
Chip Resistor

■ INTRODUCTION

Chip resistors are general passive component which is useful for derating voltage, current controlling in circuit and surface mounting is available.

Samsung electro mechanics also manufactures a wide range of chip resistors such as general, precision, trimmable and low ohms and so on.

Production is increasing with demand for small size & light weight of set product. We provide ultra-small, high-reliability, high-stability resistors.

We have obtained ISO-9002/QS-9000 and ISO-14001 certification.

■ FEATURE AND APPLICATION

● Feature

- Very small, thin, and light weight.
- Both flow and reflow soldering are applicable.
- Owing to the reduced lead inductance, the high frequency characteristic is excellent.
- Suitable size and packaging for surface mount assembly.
- Reel type and Bulk type Packaging are applicable.

● Application

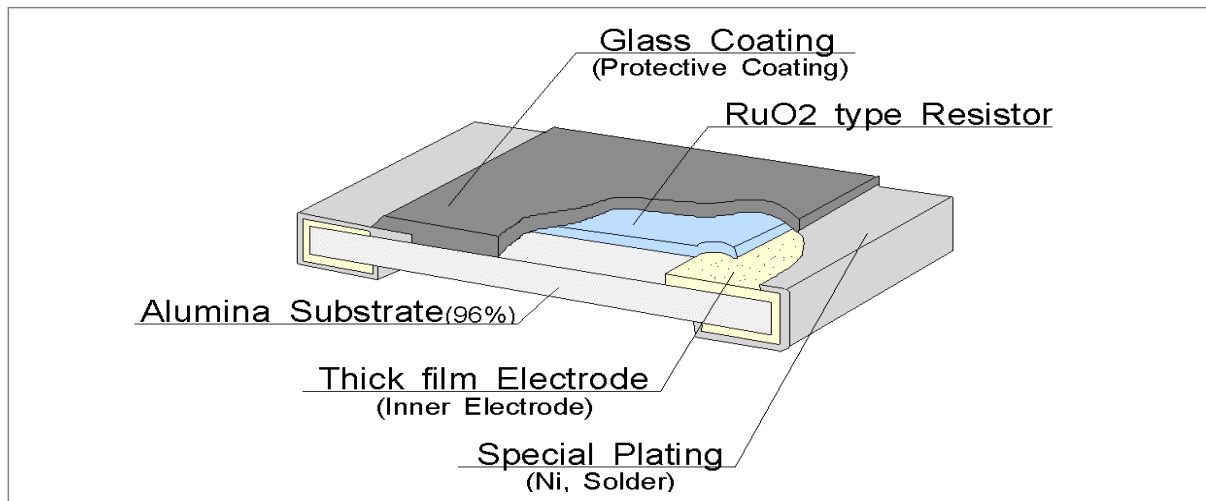
- General purpose.
- Home Appliances.
(DVD, Digital TV, Camcorder, VTR, Digital Camera, Audio, Tunner)
- For Computers & Communication Devices.
(Notebook, Memory Module, Mobile, Network Equipment, etc)

