

Surface Mount Resistor Kit

1206 Case Size



RoHS
Compliant



Specifications Table

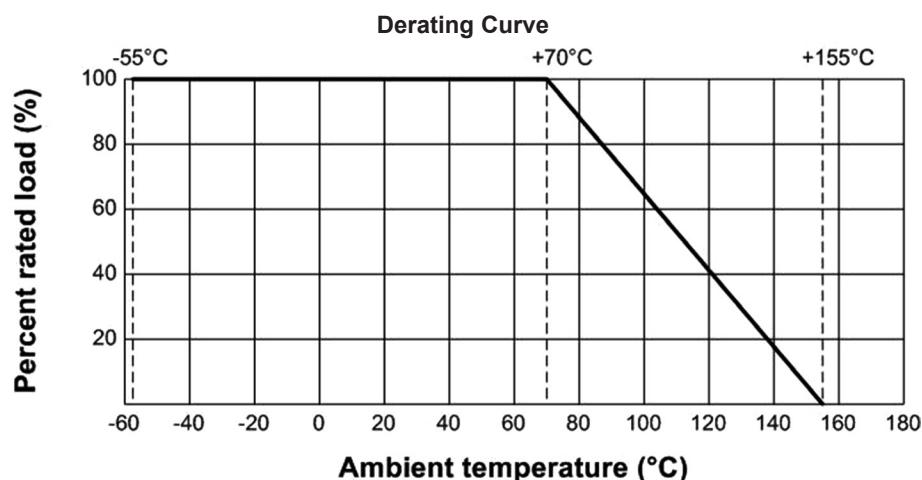
Type	Power Rating	Resistance Tolerance	Nominal Resistance
MC 1206	0.125W (1/8W)	±5%	10Ω

Ratings:

Type	MC 1206
Power Rating	0.125W (1/8W)
Rated Current(Jumper)	2A
Max. Overload Current(Jumper)	10A
Max. Working Voltage	200V
Max. Overload Voltage	400V
Dielectric Withstanding Voltage	500V
Temperature Range	-55°C +155°C
Ambient Temperature	+70°C

Power Rating:

Resistors shall have a power rating based on continuous load operation at an ambient temperature of 70°C . For temperature in excess of 70°C , The load shall be derate as shown in figure.



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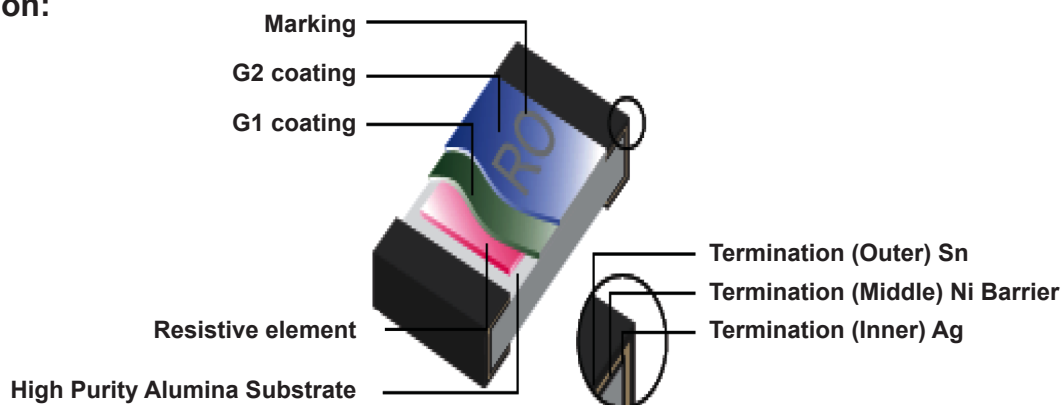
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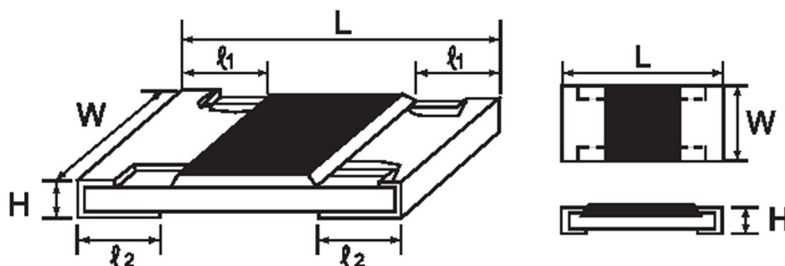
Nominal Resistance:

