Surface Mount Resistor Kit
0603 Case Size

RoHS Compliant

Specifications Table

Type	Power Rating	Resistance Tolerance	Nominal Resistance
MC 0603	0.0625W (1/16W)	±5%	10Ω

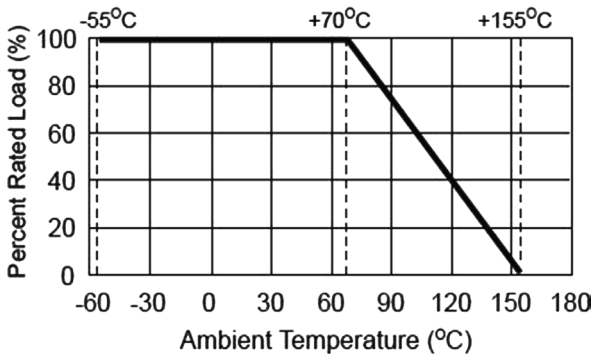
Ratings:

Type	MC 0603
Power Rating	0.0625W (1/16W)
Rated Current(Jumper)	1A
Max. Overload Current(Jumper)	2A
Max. Working Voltage	75V
Max. Overload Voltage	150V
Dielectric Withstanding Voltage	300V
Temperature Range	-55°C to +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.

Derating Curve

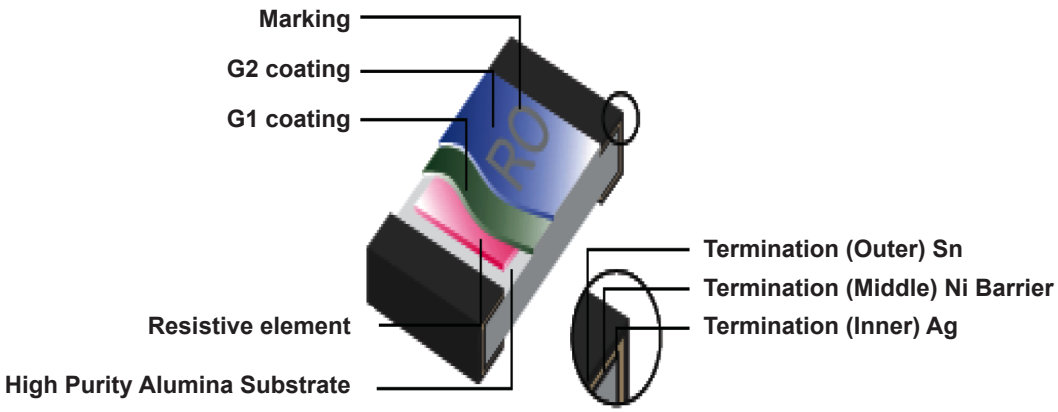


Surface Mount Resistor Kit
0603 Case Size

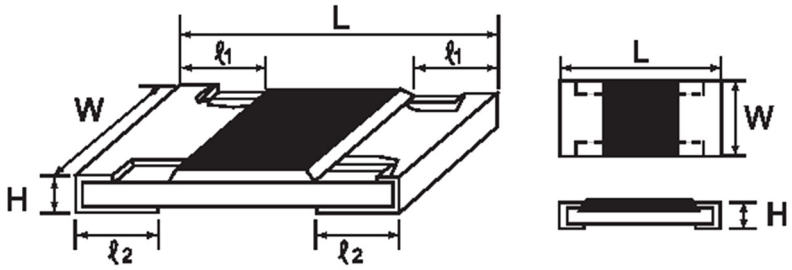
Nominal Resistance:

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:

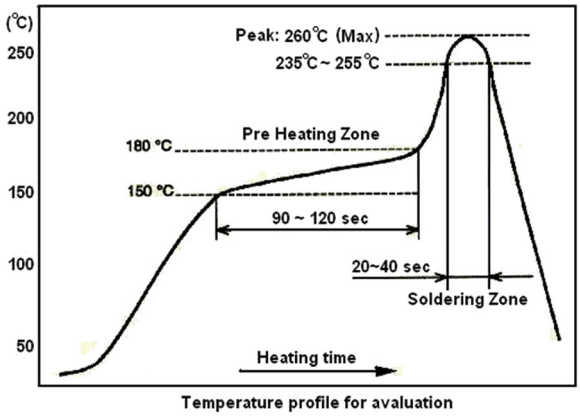
Type	Dimension (mm)				
	L ±0.1	W + 0.15 / 0.1	H ±0.1	ℓ1 ±0.2	ℓ2 ±0.2
MC 0603	1.6	0.8	0.45	0.3	0.3

Power Rating:

Type	Power Rating	Tolerance	Resistance	Standard Series
MC 0603	0.0625W (1/16W)	Jumper	< 50mΩ	E-6
		±5	10Ω ~ 1MΩ	

Surface Mount Resistor Kit
0603 Case Size

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	1Ω ~ 10Ω : ± 400 PPM/°C 11Ω ~ 100Ω : ± 200 PPM/°C >100Ω : ± 100 PPM/°C	Natural resistance change per temp. degree centigrade. $\frac{R_2-R_1}{R_1(t_2-t_1)} \times 10^6$ (PPM/°C) R_1: Resistance value at room temperature (t1) R_2: Resistance value at room temp. plus 100°C (t2)
Short time overload	Resistance change rate is ± (2% + 0.1Ω) 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 ± 3°C Dwell time in solder : 2 ~ 3 seconds
Soldering temp. Reference	Electrical characteristics shall be satisfied. Without distinct deformation in appearance. (95 % coverage Min.)	Wave soldering condition: (2 cycles Max.) Pre-heat : 100°C to 120°C, 30 ± 5 sec. Suggestion solder temp.: 235°C to 255°C, 10 sec. (Max.) Peak temp.: 260°C Reflow soldering condition: (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  Temperature profile for avaluation Hand soldering condition: The soldering iron tip temperature should be less than 300°C and maximum contract time should be 5 sec.