Chip Resistor

■ PICTURE

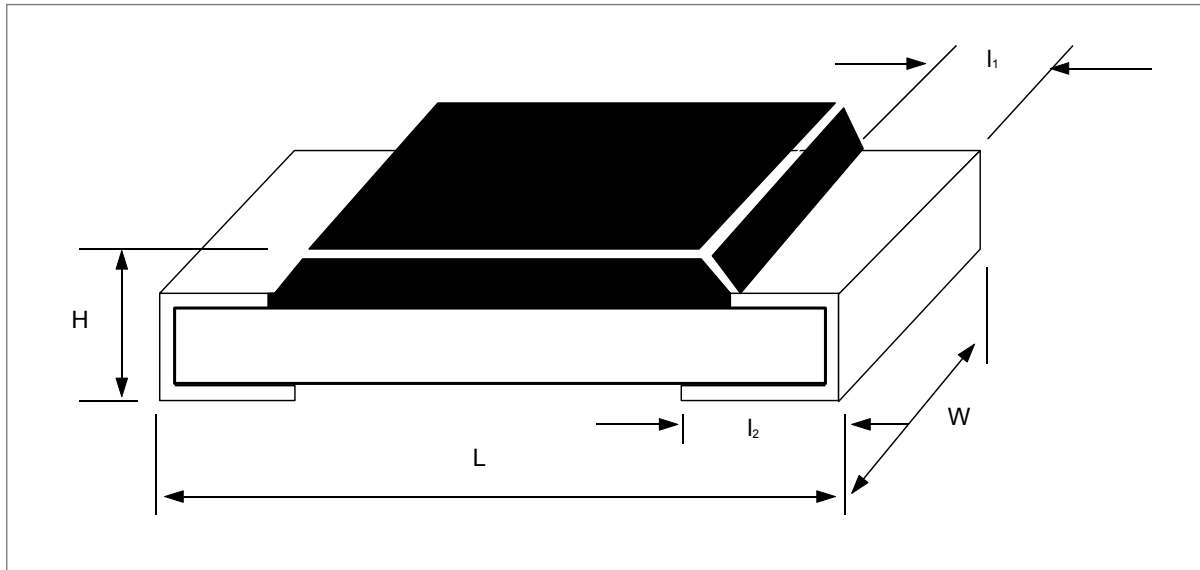
Chip Resistor

■ STRUCTURE



Chip Resistor

■ APPEARANCE AND DIMENSION



[Unit : mm]

TYPE	inch	Power (W)	L	W	H	l ₁	l ₂	Average Weight
0603	0201	1/20	0.60±0.03	0.30±0.03	0.25±0.05	0.15±0.05	0.15±0.05	0.16mg
1005	0402	1/16	1.00±0.05	0.50±0.05	0.35±0.05	0.20±0.10	0.25±0.10	0.6mg
1608	0603	1/10	1.60±0.10	0.80±0.15	0.45±0.10	0.30±0.20	0.35±0.20	2.1mg
2012	0805	1/8	2.00±0.20	1.25±0.15	0.50±0.10	0.40±0.20	0.35±0.20	4.9mg
3216	1206	1/4	3.20±0.20	1.60±0.15	0.55±0.10	0.45±0.20	0.40±0.20	9.5mg
3225	1210	1/3	3.20±0.20	2.55±0.20	0.55±0.10	0.45±0.20	0.40±0.20	16mg
5025	2010	2/3	5.00±0.20	2.50±0.15	0.55±0.15	0.60±0.20	0.60±0.20	26mg
6432	2512	1	6.30±0.20	3.20±0.15	0.55±0.15	0.60±0.20	0.60±0.20	41mg

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■ PART NUMBERING

RC	1005	J	101	CS
①	②	③	④	⑤

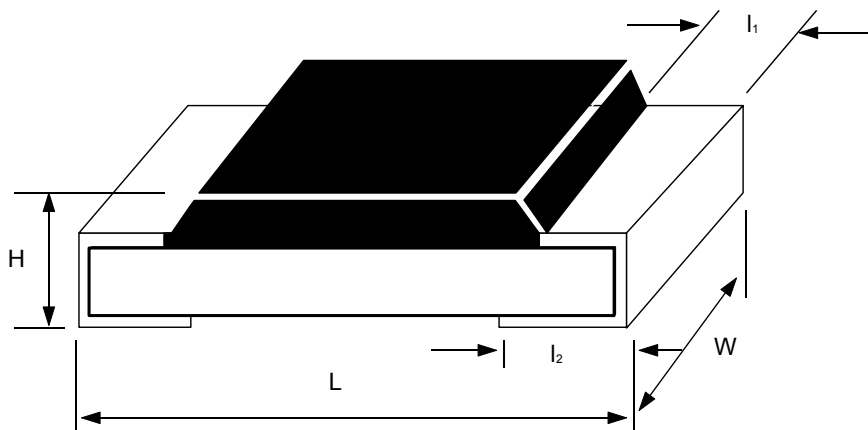
① CODE DESIGNATION

RC : This code expresses the Resistor that is produced by Samsung Electro-Mechanics CO.LTD. (with the exception of Trimmable Chip Resistor(RT))