Effective figures of nominal resistance shall be in accordance with E-24 and E-96 series
E-96 series for 1 % and E-24 series for 2 % and 5 %

Construction:



Power Rating and Dimensions:



Dimension:

Type	Dimension (mm)				
	$L \pm 0.15$	$W +0.15 / -0.1$	$H \pm 0.1$	$l1 \pm 0.2$	$l2 \pm 0.2$
MC 1206	3.1	1.55	0.55	0.45	0.45

Power Rating:

Type	Power Rating	Tolerance	Resistance	Standard Series
MC 1206	0.125W (1/8W)	Jumper	< 50mΩ	E-12
		±5	10Ω ~ 1MΩ	

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Performance Specification :

Characteristics	Limits	Test Methods (JIS C 5201-1)
Insulation resistance	1,000 MΩ or more	Apply 500V DC between protective coating and termination for 1 min, then measure
Dielectric withstanding voltage	No evidence of flashover mechanical damage, arcing or insulation break down	Apply 300V AC between protective coating and termination for 1 minute
Temperature coefficient	$1\Omega - 10\Omega$: ± 400 PPM/°C $11\Omega - 100\Omega$: ± 200 PPM/°C $>100\Omega$: ± 100 PPM/°C	Natural resistance change per temp. degree centigrade. $\frac{R_2 - R_1}{R_1(t_2 - t_1)} \times 10^6 \text{ (PPM/°C)}$ R ₁ : Resistance value at room temperature (t ₁) R ₂ : Resistance value at room temp. plus 100°C (t ₂)
Short time overload	Resistance change rate is $\pm (2.0\% + 0.1\Omega)$ Max.	Permanent resistance change after the application of a potential of 2.5 times RCWV for 5 seconds
Solderability	95 % coverage Min.	Test temperature of solder : $245 \pm 3^\circ\text{C}$ Dwell time in solder : 2 ~ 3 seconds
Soldering temp. Reference	Electrical characteristics shall be satisfied. Without distinct deformation in appearance. (95 % coverage Min.)	<p><u>Wave soldering condition:</u> (2 cycles Max.) Pre-heat : 100°C to 120°C, 30 \pm 5 sec. Suggestion solder temp.: 235°C to 255°C, 10 sec. (Max.) Peak temp.: 260°C</p> <p><u>Reflow soldering condition:</u> (2 cycles Max.) Pre-heat : 150°C to 180°C, 90 to 120 sec. Suggestion solder temp.: 235°C to 255°C, 20 to 40 sec. Peak temp.: 260°C</p> <p><u>Hand soldering condition:</u> The soldering iron tip temperature should be less than 300°C and maximum contract time should be 5 sec.</p>

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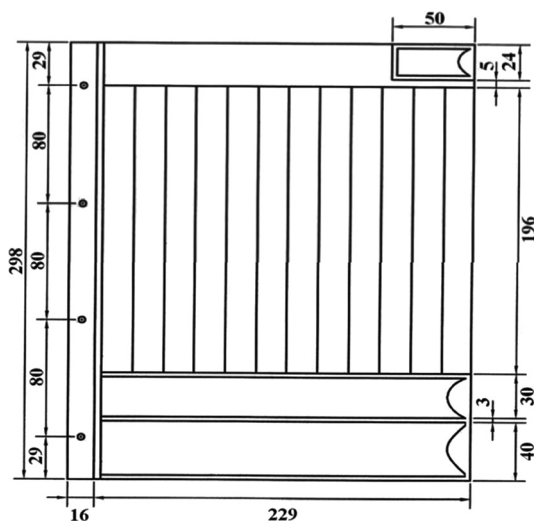
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Characteristics	Limits	Test Methods (JIS C 5201-1)		
Soldering Heat	Resistance change rate is: ±(1% +0.05Ω) Max.	Dip the resistor into a solder bath having a temperature of 260°C ±3°C and hold it for 10 ±1 seconds.		
Temperature cycling	Resistance change rate is ± (1% +0.05Ω) Max.	Resistance change after continuous 5 cycles for duty cycle specified below :		
		Step	Temperature	Time
		1	-55°C ± 3°C	30 mins
		2	Room temp.	10 to 15 mins
		3	+155°C ± 2°C	30 mins
		4	Room temp.	10 to 15 mins
Load life in humidity	Resistance change rate is ± (3% +0.1Ω) Max.	Resistance change after 1,000 hours (1.5 hours “on”, 0.5 hour “off”) at RCWV in a humidity chamber controlled at 40°C ±2°C and 90 to 95 % relative humidity		
Load Life	Resistance change rate is ± (3% +0.1Ω) Max.	Permanent resistance change after 1,000 hours operating at RCWV, with duty cycle of (1.5 hours “on”, 0.5 hour “off”) at 70°C ±2°C ambient		
Terminal bending	Resistance change rate is ± (1% +0.05Ω) Max.	Twist of Test Board : Y/X = 5/90mm for 10 seconds		