Surface Mount Resistor Kit
0603 Case Size

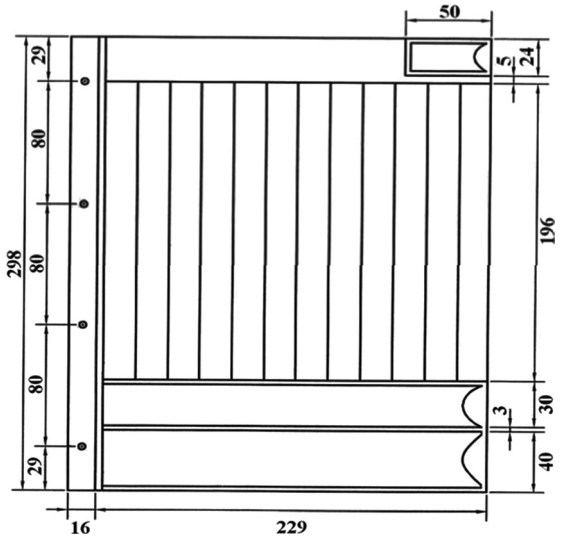
Characteristics	Limits	Test Methods (JIS C 5201-1)
Soldering Heat	Resistance change rate is: ±(1% +0.05Ω) Max.	Dip the resistor into a solder bath having a temperature of 260°C ±3°C and hold it for 10 ±1 seconds.
Temperature cycling	Resistance change rate is ± (0.5% +0.05Ω) Max.	Resistance change after 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:

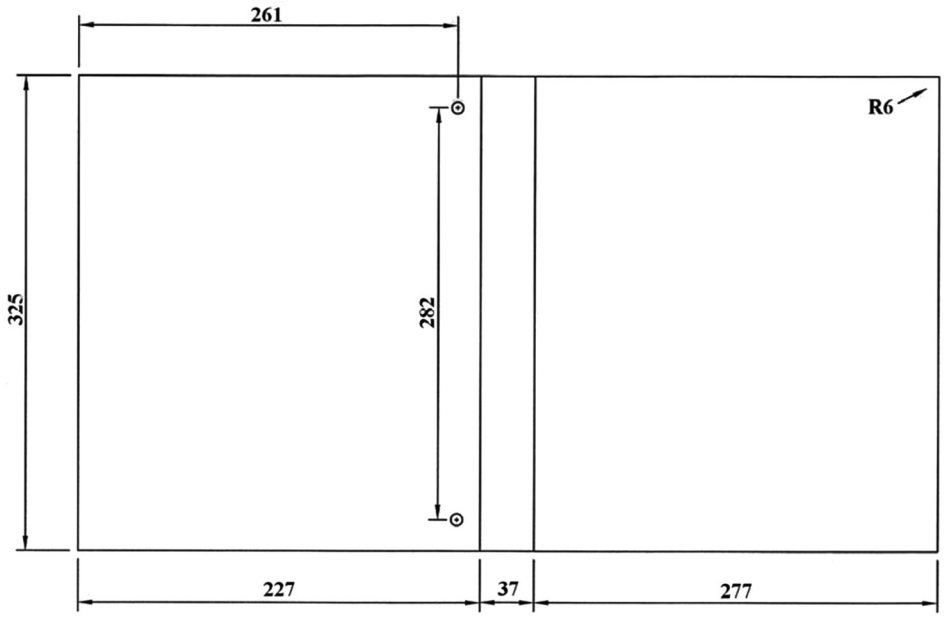
Insert for Chip Kit



Dimensions : Millimetres

Surface Mount Resistor Kit
0603 Case Size

Album for Chip Kit:



Dimensions : Millimetres

Chip Kit Resistors:

Product : MC Kit (0603) ±5%
E6 Series : 32 values (0R&10R to 1M)
Quantity : 100pcs per value
Total Qty : 3,200pcs.

NO.	Value
1	0E
2	10R
3	15R
4	22R
5	33R
6	47R
7	68R
8	100R

NO.	Value
9	150R
10	220R
11	330R
12	470R
13	680R
14	1K
15	1K5
16	2K2

NO.	Value
17	3K3
18	4K7
19	6K8
20	10K
21	15K
22	22K
23	33K
24	47K

NO.	Value
25	68K
26	100K
27	150K
28	220K
29	330K
30	470K
31	680K
32	1M

Part Number Table

Description	Part Number
Resistor Kit, 0603, E-6, 5%	MC0603WGJE006KIT