② DIMENSION

The dimension is expressed as 4 digits number by SI unit (mm). <Table 1>
Left 2 digits are length of resistor, and the other 2 digits are width. <Fig 1>

<Fig 1>



<Table 1>

[Unit : mm]

Dimension (inch)	0603 (0201)	1005 (0402)	1608 (0603)	2012 (0805)	3216 (1206)	3225 (1210)	5025 (2010)	6432 (2512)
L	0.60±0.03	1.00±0.05	1.60 ± 0.10	2.00 ± 0.20	3.20 ± 0.20	3.20 ± 0.20	5.00 ± 0.20	6.30 ± 0.20
W	0.30±0.03	0.50±0.05	0.80 ± 0.15	1.25 ± 0.15	1.60 ± 0.15	2.55 ± 0.20	2.50 ± 0.20	3.20 ± 0.20
H	0.25±0.05	0.35±0.05	0.45 ± 0.10	0.50 ± 0.10	0.55 ± 0.10	0.55 ± 0.10	0.55 ± 0.10	0.55 ± 0.10
l ₁	0.15±0.05	0.20±0.10	0.30 ± 0.20	0.40 ± 0.20	0.45 ± 0.20	0.45 ± 0.20	0.60 ± 0.20	0.60 ± 0.20
l ₂	0.15±0.05	0.25±0.10	0.35 ± 0.10	0.35 ± 0.20	0.40 ± 0.20	0.40 ± 0.20	0.60 ± 0.20	0.60 ± 0.20

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③ RESISTANCE TOLERANCE

The Resistance Tolerance is expressed as 1 digit alphabet by EIAJ standard. <Table 2>

<Table 2>

Item	F	G	J	K	M
Tolerance (%)	± 1	± 2	± 5	± 10	± 20
Producing Series	E-24, E-96	E-48	E-24	E-12	E-6
Type	P, L	G, L	G, L	G, L, T	T

Type Representation : G(General), P(Precision), L(Low ohms), T(Trimmable)

④ NOMINAL RESISTANCE VALUE

The Nominal Resistance Value is expressed as 3 or 4 digits by EIAJ standard. <Table 3>

<Table 3>

Item	3 Digits mark	4 Digits mark
Resistance Tolerance	F, G, J, K, M	F, G
Only number	Left 2 digits : Resistance value Right 1 digit : Exponential number of 10.	Left 3 digits : Resistance value Right 1 digit : Exponential number of 10.
Number & alphabet "R"	Read alphabet "R" as decimal point.	Read alphabet "R" as decimal point.
Example	1) 101 : $10 \times 10^1 = 10 \times 10 = 100 \Omega$ 2) 7R5 : $7 . 5 = 7.5 \Omega$ 3) R75 : 0.75Ω	1) 1001 : $100 \times 10^1 = 100 \times 10 = 1 \text{ k}\Omega$ 2) 9R09 : $9.09 = 9.09 \Omega$

If resistance value in E-96 is same resistance value in E-24, we mark 3 or 4 digits on the resistor.

In case of JUMPER(0 ohm), '000' is marked on that resistor.

※ 0603, 1005, 1608 (4 digits mark) : No Marking on the resistor.

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⑤ PACKAGING CODE

The Packaging Code is expressed as 2 digits alphabet. <Table 4>

Packaging Code	Description	Dimension	Packaging Q'ty
C S	7" REEL PACKAGING	0603, 1005	10,000 PCS
		1608, 2012, 3216, 3225	5,000 PCS
		5025, 6432	4,000 PCS
E S	10" REEL PACKAGING	1608, 2012, 3216	10,000 PCS
A S	13" REEL PACKAGING	0603, 1005	40,000 PCS
		1608, 2012, 3216, 3225	20,000 PCS
		5025, 6432	15,000 PCS
G S	BULK CASE PACKAGING	1608	25,000 PCS
		2012	10,000 PCS
		3216	5,000 PCS

<Table 4>