Kit resistors:

Insert for Chip Kit



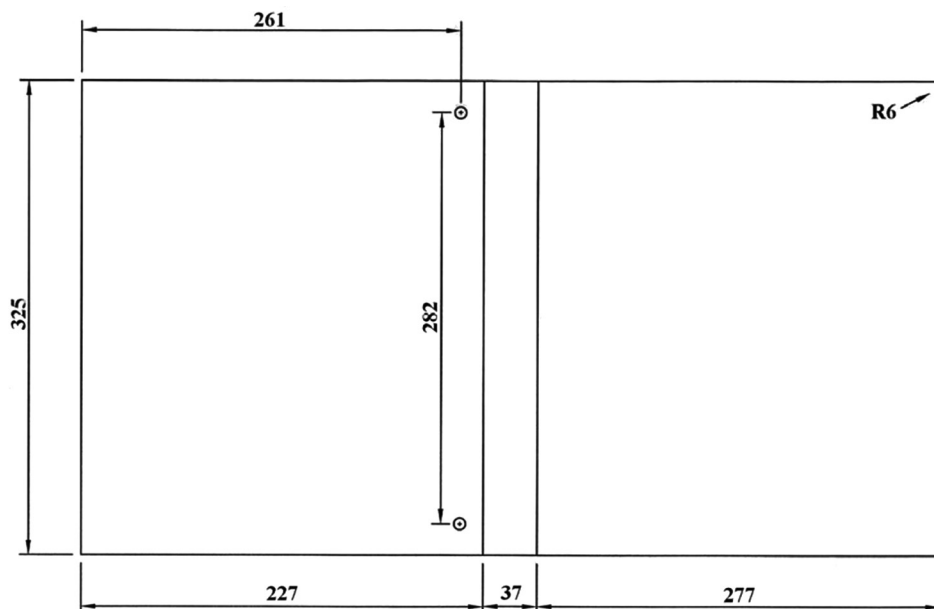
Dimensions : Millimetres

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Album for Chip Kit:



Dimensions : Millimetres

Chip Kit Resistors:

Product : MC Kit (1206) $\pm 5\%$
 E12 Series : 62 values (0R&10R to 1M)
 Quantity : 100pcs per value
 Total Qty : 6,200pcs.

NO.	Value
1	0E
2	10R
3	12R
4	15R
5	18R
6	22R
7	27R
8	33R
9	39R
10	47R

NO.	Value
11	56R
12	68R
13	82R
14	100R
15	120R
16	150R
17	180R
18	220R
19	270R
20	330R

NO.	Value
21	390R
22	470R
23	560R
24	680R
25	820R
26	1K
27	1K2
28	1K5
29	1K8
30	2K2

NO.	Value
31	2K7
32	3K3
33	3K9
34	4K7
35	5K6
36	6K8
37	8K2
38	10K
39	12K
40	15K

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NO.	Value
41	18K
42	22K
43	27K
44	33K
45	39K
46	47K
47	56K
48	68K
49	82K
50	100K

NO.	Value
51	120K
52	150K
53	180K
54	220K
55	270K
56	330K
57	390K
58	470K
59	560K
60	680K

NO.	Value
61	820K
62	1M

Part Number Table

Description	Part Number
Resistor Kit, 1206, E-12, 5%	MC1206W8JE012KIT

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