±0.10</td> <td>1.20±0.10</td> <td>0.6 Max</td> </tr> <tr> <td>RF062P</td> <td>0.70±0.10</td> <td>0.90±0.10</td> <td>0.35 Max</td> </tr> <tr> <td>RF064P</td> <td>0.70±0.10</td> <td>1.60±0.10</td> <td>0.35 Max</td> </tr> <tr> <td>RP102</td> <td>1.17±0.10</td> <td>1.17±0.10</td> <td>0.6 Max</td> </tr> <tr> <td>RP10AT</td> <td>1.20±0.10</td> <td>1.20±0.10</td> <td>0.6 Max</td> </tr> <tr> <td>RN102</td> <td>1.20±0.10</td> <td>1.20±0.10</td> <td>0.6 Max</td> </tr> <tr> <td>RP104</td> <td>1.20±0.10</td> <td>2.20±0.10</td> <td>0.6 Max</td> </tr> <tr> <td>RN104</td> <td>1.20±0.10</td> <td>2.20±0.10</td> <td>0.8 Max</td> </tr> </tbody> </table> <p>-0603: Press pocket.</p>		A	B	T	0402	0.24±0.03	0.45±0.03	0.5 Max	0603	0.38±0.05	0.68±0.05	0.5 Max	1005	0.70±0.10	1.20±0.10	0.6 Max	RF062P	0.70±0.10	0.90±0.10	0.35 Max	RF064P	0.70±0.10	1.60±0.10	0.35 Max	RP102	1.17±0.10	1.17±0.10	0.6 Max	RP10AT	1.20±0.10	1.20±0.10	0.6 Max	RN102	1.20±0.10	1.20±0.10	0.6 Max	RP104	1.20±0.10	2.20±0.10	0.6 Max	RN104	1.20±0.10	2.20±0.10	0.8 Max
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Packaging Table

TYPE (mm)	TYPE (inch)	Taping Packaging				
		Code	Reels	Carrier Tape	Quantity	Weight(g)
0402	01005	CS	7"	Pressed Paper	20,000	143
		AS	13"	Pressed Paper	15,000	126
0603	0201	DP	7"	Punched PE	20,000	154
		AS	13"	Pressed Paper	60,000	573
		FP	13"	Punched PE	50,000	474
		CS	7"	Punched paper	10,000	92
DS	7"	20,000	152			
ES	10"	30,000	331			
AS	13"	40,000	539			
1608	0603	CS	7"	5,000	125	
		ES	10"	10,000	324	
2012	0805	AS	13"	20,000	561	
		CS	7"	5,000	149	
3216	1206	ES	10"	10,000	360	
		AS	13"	20,000	658	
3225	1210	CS	7"	5,000	157	
		ES	10"	10,000	382	
5025	2010	AS	13"	20,000	695	
		CS	7"	5,000	183	
6432	2512	ES	10"	10,000	463	
		AS	13"	20,000	674	
062P	0201×2R	CS	7"	Embossed PE	4,000	202
		AS	13"	4,000	267	
064P	0201×4R	CS	7"	Punched paper	15,000	1,041
		AS	13"		20,000	126
102P	0402×2R	CS	7"	10,000	100	
		AS	13"	40,000	485	
104P	0402×4R	CS	7"	10,000	136	
		AS	13"	40,000	610	
164P	0603×4R	CS	7"	5,000	157	
		AS	13"	20,000	695	
10AT (1010)	0404	CS	7"	Punched paper	10,000	100
		AS	13"	40,000	485	

- General type, Precision, Low ohms, High ohms.
- Packaging style can be modified when you want.

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